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THE COMMONWEALTH OF MASSACHUSETTS
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January 14, 2010

Rhoda E. Schneider, General Counsel
Massachusetts Department of Elementary & Secondary Education
75 Pleasant Street
Malden, MA 02148

Re: Authorization to Make State Attorney General's Certification in Federal "Race to the Top Fund" Grant Application

Dear Ms. Schneider:

I hereby designate you as my authorized representative to make the State Attorney General certification required by the United States Department of Education in state applications for grants from the federal Race to the Top Fund. That certification is required by Application Requirement (f) as set forth in 34 CFR Subtitle B, Chapter II, appearing in the Federal Register, v. 74, no. 221, p. 59800 (Nov. 18, 2009), which provides:

> (f) The State must submit a certification from the State Attorney General that—
>
> > (1) The State's description of, and statements and conclusions concerning State law, statute, and regulation in its application are complete, accurate, and constitute a reasonable interpretation of State law, statute, and regulation; and
> >
> > (2) At the time the State submits its application, the State does not have any legal, statutory, or regulatory barriers at the State level to linking data on student achievement or student growth to teachers and principals for the purpose of teacher and principal evaluation.

It is my understanding that the Application Form issued by the Department of Education, and referenced at page 59722 of the Federal Register edition cited above, expressly envisions the certification being made by a State Attorney General or her authorized representative. This letter confirms that you are authorized to make the required certification.

Cordially,

Martha Coakley

Martha Coakley

General Appendix 2:
Glossary of Massachusetts Education Terminology

Adequate Yearly Progress (AYP): As required by the federal No Child Left Behind Act (NCLB), all schools and districts are expected to meet or exceed specific student performance standards in ELA and mathematics by the year 2014. AYP determinations are issued yearly based on the performance of all students and for student subgroups to monitor the interim progress toward attainment of those performance goals.

AFT–MA: The American Federation of Teachers–Massachusetts is the second largest teacher's union in Massachusetts.

Chapter 70: State distributed education aid is referred to as Chapter 70 and is distributed using a progressive funding formula. The formula establishes an adequate spending level for each district and ensures that every district reaches this spending goal annually through a combination of state aid and local resources. These dollars can be used to fund a variety of district operating costs, with the exception of transportation and capital expenditures.

Competency Determination: Students who meet the state high school graduation requirements have earned their "competency determination." The requirement is to score *Proficient* on the on the grade 10 English language arts and mathematics and high school science MCAS exams or to score *Needs Improvement* and complete an Educational Proficiency Plan in the subject(s) in which the student is not proficient before the end of high school.

COP: The Certificate of Occupational Proficiency (COP) was first proposed as part of the Education Reform Act of 1993. The COP will be awarded to students who successfully complete a comprehensive education and training program in a particular trade or professional skill area.

Composite Performance Index (CPI): A 100-point index that combines the scores of students who take standard MCAS tests (the Proficiency Index) with the scores of those who take the MCAS-Alternate Assessment (the MCAS-Alt Index) and is a measure of the extent to which students are progressing toward proficiency in English Language Arts and mathematics, respectively. CPI is the measure the state uses to determine whether schools and districts have made Adequate Yearly Progress.

A school or district's CPI is calculated by determining, in each subject for each student group, the following:

1. the number of students who took standard MCAS tests who performed at each of the five proficiency levels (low *Warning/Failing*, high *Warning/Failing*, low *Needs Improvement*, high *Needs Improvement*, and *Proficient* and above) and multiplying the number at each level times the proficiency index points associated with that level (0, 25, 50, 75, and 100, respectively);
2. the same calculation with the number of students who participated in the MCAS-Alt for reasons other than significant cognitive impairments

3. the number of students with significant cognitive impairments who demonstrated performance at each of the five MCAS-Alt levels and multiplying the number at each level times the MCAS-Alt index points associated with that level.

The point totals from steps one, two and three above are added together and the sum is divided by the total number of students assessed. The result is a number between 0 and 100, which constitutes the district, school, or subgroup's CPI for that subject and student group.

DHE: The Massachusetts Department of Higher Education (DHE) oversees the state's 15 community colleges, nine state colleges, and the five campuses of the University of Massachusetts.

DSAC: District and School Assistance Centers (DSACs) operate within Readiness Centers to help districts and their schools strategically access and use professional development and targeted assistance to improve instruction and raise achievement for all students. First priority is given to districts in corrective action or to schools in corrective action or restructuring.

Educational Proficiency Plan (EPP): An EPP is an educational planning tool to be developed for the subject area(s) in which students did not score at least 240 (*Proficient* or above) on the MCAS exam. Each individual EPP includes a review of the student's strengths and weaknesses in that subject, the courses the student will be required to take and successfully complete in grades 11 and 12 in the relevant content area(s); and a description of the assessments the school will administer to the student annually to determine whether the student is progressing toward proficiency.

EDW: The Education Data Warehouse (EDW) is a collaborative effort of the ESE and LEAs to centralize K–12 educational performance data into one state coordinated data repository hosted by the Department. The data warehouse contains SIMS and MCAS data for every district and provides several dozen reports, each with many views and variations, are available, and more technically adept users can generate their own reports.

EEC: The Department of Early Education and Care (EEC) was created in 2005, making Massachusetts the first state in the nation to establish one agency to oversee early education and care and after school services for families. The agency today administers financial assistance to approximately 60,000 children from low income families and licenses nearly 12,000 early education and care and out-of-school-time programs statewide.

ELAR: The Educator Licensing and Recruitment (ELAR) system is an online tool that allows current and prospective Massachusetts educators to complete most licensure related transactions on the Internet. ELAR allow individuals to, among other things, apply for new licenses, renew Professional licenses, check licensure status, edit personal information, post resumes, and locate job openings.

EOE: The Executive Office of Education (EOE) was proposed by Gov. Patrick in 2007, and overwhelmingly supported by the Legislature and established in 2008 to work in partnership with the Departments of Early Education and Care, Elementary and Secondary Education,

Higher Education and the University of Massachusetts system to create a seamless system of education for the Commonwealth's students.

EPIMS: The Education Personnel Information Management System (EPIMS) is a data collection tool developed by the Department of Elementary and Secondary education to collect individual educator data from all public school districts and charter schools. Eventually the data collected through EPIMS will be linked with the licensure data maintained in ELAR.

ESE: The Massachusetts Department of Elementary and Secondary Education oversees the state's more than 1,800 K–12 public schools, serving nearly 1 million students.

Foundation budget: The amount that each district is required to spend to ensure every student requires an adequate education. The foundation budget is calculated using a set of assumptions about how much districts should spend per pupil across expenditure categories and for a variety of student groups, assigning higher rates to students whose resource needs are assumed to be greater, such as vocational students, English language learners, and low-income students. Rates are adjusted for inflation each year.

Gateway for Educators in Massachusetts (GEM): An online tool for aspiring educators to learn more about the career and determine if education is the right career path for them to pursue. This site is available on the Department of Elementary and Secondary Education's website.

John and Abigail Adams Scholarship: Recipients receive a tuition waiver for eight semesters of undergraduate education at a Massachusetts state college or university. Public high school students are eligible for the merit-based scholarship when they score Advanced on either the English Language Arts or the Mathematics test and Proficient or Advanced on the other, **and** have a combined score that places them in the top 25 percent of the graduating class in their district.

LEA: The Local Education Agency (LEA) is the central office that oversees the public schools in every city and town in the Commonwealth. Charter schools are independent LEAs.

The Massachusetts Association of School Committees (MASC): The state association for local school committees.

The Massachusetts Association of School Superintendents (MASS): The state association for district superintendents.

Massachusetts Educator Careers Center (MECC): An online job posting center available through the Department of Elementary and Secondary Education's website.

MassCore: The Massachusetts High School Program of Studies (MassCore) is intended to ensure all students graduate ready to succeed at college or in the workplace. The recommended program of studies includes: four years of English, four years of mathematics, three years of a lab-based science, three years of history, two years of the same foreign language, one year of an arts program and five additional "core" courses such as business education, health, and/or

technology. MassCore also includes additional learning opportunities including AP classes, dual enrollment, a senior project, online courses for high school or college credit, and service or work-based learning.

Mass TeLLS: The Massachusetts Teaching, Learning and Leading Survey (Mass TeLLS) was taken by more than 40,000 educators in 2008. Participants provided their views about teaching and learning conditions, leadership, empowerment, facilities and resources, professional development and time in their schools.

MCAS: The Massachusetts Comprehensive Assessment System (MCAS) was designed to meet the requirements of the Education Reform Law of 1993, which specified that the program test all public school students, measure performance based on the state's curriculum frameworks and report on the performance of students, schools and districts. Students in grades 3–8 and 10 are tested in English language arts and mathematics, and MCAS also includes end-of-course high school science tests. Students are required to pass the grade 10 English language arts and mathematics and high school science exams as one condition of eligibility for a high school diploma, in addition to meeting local requirements. (See Competency Determination.) MCAS results are also used to hold schools and districts accountable for the progress they have made in meeting the No Child Left Behind goal of bringing all students to proficiency in reading and mathematics by 2014.

MCAS-Alternate Assessment (MCAS-Alt): While the majority of students with disabilities take standard paper and pencil MCAS tests, either with or without accommodations, the MCAS-Alt is used to assess the attainment of students who, by reason of severe and complex disabilities, are not able to participate in the standard MCAS testing program. According to federal rules, up to 1% of the student population assessed using the MCAS-Alt may be included in AYP determinations using the MCAS-Alt Index.

MEPID: Every educator receives a Massachusetts Education Personnel ID (MEPID), a unique identifier assigned to all education personnel and linked to their individual data.

MESPA: The Massachusetts Elementary School Principals' Association (MESPA) is the statewide association for elementary school principals.

MSSAA: The Massachusetts Secondary School Administrators' Association (MSSAA) is the statewide association for middle and high school principals.

MTA: The Massachusetts Teachers Association is the state's largest teacher's union.

MTEL: The Massachusetts Tests for Educator Licensure (MTEL) program includes a test of communication and literacy skills as well as tests of subject matter knowledge. The tests are designed to ensure that Massachusetts educators can communicate adequately with students, parents/guardians, and other educators and that they are knowledgeable in the subject matter of the license sought.

NISL: The National Institute for School Leadership (NISL) is a research-based professional development program offered to principals in the lowest performing districts to provide them with the knowledge and skills they need to be instructional leaders and improve student achievement in their schools.

Pilot schools: District-based schools with autonomy over staffing, budget, curriculum and assessment, governance, policies, and school calendar and with greater accountability for results.

Readiness Centers: Six regional Readiness Centers were established across the Commonwealth in 2009 in an effort to improve teacher quality. The centers will provide educators with greater access to proven instructional practices, proven practices in the use of student data to inform instruction, and focused professional development opportunities. Their development was first proposed as a key initiative in Governor Patrick's Education Action Agenda.

SASID: A State Assigned Student Identifier (SASID) is a unique number given to each student receiving a publicly-funded education in Massachusetts. The SASID remains with the student in grades preK–12, even as the student transfers from one district or school to another.

Security Portal: The Department's secure, online data transmittal application used by authorized school and district personnel to submit and review data, (e.g., MCAS, SIMS, AYP, NCLB Report Cards, etc.).

SIMS: The Student Information Management System (SIMS) is a student-level data collection system that allows the ESE to collect and analyze accurate and comprehensive information in order to meet federal and state reporting requirements and inform policy and programmatic decisions. Student data is transmitted to the Department from districts via the state's web-based security portal.

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THE PATRICK ADMINISTRATION ACTION AGENDA

Massachusetts is ready for the next phase of education reform. We value our strengths. We understand our challenges. We know what we want to achieve. And now we present an agenda developed with broad-based input from education, government, business, civic leaders and citizens.

Four broad goals, all integrally linked, shape the specific steps in our action agenda:

First, we must raise the achievement of all students. That involves not only improvements in teaching and curriculum, but also addressing the external factors that impede success, teaching 21st century skills, and introducing learning opportunities and a heightened attention to quality care beginning in the earliest years of life.

Second, fulfilling the new promise of public education demands that we genuinely and deliberately elevate teaching to a recognized profession capable of attracting the most highly qualified candidates to the field. Teachers deserve the opportunity to build their own content knowledge and skills. They, along with administrators, need high-quality mentoring, professional development, supervision and evaluation.

Third, we must broaden and deepen our commitment to public education so that every student is prepared to take advantage of higher education, employment and lifelong learning opportunities. That means extending our definition of a basic public education to include at least two years of postsecondary learning. And it means aligning the curriculum with 21st century knowledge and skills.

Finally, we must unleash innovation broadly, allowing the power of new ideas and new approaches to transform the system. We have to muster the collective courage to ask provocative questions and answer them honestly. Do our students and teachers have enough time during the day and during the year to meet the necessarily high expectations that we have set? Does our system of district governance allow us to maximize resources and generate the best possible results? How can we improve our record of recruiting, hiring and retaining educators? Are we maximizing the use of our vocational and technical infrastructure and facilities? Are we leveraging technology well? What best practices from successful charter and other schools here in the Commonwealth and across the country and the world can we bring to *all* Massachusetts schools?

To move forward, we must confront old constraints and move innovations from the margin to the mainstream. Effectiveness must trump ideology. Mission must triumph over tradition. Children's learning needs must be paramount, notwithstanding any inconvenience to adults inside and outside of our schools.

(b)(6)

As always, the network of people invested in our long tradition of excellence in education will drive this critical effort. Parents, policymakers, educators, business people and citizens must join forces and resources — human and financial — to keep pushing us forward. We are off to a strong start. Over the past 18 months, the Commonwealth has:

- Made strategic investments in early education and care, full-day kindergarten, expanded time for teaching and learning, and higher education facilities;
- Increased Chapter 70 funding to record levels, including targeted increases for special education students and English language learners;
- Created a new Executive Office of Education — a single point of access and coordination for statewide education policy;
- Initiated the first comprehensive survey of the state's teachers;
- Invested historic levels of funding in youth and workforce development;
- Passed a $1 billion life sciences bill; and
- Inaugurated the Commonwealth Corps and the Statewide Youth Council, two new initiatives that will give youth in our state a voice in their government and opportunities to actively engage in projects and service to address challenges in our communities.

The following action agenda, rooted in the good work of the past 15 years and the groundbreaking partnership that is the Commonwealth Readiness Project, outlines actions and strategies that will allow students, teachers, communities and Massachusetts to achieve more than ever before. While we offer detail on several signature initiatives in the following pages, let the release of this action agenda mark the beginning of an unprecedented decade of collaborative policymaking in education.

No single actor can generate the scale of reform required, and no single action included here will yield the scope of advancement needed. Working together, however, we can press ahead, implementing actions and strategies that will help get us all ready for success in the 21st century.

Appendix A2: State Memorandum of Understanding

The standard MOU for a Participating LEA begins on the next page. The 3 required signatories on the standard MOU for districts are the superintendent, the teachers' union leader, and the school committee leader.

Three variations of this MOU are:

- Horace Mann and unionized Commonwealth charter schools
    - The 3 required signatories are the charter school leader, the teachers' union leader, and the chair of the board of trustees.
- Other Commonwealth charter schools
    - The 2 required signatories are the charter school leader and the chair of the board of trustees.
- Districts where the teachers' union is affiliated with the American Federation of Teachers
    - In these 21 districts, we allowed districts to participate without the union's sign-on. Of these districts, six signed on with all three parties; 14 signed on with just the superintendent and school committee chair; and one declined to participate.

These variations account for differences in governance across traditional districts, Commonwealth charter schools, and Horace Mann charter schools (see section F2 for an explanation of the types of charter schools in Massachusetts), as well as the fact that the state association for the American Federation of Teachers declined to endorse our proposal.

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding ("MOU") is entered into by and between The Massachusetts Department of Elementary and Secondary Education ("Massachusetts" or the "state") and _____ ("participating LEA"). This agreement establishes a framework of collaboration, roles and responsibilities in support of Massachusetts in its implementation of an approved Race to the Top grant project.

I. PRELIMINARY SCOPE OF WORK

This Preliminary Scope of Work indicates which portions of Massachusetts' proposed reform plans the participating LEA is agreeing to implement. The initiatives listed below track to the criteria in the federal RFP. See Attachment 1 for a draft summary of MA's proposal for each of these initiatives, including the role of the LEA in each initiative.

The participating LEA is committing to implementing Massachusetts' plan to:

- Improve teacher and principal effectiveness based on performance: **LEAs will:**
  - In collaboration with ESE, design and implement evaluation systems that incorporate multiple measures of effectiveness including significant attention to student growth (see Attachment 3 for definition)
  - Conduct annual evaluations and use evaluations to inform professional development and decisions around compensation, promotion, retention, professional teaching status (tenure) and removal
  - Provide effective support to teachers and principals in the form of high-quality professional development, and measure the effectiveness of that professional development
  - Collect and report aggregate effectiveness data and submit to the state annually
- Ensure effective teachers and leaders in every school and classroom: **The state will** expand and strengthen a pipeline of diverse and highly effective teachers and leaders, particularly in science, technology, engineering, and mathematics; special education, and English language learners. **LEAs will** work with the state to access this pipeline to help them achieve an equitable distribution of effective teachers and leaders across their schools.
- Turn around the lowest-achieving schools (only for LEAs with level 4 or 5 schools): With support provided by the state, **LEAs will** implement one of four school intervention models:
  - Turnaround model (replace up to 50% of staff)
  - Restart model
  - School closure
  - Transformation model (provided that an LEA with more than nine level 4 or 5 schools may not use the transformation model for more than 50 percent of its schools)
- Use data to improve instruction: Integral to implementing all the initiatives in Massachusetts' plan successfully, **LEAs will:**
  - Support educator access to timely data about student learning and professional development on use of that data to improve instruction
  - Cooperate with the state to make available appropriate data for research and program evaluation

The state also strongly encourages the participating LEA to commit to participating in Massachusetts' plan to:

	LEA participation (Y/N)
• Roll out statewide P-12 Teaching and Learning System: **LEAs are encouraged to** partner with the state to develop and implement a new P-12 Teaching and Learning System aligned to the Common Core of standards, including: o Summative, benchmark, formative assessments and curriculum-embedded performance tasks o Exemplar curricula and instructional units o Educator professional development o Innovative technology solutions	
• Increase college and career readiness: **LEAs are encouraged to** partner with the state to develop and implement new programs, supports or incentives (such as International Baccalaureate middle and high schools, early college/dual enrollment programs, and an enhanced Adams Scholarship) to improve students' preparation for college and careers	

II. PROJECT ADMINISTRATION

A. PARTICIPATING LEA RESPONSIBILITIES

To assist Massachusetts in implementing the initiatives and achieving the goals described in Massachusetts' Race to the Top application, the participating LEA will:

1. Implement the initiatives according to a Final Scope of Work proposed by the LEA in a manner that is consistent with the Preliminary Scope of Work above and with Massachusetts' Plan
2. Actively participate in all relevant convenings, communities of practice, or other practice-sharing events that are organized or sponsored by the state or by the U.S. Department of Education ("ED");
3. Post to any website specified by the state or ED, in a timely manner, all non-proprietary products and lessons learned developed using funds associated with the Race to the Top grant;
4. Participate, as requested, in any evaluations of this grant conducted by the state or ED;
5. Be responsive to state or ED requests for information including on the status of the project, project implementation, outcomes, and any problems anticipated or encountered;
6. Participate in meetings and telephone conferences with the state to discuss (a) progress of the project, (b) potential dissemination of resulting non-proprietary products and lessons learned, (c) plans for subsequent years of the Race to the Top grant period, and (d) other matters related to the Race to the Top grant and associated plans.

B. STATE RESPONSIBILITIES

To support and collaborate with participating LEAs in implementing their tasks and activities described in Massachusetts' Race to the Top application, the state will:

1. Work collaboratively with and support the participating LEA in carrying out the Final Scope of Work;
2. Timely distribute the LEA's portion of Race to the Top grant funds during the course of the project period and in accordance with the LEA Plan identified in Exhibit II;
3. Provide feedback on the LEA's status updates, annual reports, any interim reports, and project plans and products; and
4. Identify sources of technical assistance for the project.

C. JOINT RESPONSIBILITIES

1. The state and the participating LEA will each appoint a key contact person for the Race to the Top grant.
2. These key contacts from the state and the participating LEA will maintain frequent communication to facilitate cooperation.
3. State and participating LEA grant personnel will work together to determine appropriate timelines for project updates and status reports throughout the whole grant period.
4. State and participating LEA grant personnel will negotiate in good faith to continue to achieve the overall goals of Massachusetts' Race to the Top grant, even when Massachusetts' Plan requires modifications that affect the participating LEA, or when the LEA Plan requires modifications.

D. STATE RECOURSE FOR LEA NON-PERFORMANCE

If Massachusetts determines that the LEA is not meeting its goals, timelines, budget, or annual targets or is not fulfilling other applicable requirements, the state will take appropriate enforcement action, which could include a collaborative process between the state and the LEA, or any of the enforcement measures that are detailed in 34 CFR section 80.43 including putting the LEA on reimbursement payment status, temporarily withholding funds, or disallowing costs.

III. ASSURANCES

The participating LEA hereby certifies and represents that it:

1. Has all requisite power and authority to execute this MOU;
2. Is familiar with Massachusetts' Race to the Top grant application and is supportive of and committed to working on all or significant portions of Massachusetts' Plan;
3. Agrees to be a participating LEA and, if the application is funded, the signatories agree to work together in good faith to implement those portions of Massachusetts' Plan indicated in the Preliminary Scope of Work. Nothing in this MOU shall be construed to override any rights or duties as provided by collective bargaining law or collective bargaining agreements. The LEA and the local collective bargaining agent agree to negotiate in good faith, and those portions subject to collective bargaining shall be implemented only upon the agreement of the LEA and local collective bargaining agent.
4. Will provide a Final Scope of Work to be attached to this MOU only if Massachusetts' application is funded; will do so in a timely fashion but no later than 90 days after a grant is awarded; and will describe

the LEA's specific goals, activities, timelines, budgets, key personnel, and annual targets for key performance measures ("LEA Plan ") in a manner that is consistent with the Preliminary Scope of Work and with Massachusetts' Plan; and

5. Will comply with all of the terms of the Grant, the State subgrant, and all applicable Federal and State laws and regulations, including laws and regulations applicable to the Program, and the applicable provisions of EDGAR (34 CFR Parts 75, 77, 79, 80, 82, 84, 85, 86, 97, 98 and 99).

IV. MODIFICATIONS

This Memorandum of Understanding may be amended only by written agreement signed by each of the parties involved, and in consultation with ED.

V. DURATION/TERMINATION

This Memorandum of Understanding shall be effective, beginning with the date of the last signature hereon and, if a grant is received, ending upon the expiration of the grant project period, or upon mutual agreement of the parties, whichever occurs first.

VI. SIGNATURES

Signed MOUs must be submitted to the Massachusetts Department of Elementary and Secondary Education by no later than January 13, 2010.

LEA Superintendent (or equivalent authorized signatory) - required**:**

_____
Signature/Date

_____
Print Name/Title

Chair of the Local School Committee (or equivalent, if applicable)**:**

_____
Signature/Date

_____
Print Name/Title

Local Teachers' Union Leader (if applicable)**:**

_____
Signature/Date

_____
Print Name/Title

Authorized State Official - required**:**

By its signature below, the State hereby accepts the LEA as a Participating LEA.

_____
Signature/Date

_____
Print Name/Title

Appendix A3: Massachusetts' Race to the Top Goals

Massachusetts is known for setting and achieving high, yet attainable, standards for student performance. Our goals for Race to the Top are no less ambitious. We will build on our past successes and accelerate gains among our lowest performing subgroups, so that we both improve overall performance and narrow our achievement gaps.

Our strategy with our RTTT proposal has been to make investments in knowledge, expertise, systems, protocols, tools, and resources that will continue to pay off well after the grant ends. We will see some immediate payoff from these investments, but we expect their full impact to begin later in the grant period. We also anticipate that student achievement will pick up pace faster than high school graduation and college enrollment because these latter measures represent cumulative impacts over several years of intervention, not just a change in one grade or classroom. Finally, because Massachusetts must focus first on achievement gaps rather than overall performance, we have set particularly ambitious targets for narrowing our gaps. Not only are our anticipated rates of improvement aggressive, but we are measuring them with our Composite Performance Index (see General Appendix A2 for an explanation of how CPI is calculated), which increases only when performance among students scoring below *Proficient* increases—which means we are measuring our achievement gap on MCAS by the gaps among our lowest performing students.

We anticipate that we will make important near-term gains during the grant period and accelerate these improvements in the two years following. Specifically, we intend to:

1) Increase historic rates of gain in student performance on NAEP and MCAS (our ESEA assessment) by 15% between 2010 and 2014 and another 25% between 2014 and 2016. This will increase the share of students scoring in *Advanced* and *Proficient* and reduce the share scoring in *Warning* or *Failing*.
2) Reduce achievement gaps in student performance on NAEP and MCAS by 25% between 2010 and 2014, and another 25% between 2014 and 2016.
3) Maintain our first-in-the-nation standing on all four NAEP assessments in 2010, 2012, and 2014.
4) Improve overall high school graduation and college enrollment rates by 5% between 2010 and 2014 and an additional 5% between 2014 and 2016.
5) Reduce achievement gaps in high school graduation, college enrollment, and college course completion rates by 15% between 2010 and 2014 and another 15% between 2014 and 2016.

If we attain these goals, by 2014, 13 percentage points more students will score *Advanced* or *Proficient* on the mathematics MCAS. We will no longer have some of the largest achievement gaps on NAEP, and we will cut our MCAS achievement gap almost in half in just six years. About 3,000 more students will graduate from high school by 2014, and an additional 2,000 students in the class of 2014 will enroll in college. And we will accomplish this without lowering our standards—standards that are among the strongest nationally and internationally. Tables detailing the specific outcomes we are targeting overall and by subgroup follow on subsequent pages.

The work we have set forth for ourselves in our Race to the Top proposal is the work of this agency. Our governor's education agenda and our Board's priorities are closely aligned with our proposal, and we are committed to moving forward with them. If we do not receive funding, we will continue down the same path, but necessarily at a slower pace and with fewer resources and levers to bring to bear. We will still implement the Common Core standards and develop assessment and curriculum supports to go with them, but with a lighter touch. We will still pursue a state longitudinal data system, but with less statewide capacity and more variability across districts in terms of data quality, data access, and data use. We will still revise our teacher and principal evaluation system and coordinate it more fully with our licensure requirements, but we will not have the resources needed to provide sufficient implementation support for districts. We will still invest in school supports, but with only Title I School Turnaround Grant dollars and our limited state targeted assistance dollars to bring to bear. And we will still continue to transform our relationship with the field to one that is more collaborative, but we will have neither a strong coalition of 276 willing participants with whom to craft policy nor the fiscal support to build new tools and test out ideas as aggressively as we would like. In short, we expect to reach the same goals, but on a slower pace—more likely in the 2018 to 2020 timeframe.

NAEP achievement goals

Note: We will recalculate our 2014 and 2016 English language arts NAEP goals once 2009 data are available.

NAEP Achievement Goals

Grade 4 Mathematics				
Subgroup	**2003**	**2009**	**2014**	**2016**
All students	242	252	265	271
Male	244	253	266	272
Female	239	251	265	271
Asian/Pacific Island	248	264	278	284
Black	222	236	255	265
Hispanic	222	232	252	263
White	247	258	271	277
ELL	217	221	243	255
Free & reduced lunch eligible	226	237	256	266
Students with disabilities	224	237	255	264

Grade 4 Reading				
Subgroup	**2003**	**2009***	**2014**	**2016**
All students	228	239	248	251
Male	225	237	247	251
Female	231	241	250	254
Asian/Pacific Island	229	249	258	262
Black	207	213	230	240
Hispanic	202	213	230	240
White	234	245	254	258
ELL	193	210	227	236
Free & reduced lunch eligible	210	217	234	243
Students with disabilities	200	218	233	241

Grade 8 Mathematics				
Subgroup	**2003**	**2009**	**2014**	**2016**
All students	287	299	312	318
Male	289	300	314	320
Female	284	298	312	318
Asian/Pacific Island	304	314	328	335
Black	260	272	294	306
Hispanic	255	271	293	306
White	292	305	319	325
ELL	242	238	267	285
Free & reduced lunch eligible	261	278	299	311
Students with disabilities	254	271	293	305

Grade 8 Reading				
Subgroup	**2003**	**2009***	**2014**	**2016**
All students	273	274	277	278
Male	268	270	275	278
Female	278	279	282	283
Asian/Pacific Island	281	284	286	288
Black	252	255	263	269
Hispanic	246	253	262	268
White	278	279	282	283
ELL	222	237	249	258
Free & reduced lunch eligible	251	258	266	272
Students with disabilities	239	247	257	264

Methodology: Goal for overall students based on achieving a 15% increase over historical gains (2003-2009) during the life of the RTTT grant (2010-2014) and a 25% increase over historical trends 2014-2016 once the RTTT initiatives are underway. For all lower performing subgroups, scaled score goals assume a 25% reduction in the 2009 achievement gap by 2014 and a 25% reduction in the 2014 gap by 2016. We assumed the overall student growth goals and calculated the scaled scores required to achieve the gap goals.
Notes: *2009 Reading scores unavailable, so have assumed average historical gains for 2009; data from the NAEP website and Massachusetts Department of Elementary and Secondary Education

MCAS achievement goals

MCAS Achievement Goals, All Grades (3-8, 10)

Students overall -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	16%	27%	34%	23%
2009	23%	34%	28%	15%
2014	30%	40%	23%	6%
2016	33%	43%	21%	3%

Students overall -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	9%	52%	30%	8%
2009	16%	52%	25%	6%
2014	19%	56%	20%	5%
2016	21%	57%	18%	4%

African American/Black -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	4%	14%	36%	47%
2009	8%	25%	37%	30%
2014	20%	35%	27%	18%
2016	26%	40%	22%	11%

African American/Black -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	2%	34%	47%	17%
2009	6%	43%	38%	13%
2014	12%	49%	29%	10%
2016	16%	53%	24%	8%

Asian -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	30%	27%	26%	16%
2009	42%	32%	19%	8%
2014	50%	39%	11%	0%
2016	53%	43%	4%	0%

Asian -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	13%	50%	29%	8%
2009	26%	49%	21%	5%
2014	32%	55%	12%	1%
2016	34%	57%	9%	0%

Hispanic -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	3%	13%	34%	50%
2009	8%	24%	35%	32%
2014	20%	34%	26%	20%
2016	26%	40%	22%	13%

Hispanic -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	2%	29%	46%	23%
2009	5%	39%	40%	17%
2014	11%	46%	30%	13%
2016	15%	50%	25%	10%

Native American -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	8%	24%	36%	32%
2009	13%	30%	34%	22%
2014	24%	39%	25%	12%
2016	29%	43%	21%	7%

Native American -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	5%	45%	39%	11%
2009	9%	49%	33%	9%
2014	15%	54%	25%	7%
2016	18%	57%	21%	5%

White -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	18%	31%	34%	17%
2009	27%	37%	27%	10%
2014	34%	44%	20%	3%
2016	37%	47%	17%	0%

White -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	11%	58%	26%	5%
2009	19%	56%	21%	4%
2014	22%	59%	16%	3%
2016	23%	60%	14%	2%

Lim. English Prof. -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	6%	13%	30%	51%
2009	9%	23%	33%	36%
2014	20%	33%	26%	22%
2016	26%	38%	22%	14%

Lim English Prof. -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	2%	23%	44%	32%
2009	3%	29%	43%	24%
2014	10%	39%	33%	18%
2016	14%	45%	27%	14%

Low Income -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	5%	16%	36%	43%
2009	9%	26%	36%	28%
2014	22%	37%	26%	16%
2016	29%	42%	18%	11%

Low Income -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	2%	34%	46%	18%
2009	5%	42%	39%	14%
2014	12%	49%	28%	10%
2016	17%	53%	22%	7%

Special Education -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	2%	14%	31%	53%
2009	4%	23%	34%	39%
2014	17%	34%	25%	24%
2016	25%	39%	19%	17%

Special Education -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	1%	28%	47%	24%
2009	2%	34%	43%	21%
2014	10%	43%	32%	15%
2016	15%	49%	26%	11%

Methodology: Goal for overall students based on increasing the percent of students scoring advanced and/or proficient (with at least half of the gains coming from advanced) by 15% more than the historical gains (2003-2009) and decreasing the percent of students scoring warning/failing by 15% more than historical gains (2003-2009) by 2014. We then aim to grow scores by 25% over the historical trends 2014-2016. For all subgroups, goals assume a 25% reduction in the 2009 achievement gap by 2014 and a 25% reduction in the 2014 gap by 2016.

Notes: Massachusetts Department of Elementary and Secondary Education

NAEP and MCAS achievement gap goals

Achievement Gap Goals -- NAEP and MCAS

Grade 4 Math -- NAEP Scaled Score				
Subgroup	2003	2009	2014	2016
Gender *(Males outperform females currently)*	5	2	2	1
Black/White	26	21	16	12
Hispanic/White	25	26	19	14
Students with disabilities/without	21	18	14	10
ELL/Non-ELL	26	33	25	19
Free & reduced lunch eligible/not	22	23	17	13

Grade 4 Reading -- NAEP Scaled Score				
Subgroup	2003	2009*	2014	2016
Gender *(Females outperform males currently)*	5	4	3	2
Black/White	27	32	24	18
Hispanic/White	32	32	24	18
Students with disabilities/without	33	25	18	14
ELL/Non-ELL	36	30	22	17
Free & reduced lunch eligible/not	26	29	22	17

Grade 8 Math -- NAEP Scaled Score				
Subgroup	2003	2009	2014	2016
Gender *(Males outperform females currently)*	6	2	2	1
Black/White	33	33	25	19
Hispanic/White	37	34	25	19
Free & reduced lunch eligible/not	34	29	22	16
ELL/Non-ELL	45	63	47	35
Students with disabilities/without	38	33	25	19

Grade 8 Reading -- NAEP Scaled Score				
Subgroup	2003	2009*	2014	2016
Gender *(Females outperform males currently)*	10	10	7	5
Black/White	26	24	18	14
Hispanic/White	32	26	20	15
Free & reduced lunch eligible/not	29	22	17	13
ELL/Non-ELL	52	38	28	21
Students with disabilities/without	39	32	24	18

Math -- MCAS Composite Performance Index (Grades 3-8,10)				
Subgroup	2003	2009	2014	2016
Hispanic/White	27	22	16	12
Black/White	25	20	15	11
Native American/White	13	13	10	7
LEP/Non-LEP	23	21	16	12
Low Income/Non-Low Income	24	20	15	12
SPED/Non-SPED	28	26	20	15

English Language Arts -- MCAS Composite Performance Index (Grades 3-8,10)				
Subgroup	2003	2009	2014	2016
Hispanic/White	23	18	13	10
Black/White	18	14	11	8
Native American/White	10	9	6	5
LEP/Non-LEP	27	23	18	13
Low Income/Non-Low Income	19	16	12	9
SPED/Non-SPED	24	23	17	13

Methodology: For all subgroups, the goal is to reduce the 2009 achievement gap by 25% by 2014 and then reduce the 2014 gap by 25% by 2016. For NAEP tests, we used the gap in scaled scores for Grade 4 and Grade 8 Reading and Mathematics tests, for MCAS we used the overall student Composite Performance Index scores.

Notes: *2009 Reading scores unavailable, so we have assumed average historical gains for 2009; data from the NAEP website and Massachusetts Department of Elementary and Secondary Education. MCAS data from the official accountability results, except for the subgroups non-Low Income, non-SPED and non-LEP/FLEP which were calculated by using performance level data for all students minus the relevant subgroup. The Composite Performance Index (CPI) is a 100-point index that combines the scores of students; scores correspond to one of six performance rating categories: Very High (90 - 100); High (80 - 89.9); Moderate (70 - 79.9); Low (60 - 69.9); Very Low (40 - 59.9); and Critically Low (0 - 39.9).

High school graduation, college enrollment, and college course completion goals

4-year high school graduation rate				
Subgroup	2007	2008	2014	2016
All Students	81%	81%	85%	90%
Asian	84%	87%	91%	96%
Black	65%	68%	75%	82%
Hispanic	59%	58%	67%	75%
Native American	68%	67%	74%	81%
Pacific Islander	64%	70%	77%	84%
White	86%	87%	91%	95%
Limited English Proficiency	53%	56%	64%	72%
Low-Income	65%	65%	71%	78%
Special Education	63%	64%	72%	80%

Methodology: Goal for overall students is to improve the 4-year high school graduation rate by 5% by 2014 (going from 81% in 2008 to 85% in 2014) and by another 5% from 2014-2016 (arriving at 90% by 2016). For all subgroups, the goal is to reduce the 2009 performance gap by 15% by 2014 and then the 2014 gap by 15% by 2016.
Notes: Data from the Massachusetts Department of Elementary and Secondary Education

College enrollment				
Subgroup	2003	2009*	2014	2016
All students	68%	72%	75%	79%
Asian	67%	78%	82%	86%
Black	57%	65%	70%	75%
Hispanic	47%	55%	62%	68%
Native American	56%	59%	65%	71%
White	70%	75%	78%	82%
Limited English Proficient in High School	46%	47%	54%	61%
Low Income in High School	50%	57%	64%	70%
Special Education in High School	46%	50%	57%	64%

Methodology: Goal for overall students is to improve the college enrollment rate by 5% by 2014 (going from 72% in 2009 to 75% in 2014) and by another 5% from 2014-2016 (arriving at 79% by 2016). For all subgroups, the goal is to reduce the 2009 performance gap by 15% by 2014 and then the 2014 gap by 15% by 2016.
Notes: *2009 college enrollment rates unavailable; 2009 figures assume historical gains achieved 2008-2009; Data from the National Student Clearinghouse

College credit				
Subgroup	2004	2009*	2014	2016
All students	52%	51%	53%	56%
Racial/Ethnic Minority	34%	35%	41%	46%
Free & reduced eligible	35%	37%	44%	50%
Limited English Proficiency	38%	35%	40%	45%
Special Education in High School	35%	37%	42%	47%

Methodology: Goal for overall students is to improve the college degree earning rate by 5% by 2014 (going from 51% in 2009 to 53% in 2014) and by another 5% from 2014-2016 (arriving at 56% by 2016). For all subgroups, the goal is to reduce the 2009 performance gap by 15% by 2014 and then the 2014 gap by 15% by 2016.
Notes: *2009 data unavailable; 2009 figures assume historical gains achieved 2008-2009; Data from Massachusetts Department of Higher Education and subgroup data is limited. As data systems are improved, we plan to revise goals. Two specific notes on the data: (1) Cohort is limited to students graduating from high school and enrolling in a state or community college in the same year and who enrolled as first-time, degree-seeking students (which represents 14,247 students in the 2008 cohort). (2) A typical full-time student enrolls in 15 credits per semester, so the equivalent of an academic year of credits is 30 credits. The credits used for this analysis exclude developmental/remedial credits which are earned in pre-college level courses and do not count towards degree or certificate completion.

Appendix A4: Resumes of leadership team

Resumes included:

- Mitchell D. Chester, Commissioner of Elementary and Secondary Education: accountability and oversight
- Carrie Conaway, Director of Planning, Research, and Evaluation: project implementation and management
- Jeff Nellhaus, Deputy Commissioner: Standards and Assessments
- Robert Bickerton, Senior Associate Commissioner: Data Systems to Support Instruction
- David Haselkorn, Associate Commissioner: Great Teachers and Leaders
- Karla Baehr, Deputy Commissioner: Turning Around the Lowest Achieving Schools

Mitchell Dan Chester

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(b)(6)

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EDUCATIONAL BACKGROUND

Doctorate in Education
June 1991

Harvard University, Cambridge, Massachusetts
- Concentration in Administration, Planning, and Social Policy
- Dissertation: *Changes in Attitudes Toward Teaching and Self-Efficacy Beliefs Within First-Year Teachers in Urban Schools*

Masters in Education
June 1988

Harvard University, Cambridge, Massachusetts
- Concentration in Administration, Planning, and Social Policy

Sixth-Year Diploma
August 1982

The University of Connecticut, Storrs, Connecticut
- Concentration in Educational Administration

Masters in Education
September 1975

University of Hartford, West Hartford, Connecticut
- Dual concentration in Reading and Early Childhood Education

Bachelor of Science
May 1974

The University of Connecticut, Storrs, Connecticut
- Major in Elementary Education
- Minor in English

PROFESSIONAL EXPERIENCE

Commissioner of Elementary and Secondary Education (2008 to present)
Massachusetts Department of Elementary and Secondary Education, Malden, Massachusetts

Senior Associate (2006 to 2008), **Associate** (2005-06), and **Assistant** (2001-05) **State Superintendent**
Ohio Department of Education, Columbus, Ohio

Responsibilities included:
- education policy development
- statewide accountability systems
- alignment of federal and state policy
- strategic planning and agency performance measures

Executive Director of Accountability and Assessment (1997 to 2001)
School District of Philadelphia, Philadelphia, Pennsylvania

Oversight of:
- student assessment
- accountability programs
- research and evaluation
- pupil information management

PROFESSIONAL EXPERIENCE (continued)

Education Bureau Chief, Bureau of Curriculum and Instructional Programs (1993 to 1997)
Connecticut State Department of Education, Hartford, Connecticut

Oversight of:
- programs and staff for mandated curriculum areas
- Title I, Migratory Education, Eisenhower, and Title IV programs and staff
- programs and staff for students from limited English backgrounds
- comprehensive health education programs and staff
- technology education programs
- state and federal grants

Commissioner's liaison for urban reform initiative

Senior Assessment Associate, Bureau of Research and Teacher Assessment (1988 to 1993)
Connecticut State Department of Education, Hartford, Connecticut

- Developed performance assessments for beginning (Connecticut Competency Instrument) and experienced teachers (Early Adolescence/English Language Arts Assessment Development Laboratory of the National Board for Professional Teaching Standards)
- Developed performance assessments for beginning and experienced school administrators
- Conducted studies of teacher recruitment, induction, and retention in urban school districts

Associate Principal, Timothy Edwards Middle School (1986 to 1987)
South Windsor Public Schools, South Windsor, Connecticut

Interim Assistant Principal, Resource Teacher, 2nd Grade Teacher (1985 to 1986)
Farmington Public Schools, Farmington, Connecticut

Mathematics Coordinator, 1st, 2nd, & 4th Grade Classroom Teacher (1975 to 1985)
Suffield Public Schools, Suffield, Connecticut

4th-5th Grade Classroom Teacher (summers 1973 to 1978)
Connecticut Migratory Children's Program, Hartford, Connecticut

RELATED EXPERIENCE

NAEP Contextual Data Panel Member, National Assessment of Educational Progress, *U. S. Department of Education* (2005 to 2007)

Developing recommendations for a framework and specifications for the National Assessment of Educational Progress (NAEP) in Reading for the 2007 assessment

Growth Model Peer Review Panel Member, *U. S. Department of Education* (2006)

Developed recommendations to the Secretary of Education for the employment of growth models for *No Child Left Behind Act* accountability purposes

Planning Committee Member, NAEP Reading Framework Project, *National Assessment Governing Board* (2003-2005)

Developed the framework and specifications for the National Assessment of Educational Progress (NAEP) in Reading for the 2009 and beyond assessment

Technical Work Group Member, Evaluation of Title I Accountability Systems and School Improvement Efforts, *SRI International* under contract to U.S. Department of Education (2000 to 2004)

RELATED EXPERIENCE (continued)

Acting Chief Information Officer (July 1998 to July 1999)
School District of Philadelphia, Philadelphia, Pennsylvania

Oversight of:
- mainframe computing
- management information systems
- instructional technology
- telecommunications
- records management
- Year 2000 readiness

Member, Reading Advisory Panel, Voluntary National Test (1997 to 1998)
U. S. Department of Education

Curriculum Consultant, *Window Rock Unified School District* (1995 to 1997)
Fort Defiance, Arizona

Facilitated development of K-12 district goals and curriculum

Development Team Member (1990 to 1993)
Early Adolescence/English Language Arts Assessment Development Laboratory
National Board for Professional Teaching Standards

- Developed performance assessments of accomplished teaching
- Coordinated practitioner involvement and review
- Coordinated sensitivity review

Consultant, School of Professional Studies, *Central Connecticut State University* (1989)
New Britain, Connecticut

- Advised the Dean regarding recruitment of minority teachers and programs to prepare teachers for urban schools
- Developed urban/multicultural education resources for the faculty

Assistant Editor, *Harvard Education Letter* (1988 to 1990)
Harvard Graduate School of Education, Cambridge, Massachusetts

Teaching Fellow, *Harvard Graduate School of Education* (1988 to 1989)
Cambridge, Massachusetts

- Sara Lawrence Lightfoot (Sociology of Education)
- Judith Singer (Data Analysis and Research Design)

Curriculum Council Chairperson, *Suffield Public Schools* (1978 to 1980, 1982 to 1985)
Suffield, Connecticut

- Developed and implemented new curriculum
- Instituted faculty professional development programs

PUBLICATIONS

Chester, M. D., & Zelman, S. T. (2009). Approximations of Teacher Quality and Effectiveness: View From the State Education Agency. In D. H. Gitomer (Ed.). *Measurement Issues and Assessment for Teaching Qualilty* (pp. 131-149). Thousand Oaks, CA: Sage Publications.

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Chester, M. D., & Beaudin, B. Q. (1996). Efficacy Beliefs of Newly Hired Teachers in Urban Schools. *American Education Research Journal*, *33*(1), 233-257.

Chester, M. D., & Pecheone, R. L. (1992). Assessment-Based Licensing of School Principals. *The International Journal of Educational Management*, *6*(3), 31-39.

Chester, M. D. (1990). The Acid Test of Black Dominance. In D. Bell, T. Higgins, & S-H. Suh (Eds.), Racial Reflections: Dialogues in the Direction of Liberation. *U.C.L.A. Law Review*, *37*(6).

Teamwork in the Middle Grades: Learning to Fly. (1990). *The Harvard Education Letter*, *6*(5).

Good Teaching: Do You Know It When You See It? (1989). *The Harvard Education Letter*, *5*(3).

Inside Good High Schools: A Sense of Community. (1989). *The Harvard Education Letter*, *5*(4).

A License to Teach in Connecticut. (1989). *The Harvard Education Letter*, *5*(3).

Chester, M. D. (1984). Curriculum Improvement: Theory into Practice. *Connecticut Association of Boards of Education Journal*.

SELECTED PAPERS and PRESENTATIONS

Chester, M. D. (2008). *The Role of Evidence in Developing State Compliance Practices for No Child Left Behind*. Presentation to the National Academies Standing Committee on Social Science Evidence for Use, Washington, DC.

Chester, M. D. (2007). *Achievement and Engagement in Secondary Education.* Symposium discussant at the Annual Meeting of the American Educational Research Association, Chicago.

Chester, M. D. (2007). *College and Work Readiness: Raising Standards and Improving Assessments.* Panel presentation at the Alliance for Excellent Education's Fourth Annual High School Policy Conference: From No Child Left Behind to Every Child a Graduate, Washington, DC.

Chester, M. D. (2007). *Crosscutting Principles for the Use of Growth Models for Adequate Yearly Progress*. Presentation to the Annual Meeting of the American Educational Research Association, Chicago.

Chester, M. D. (2007). *Do States Really Have Different Proficiency Standards? And If So, Why Do We Care?* Symposium discussant at the Annual Meeting of the American Educational Research Association, Chicago.

Chester, M. D. (2007). *Policy Considerations for Implementing a Value-Added Model.* Presentation at the Minnesota Value-Added Symposium, Roseville, Minnesota.

Chester, M. D. (2007). *Which Schools Tend to Make Stronger Gains? Exploring the Relationship between Status and Growth*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Nashville.

Chester, M. D. (2007). *State Perspectives on Multiple Measures*. Presentation to the National Academies Board on Testing and Assessment Workshop on Multiple Measures, Washington, DC.

Chester, M. D. (2006). *Consequential Validity of NCLB: Research and Practice*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Francisco.

Chester, M. D. (2006). *Employing Growth for School Accountability*. Presentation to the Annual Meeting of the American Educational Research Association, San Francisco.

Chester, M. D. (2006). *Toward a Theory of Action for State Education Policy in the Context of School Improvement*. Presentation to the Annual Meeting of the American Educational Research Association, San Francisco.

Chester, M. D. (2006). *Value-Added and Growth Models: Promises and Precautions*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Francisco.

Chester, M. D. (2005). *Challenges, Contributions, and Consequences of State Accountability Systems*. Presentation to the Annual Meeting of the National Council on Measurement in Education, Monteal, Canada.

Chester, M. D. (2005). *Do Graduation Tests Measure Up? A Closer Look at State High School Exit Exams*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Antonio.

Chester, M. D. (2005). *Documenting the Validity of Accountability Systems*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Antonio.

PAPERS and PRESENTATIONS (continued)

Chester, M. D. (2005). *NCLB and Decision Consistency – Contributions of State Design Features*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Antonio.

Chester, M. D. (2005). *Using Student Growth Data for School Accountability*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Antonio.

Chester, M. D. (2004). *Impact of NCLB Accountability Requirements: Were the First-Year Results as Dire as Predicted?* Presentation to the Annual Meeting of the American Educational Research Association, San Diego.

Chester, M. D. (2004). *State Lessons from NCLB-AYP Year One: How Can Accountability Decisions Be Improved*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Boston.

Chester, M. D. (2004). *The State of State Implementation*. Discussant at the Leaving No Child Behind? Option for Kids in Failing Schools conference of the American Enterprise Institute and the Thomas B. Fordham Institute, Washington, DC.

Chester, M. D. (2003). *Benchmarking NCLB Standards*. Presentation to the Annual Meeting of Education Reporters, Writers and Editors, Chicago.

Chester, M. D. (2003). *Implementing School Accountability and AYP Requirements under No Child Left Behind*. Presentation to the Annual Meeting of the American Educational Research Association, Chicago.

Chester, M. D. (2003). *Ohio's Statewide Accountability Plan: Three Challenges*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Antonio.

Chester, M. D. (2003). *Opportunities and Challenges: Accountability for Students with Disabilities*. Presentation to the Council for Exceptional Children Annual Convention, Seattle.

Chester, M. D. (2002). *Assessments that Illuminate Instruction: Important, But Maybe Not Enough*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Palm Desert, California.

Chester, M. D. (2002). *Effective Use of Technical Advisory Committees in Large-Scale Assessment Programs*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Palm Desert, California.

Chester, M. D. (2002). *Fourth grade promotion decisions in Philadelphia: Face, construct, consequential, and predictive validity of multiple measures*. Presentation to the Annual Meeting of the National Council on Measurement in Education, New Orleans.

Chester, M. D. (2002). *Overcoming the New Assessment Challenges of Title I*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Palm Desert, California.

Chester, M. D. (2001). *Accountability Growth Expectations: Can Schools Meet Them?* Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Houston.

Chester, M. D. (2001). *Access and Achievement for Urban Students*. Symposium discussant at the Annual Meeting of the American Educational Research Association, Seattle.

Chester, M. D. (2001). *The Impact of State Accountability Systems on Districts and Schools: Are the Results What Policymakers Intended*? Presentation to the Education Commission of the States' National Forum on Education Policy, Philadelphia.

PAPERS and PRESENTATIONS (continued)

Chester, M. D. (2001). *Innovations in Testing: Reliable and Valid Identification of K-3 Student Literacy Achievement – Toward a Theory-Based, Data-Driven Continuum*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Houston.

Chester, M. D. (2001). *Interaction Among Standards, Assessments, and Accountability: Implications for Publishers*. Presentation to the Association of American Publishers School Division, Washington, DC.

Chester, M. D. (2001). *Promoting Higher Achievement: Incorporating Standards, Assessments, and Accountability in State Policy*. Presentation at the Best Practices Boot Camp of the Idaho State Board of Education and Legislature, Boise, Idaho.

Chester, M. D. (2001). *Tracing the Impact on Instructional Reform and Achievement of Ending Social Promotion*. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle.

Chester, M. D. (2001). *Using Data to Promote School and District Growth: Making the Most of Your Accountability Results*. Presentation at the Raising Standards and Performance for Low-Achieving Students conference of the Comprehensive Center Region VI, Minneapolis, Minnesota.

Chester, M. D., Offenberg, R., & Denge Xu, M. (2001). *Urban Teacher Transfer: A Four-Year Cohort Study of the School District of Philadelphia Faculty*. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle.

Chester, M. D., Orr, M., & Christman, J. (2001). *Consequential Validity of Philadelphia's Accountability System: Triangulating Four Years of Multiple Sources of Evidence*. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle.

Porter, A., & Chester, M. D. (2001). *Doing Education Accountability Right*. Paper presented at the Brown Center on Education Policy Conference on Accountability and Its Consequences for Students: Are Children Hurt or Helped by Standards-Based Reform. The Brookings Institution, Washington, DC.

Chester, M. D. (2000). *Follow-Up Study to 1998-99 Promotion/Retention Decisions and 1999 Summer Programs*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Chester, M. D. (2000). *The Impact of Summer Programs on Promotion/Retention Decisions and Subsequent Achievement*. Paper presented at the Summer Learning and the Achievement Gap: First National Conference, Johns Hopkins University, Baltimore, Maryland.

Chester, M. D. (2000). *Standards, Assessment, and Accountability: Making it Work for All Students*. Presentation to the United States Department of Education conference on Improving America's Schools, Washington, DC.

Chester, M. D. (2000). *Using Research-Based Knowledge to Guide Educational Practice: Examples from Two Districts*. Symposium discussant at the Annual Meeting of the American Educational Research Association, New Orleans.

Salinger, T., Chester, M. D., & Maraschiello, R. (2000). *K-3 Assessments in Philadelphia: Innovation and Realities*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Chester, M. D. (1999). *Aligning School-Based Reforms with State (and District) Standards and Assessments*. Presentation to the United States Department of Education Office of Elementary and Secondary Education Summer Institute on Comprehensive School Reform and Schoolwide Programs, Washington, DC.

Chester, M. D. (1999). *Assessment and Accountability in the Early Grades*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Snowbird, Utah.

PAPERS and PRESENTATIONS (continued)

Chester, M. D. (1999). *Philadelphia's Accountability System*. Presentation to the United States Department of Education Office of Elementary and Secondary Education Region VI Comprehensive Regional Assistance Center – Madison, Wisconsin.

Chester, M. D. (1999). *To What Extent are Districts Interested in District-Level NAEP Reporting*. Presentation to the National Research Council / National Academy of Sciences Board on Testing and Assessment, Washington, DC.

Chester, M. D. (1999). *Urban Student Performance and Course-Taking Patterns*. Symposium discussant at the Annual Meeting of the National Council on Measurement in Education, Montreal, Canada.

Council of Great City Schools (1999). *Strengthening the Milwaukee Public Schools: Interim Report of the External Team on Research and Assessment*. Submitted to the Milwaukee Public Schools.

Chester, M. D. (1998). *Philadelphia Perspective on Title I Testing and Assessment*. Presentation to the National Research Council/National Academy of Sciences Board on Testing and Assessment, Washington, DC.

Chester, M. D. (1998). *Retention and High Stakes Testing: Will They Result in Improvements in Urban Student Achievement?* Presentation to the American Youth Policy Forum, Washington, DC.

Chester, M. D. (1998). *Revisiting the Issue of Measuring and Reporting Student Growth in an Era of Standards-Based Reform*. Paper presented at the Annual Meeting of the National Council on Measurement in Education, San Diego.

Chester, M. D., & Simmons, W. (1998). *School Practice Review in an Accountability Context*. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego.

Chester, M. D. (1997). *Applied Literacy in National Standards in the Other Content Areas*. Presentation to the Annual Conference of the International Reading Association, Atlanta.

Chester, M. D. (1997). *Consequential Aspects of State Assessments vis a vis Instructional Practices*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Colorado Springs.

Chester, M. D. (1996). *Other Forms of State Incentives for Professional Development: Connecticut's Incentive Program*. Presentation to the Council of Chief State School Officers' IASA Implementation Project Professional Development Conference, San Diego.

Chester, M. D. (1996). *Determining English Language Arts and Reading Standards: If Someone's Gonna Do It, It Might as Well Be Us*. Presentation to the annual convention of the International Reading Association, New Orleans.

Chester, M. D. (1995). *Benchmarking State Standards and Teacher Education and Certification*. Presentation at the National Association of State Directors of Teacher Education and Certification conference on the Impact of National Standards on Teacher Education and Certification, Baltimore.

Beaudin, B. Q., & Chester, M. D. (1994). *Effect of Teacher Beliefs on Persistence in Urban Schools.* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Chester, M. D. (1994). *Interstate New Teacher Assessment and Support Consortium (INTASC)*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Albuquerque.

Chester, M. D., & Jacobson, L. (1994). *Toward a Content-Specific Approach to the Assessment of Leadership.* Paper presented to the International Congress on the Assessment Center Method, San Francisco.

PAPERS and PRESENTATIONS (continued)

Chester, M. D. (1993). *Alternatives to Traditional Principal Preparation and Licensing: Exploring the Roles of the Stakeholders*. Presentation to Convention '93 of the University Council for Educational Administration, Houston.

Chester, M. D. (1993). *Exploring Teacher and Administrator Assessment in the Context of Delaware's New Curriculum Reforms*. Presentation to the Delaware Principals' Academy, Dover, Delaware.

Chester, M. D. (1992). *Alterable Factors that Mediate the Induction-Year Experience of Teachers in Urban Schools*. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Chester, M. D., & Pecheone, R. L. (1992). *Proposal for an Outcome-Based School Administrator License*. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco. (ERIC Document Reproduction Service No. ED 345 360)

Chester, M. D. (1991). *Changes in Attitudes Within First-Year Teachers in Urban Schools*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago. (ERIC Document Reproduction Service No. ED 331 804)

CARRIE L. CONAWAY

Massachusetts Department of Elementary and Secondary Education
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WORK EXPERIENCE

Director of Planning, Research, and Evaluation
Massachusetts Department of Elementary and Secondary Education, 2007 to present

- Direct a unit providing research, analysis, and planning support to the state K–12 education agency.
- Develop a policy research agenda linked to the Department's strategic priorities: educator development, curriculum and instruction, accountability and assistance, and supports for students and families.
- Manage a team of analysts who write policy briefs, memoranda, and reports; analyze data to evaluate program effectiveness; advise on research and evaluation projects and on survey design; and review Department reports. Projects assigned to the group include:
    - Developing a public website displaying trends in district and school performance, as a means of district self-assessment and the first step in the state's new school accountability system.
    - Leading a cross-agency team to pilot-test and implement a growth model: a new way of measuring individual student progress over time on the statewide MCAS tests.
    - Developing a public, searchable database of all teacher union contracts statewide.
    - Analyzing the disproportionate representation of minority students in special education.
    - Writing and managing a $2.9 million federal research grant to support a rigorous four-year evaluation of the state Expanded Learning Time initiative.
    - Managing a Harvard-based research team that evaluated the academic impact of charter and pilot schools in the city of Boston.
- Work with senior staff to strengthen and update the Department's strategic plan. Produce analysis on progress toward the agency's vision, mission, and goals.
- Coordinated the agency's application for the federal Race to the Top grant program.

Deputy Director, New England Public Policy Center
Federal Reserve Bank of Boston, 2004 to 2007

- Proposed, developed, and served as second-in-command of a policy analysis research group whose mission was to increase policymakers' access to high-quality, timely, objective information on the economic and policy issues that affect New England.
- Developed a communication and research strategy to maximize the impact of the Center's work based on input from legislators, policy researchers, and thought leaders throughout New England.
- Conducted analyses of policy issues, led teams of research assistants, and produced reports and presentations for general and technical audiences.
- Handled most day-to-day aspects of Center operations. Managed the Center's publication series and produced conferences and special events.

Associate Editor, *Regional Review*
Federal Reserve Bank of Boston, 2001 to 2004

- Researched and wrote feature-length analytical articles and edited two regular columns for a quarterly economics magazine aimed at New England's business leaders and decision-makers.
- Hired and supervised research assistants and college interns.

Research Analyst
Case Western Reserve University, University of Minnesota, Minnesota Department of Economic Security, Kennedy School of Government, and Harvard University, 1994 to 2001

- Held progressively responsible analyst positions after college and during graduate school.
- Designed research studies, managed data collection, analyzed data, and wrote research reports and articles for general and technical audiences.

OTHER CONTRIBUTIONS AND RECOGNITION

- Serve on research advisory committees for the Massachusetts Department of Elementary and Secondary Education, the Department of Higher Education, The Education Resources Institute, and the Lincoln Institute of Land Policy.
- Selected to participate in the Boston-area Education Policy Fellowship Program, 2009–2010.
- Created an interdepartmental task force to increase the number of minority applicants to economics research positions at the Federal Reserve Bank of Boston. Served on the Bank's Diversity Committee.
- Selected for the Federal Reserve Bank of Boston's leadership development program. Received the Bank's top staff award three out of five years.

SELECTED PUBLICATIONS

Massachusetts Department of Elementary and Secondary Education

- Preliminary Report on Current Fiscal Conditions in Massachusetts Public Schools. January 2008.
- Supply and Demand of STEM Workers in Massachusetts. October 2007.

New England Public Policy Center, Federal Reserve Bank of Boston

- Ensuring Adequate Electrical Capacity for New England. Policy Brief 06-2, July 2006.
- Population Growth and Migration in New England. Preliminary memo, June 2006.
- The Challenge of Energy Policy in New England. Research Report 06-2, April 2006 and Working Paper 05-2, December 2005.

Regional Review, Federal Reserve Bank of Boston

- Paying the price: How family choices affect career outcomes, Q1 2005.
- Where does the time go? The division of household labor, Q1 2005.
- Objects of desire: Creating legacies, one collection at a time, Q4 2003/Q1 2004.
- Accidents will happen. So what improves workplace safety? Q3 2003.
- The pros and cons of pharmaceutical patents, Q1 2003.
- Doing well by doing time? Q4 2002.
- Preserving our past: Who should bear the cost of history? Q2 2002.
- Virtual university: Is online learning changing higher education? Q1 2002.
- The past, present, and future of the registered nurse workforce, Q3 2001.

Other publications

- College Readiness: Massachusetts Compiles the Data. *Communities and Banking*, Spring 2009.
- From Uncertainty to Optimism: Minnesota's Rural Workforce in the 1990s. *Minnesota Economic Trends*, December 1998.
- Women in the Workforce Factsheet. *Minnesota Economic Trends*, July 1998.

EDUCATION

M.A. in sociology and social policy, Harvard University, 2001.

M.A. in public affairs with concentrations in policy analysis and labor policy, Hubert H. Humphrey Institute of Public Affairs, University of Minnesota, 1998.

B.A. in sociology (with high honors), Oberlin College, 1994.

Jeffrey M. Nellhaus

(b)(6)

jnellhaus@doe.mass.edu

OBJECTIVE

My objective is to partner with others to lead improvements in the public education system so every child can achieve proficiency at each grade level and graduate from high school prepared for post-secondary education or a skilled job.

QUALIFICATIONS

- Nationally recognized for expertise in student assessment and accountability systems
- Strong advocate for all children to get the support they need to meet high educational standards
- Extensive experience developing and leading the implementation of standards-based education reforms
- Ability to work collaboratively and effectively with local educators, policymakers, governors, legislators, advocacy groups, business and community leaders.
- Demonstrated ability to lead and manage a large state agency, including strategic and operational planning
- In-depth knowledge of Massachusetts and national educational laws and regulations

SELECTED ACCOMPISHMENTS

- Led the design, development and implementation of the Massachusetts Comprehensive Assessment System, including policies related to implementation of the state's high school graduation standard and exams
- Served as Acting Commissioner of the Massachusetts Department of Elementary and Secondary Education which includes over 550 employees and a budget of over $4 billion annually serving nearly 1 million students in over 1,800 schools and 350 school districts
- Increased the Massachusetts Department of Education capacity in the areas of information management systems, targeted assistance, student assessment, and planning, research and evaluation.
- Led the refinement of the Massachusetts English Language Arts, Mathematics, and Science and Technology/Engineering Curriculum Frameworks
- Served on the U.S. Department of Education's Growth Model Peer Review Committee
- Co-authored with the Chancellor of the Massachusetts Board of Higher Education proposal to the National Governor's Association, which resulted in an award of $2 million. The award led to the development of a recommended course of studies for high school (MassCore), a school-to-college information management system, and the initial development of a comprehensive web-based tool for educational planning.

EMPLOYMENT HISTORY

Massachusetts Department of Education, Malden, MA	
Deputy Commissioner of Education	Present
Acting Commissioner of Education	2007-2008
Deputy Commissioner of Education	2005- 2007
Associate Commissioner for Curriculum and Assessment	1999-2004
Director of Student Assessment	1994-1998
Policy and Planning Specialist	1986-1993
Metropolitan Indochinese Children and Adolescent Services, Boston, MA	
Project Coordinator	1984-1985
The Experiment in International Living, Phanat Nikom, Thailand	
Program Manager and Teacher Trainer	1982-1984
Common Ground Restaurant, Brattleboro, Vermont	
Manager	1979-1982
Leland and Grey Union High School, Townshend, Vermont	
Chemistry and Mathematics Teacher	1974-1978
The Peace Corps, India	
Science Teacher Trainer	1970-1972

SELECTED CONSULTENCIES

- NAEP Validity Studies Panel, American Institutes for Research
- NAEP Technical Advisory Committee on Standard Setting, ACT, Inc.
- Growth Model Peer Review Committee, U.S. Department of Education
- Technical Advisory Committee, Student Assessment, Maine Department of Education
- Technical Advisory Committee, Student Assessment, Rhode Island Department of Elementary and Secondary Education
- National Technical Advisory Panel on Assessment and Accountability, Kentucky Legislative Research Commission
- Provincial Expert Panel, Student Assessment, Ontario, Canada
- Maryland, Alaska, Connecticut, and South Carolina Departments of Education

EDUCATION

- Harvard Graduate School of Education, M.Ed., 1986
- Antioch New England Graduate School, M.S. in Science Teaching, 1974
- University of Massachusetts, B.S., Chemistry, 1970

RECOGNITIONS

- Manuel Carballo Award for Excellence in Public Service, Governor Jane Swift, 2004
- Friend of Education Award, Massachusetts Secondary School Administrators Association, 2004
- Distinguished Community Service Award, Jobs for Youth, 2006

ROBERT "BOB" BICKERTON

PROFESSIONAL EXPERIENCE:

Massachusetts Department of Education, Malden 2/88 – present

Sr. Associate Commissioner of Education
Center for Lifelong Learning, Assessment, Educator Quality & Technology

Provide statewide strategic and policy leadership for:

- Adult & Community Learning Services
- Student Assessment,
- Educator Preparation, Quality and Licensure
- Information Services & Technology.

These offices manage a combined $135 million, including high stakes and formative student assessments, the approval of 1,000 educator preparation programs in 70 Massachusetts colleges and universities, the licensure and license renewal of over 80,000 preK-12 and adult education teachers, all department information and instructional technologies, data collections and analysis (including development and implementation of an enterprise wide education data warehouse) and over 200 adult learning centers, family literacy, transitions to higher education, and workplace education programs.

Director, Adult & Community Learning Services

First director of this office, established in 1988 by the Board of Education to meet its priority for more effective and expanded adult basic education services. Starting with $7 million in total state and federal funding and a "patchwork quilt" of services, this office has made extraordinary progress restructuring and building a fully integrated ABE service delivery system of more than 200 adult literacy, adult secondary, English for speakers of other languages, family literacy, workplace education, transitions to higher education and distance learning programs staffed by over 2,500 adult educators and supported with $43 million in total resources. Key characteristics of the system we have developed include standards based design, content and performance criteria, fully WEB/Internet based assessment, data and program management systems, a very successful/ entrepreneurial approach to fund raising and program development, and increased policy integration with several other state agencies. Initiated, supported and/or led several interagency initiatives including the "Massachusetts Family Literacy Consortium" (memoranda of agreements across 14 state education, employment & training, health & human service agencies), served on the executive committee of the MA Workforce Investment Board, helped craft our state's WIA Unified Plan, and brought all major pK-12 education associations together to forge common ground in pursuit of higher levels of educator effectiveness.

City of Boston Transportation Department, Boston 2/86 - 1/88

Deputy Commissioner

Responsible for overall management of three divisions within the Transportation Department: Traffic Management & Engineering, Operations and Enforcement, which together comprise over 85% of the BTD's 518 employees. I also played an integral role in planning for, securing required personnel and fiscal resources (+55%), and negotiating

contracts to implement a number of innovative programs. My role required extensive coordination with other City and State agencies, the Mayor and City Council, formulating policy and development of implementation plans.

ADULT EDUCATION TEACHING, DIRECTING,COMMUNITY LEADERSHIP:

Jamaica Plain Community Schools, City of Boston 10/84 - 2/86

Regional Director in this racially/ethnically/linguistically diverse community

Quincy School Community Council, Inc., Boston C.B.O. 9/81 - 10/84

Executive Director in a changing Boston Chinatown neighborhood

Community Learning Center, Cambridge P.S. & City of Cambridge 9/74 - 8/81

Administrator/ABE Math Teacher

Boston State College, Flexible Admissions Program, Boston 12/74 - 6/76

Math Coordinator/Teacher

Education Warehouse, Cambridge C.B.O. 10/72 - 8/74

ABE Volunteers Supervisor & Trainer

College of Public & Community Service, Univ. of Mass., Boston 2/74 - 8/74

Curriculum Developer and Math Instructor

Tutoring Plus, Inc., Cambridge C.B.O. 12/70 - 6/72

Youth Activities Coordinator & Tutor

EDUCATION & CERTIFICATION:

Antioch University/Cambridge College, Cambridge, MA	M.Ed	8/78
Massachusetts Institute of Technology, Cambridge, MA	Architecture	6/73
MA Teachers Certification in Secondary Math	#0231745	9/78

APPOINTMENTS:

Commissioner, National Commission on Adult Literacy	6/06 – 6/08
National Council of State Directors of Adult Education, and National Adult Education Professional Development Consortium, President, Executive Committee, and	11/91 – 6/06
National Legislative Chair (represented field in negotiations with Congress)	11/93 - 10/97
Jamaica Plain Community Programs, member, Governing Board	9/86 - 2/88
Jamaica Plain Neighborhood Council, by appointment of Mayor Flynn	10/85 - 2/86
Massachusetts Committee on Adult Education, Co-Chair	6/82 - 6/85
Coalition For Cambridge, by appointment of Mayor Frances Duehay	12/80 - 8/81
Forest Hill Neighbors, a Jamaica Plain, Boston Neighborhood Association	2/80 - 11/81
KLH Child Development Center, member, Board of Directors	3/75 - 4/76

David Haselkorn
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781)338-3562(w)
dhaselkorn@doe.mass.edu (b)(6)

Qualifications Summary

Innovative national education and non-profit leader with highly successful program development, research, policy, advocacy, public service marketing, and national media track record. Substantial policy, research, strategic planning, fundraising, polling, and philanthropic experience at the national, regional, state, and institutional levels. Strong conceptual and creative abilities with significant experience in education reform at the national level. Senior-level college administrative experience, as change agent

Experience

4/2009-Present **Associate Commissioner**
Educator Policy, Preparation, Licensure, and Leadership Development
Massachusetts Department of Elementary and Secondary Education

Oversee the Center for Educator Policy, Preparation, Licensure, and Leadership Development for Massachusetts Department of Elementary and Secondary Education. Provide policy direction and leadership for all phases of the educator career continuum for the Commonwealth of Massachusetts. Lead/supervise three units and a staff of more than 50. Member of the strategic leadership team (senior staff) for the Department, recognized as one of the most effective and forward-looking SEA's in the nation.

4/07-3/2009 **Senior Fellow**
Director of Policy Studies
Woodrow Wilson National Fellowship Foundation

Direct Foundation's new national teaching fellowship program, a national, state, and locally based strategy to establish the equivalent of a "Rhodes Scholarship" for high school teaching. Lead Annenberg National Teaching Fellowship and Ohio STEM Teaching Fellowship work. Oversee the Foundation's policy research and policy-related studies, public opinion and focus group research, and outreach. Maintain contacts with key state and national policy leaders.

Implement comprehensive strategies for growing the Fellowship at the state and national levels. Work with key state and university leaders to establish high quality clinically based Master's programs at leading national universities. Develop key policies and processes for outreach, recruitment, admissions, program development, mentoring, and induction. Direct evaluation strategies. Represent the Foundation before a variety of external audiences. Serve as a member of the Foundation's Senior Staff. Help raise more than $6 million in supporting funds for the Fellowship from leading national and regional grant makers.

1/05-3/07 **Vice President, Strategic and Policy Initiatives**
Lesley University

Advise University President on national policies, strategic positioning, advocacy, public relations, development, and strategic planning. Identify new business opportunities and nurture partnerships with states, districts, and national organizations. Represent the University before national audiences. Provide strategic guidance on foundations, federal relations, and communications. Oversee development of revised mission, University strategic vision, and a variety of new programs. Direct University initiatives related to Leadership for Social Change. Supervise Office of Public Affairs. Co-direct TEAC accreditation team. Help develop new PhD program in Leadership and Social Change. Advise/draft articles, op-eds/speeches for University President.

5/02 – 1/05 **Dean, National Education Programs and Policies/**
Associate Director, Center for Distance and Online Learning
Lesley University

Create an enhanced national presence for the Center and the University, oversee quality assurance processes for off-campus programs serving 8000 teachers in 23 states. Work closely with on and off-campus faculty and administration to help Lesley identify and meet the evolving teacher education and development needs of individuals, school districts, and states. Help guide new state entry and develop new partnerships.
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1/91 – 4/02 **President, Recruiting New Teachers, Inc.**

9/88 - 1/91 **Executive Director, Recruiting New Teachers, Inc.**

Lead unique national public service campaign designed to raise esteem for teaching; encourage individuals (particularly prospective candidates of color) to enter pathways into teaching; and foster improved local, state, and national policies and practices towards teacher recruitment, development, and diversity. Establish RNT as a leading voice for these issues in the national school reform arena.

Direct award-winning national public service advertising campaign designed to increase participation in the teacher profession. Oversee all aspects of most successful response campaign in the history of the Advertising Council (1,400,000 calls in eight years, $200-plus million in donated advertising placements).

Grow organization from one to twenty-two employees. Increase budget from $350,000 to $2.5 million annually. Oversee all RNT publications, PSAs, research/policy initiatives, national conferences, technical assistance efforts, and other program development. Establish RNT Urban Helpline, career counseling hotline serving the nations 50 largest urban school systems. Create RNT National Center for Precollegiate Teacher Recruitment, and the National Center for Teacher Recruitment, a unique federally funded national online clearinghouse and job bank portal.

Initiate networks, coalitions, and partnerships with major national education organizations. Represent RNT before national groups, U.S. Congress, and state legislatures advocating improved educational human resource development, school reform, and educational equity. Consult with a variety of organizations, states,

foundations, school districts, and the federal government on teacher development and diversity issues. Develop successful 5-city AmeriCorps project: The Urban Education Service Corps (securing $1,000,000 in funding from the National Corporation for National and Community Service). Lead statewide strategic planning task force for teacher recruitment in California resulting in more than $100 million in new state funding for teacher recruitment and induction in the Golden State. Assist in drafting major teacher quality and recruitment provisions of federal Title II Post-Secondary Education Reauthorization.

Raise over $20 million to fund the RNT campaign from leading national foundations, corporations, states, and the federal government. Work with prominent national board members to sustain and extend the reach of the organization via board development, fundraising, strategic planning, fiscal oversight, and board advocacy.

4/88-6/97 **Senior Advisor for Education Policy and Initiatives to David Rockefeller, Jr.**

Advise the Chairman of the Rockefeller Financial Services, Inc. (and former Chair, Rockefeller Brothers Fund) on strategies and issues related to education policy, philanthropy, the arts, and the environment. Represent Mr. Rockefeller on boards and committees; provide staff assistance for his ongoing work in education, collaborate on articles, speeches, etc. Maintain contacts with national, state, and local leaders involved in educational reform and philanthropy. Assist Mr. Rockefeller in administering his personal philanthropy.

1995-1997 **Senior Policy Advisor, National Commission on Teaching & America's Future (NCTAF).**

Provide strategic counsel to NCTAF's Executive Director and staff on national reform, communications, public engagement, and key advocacy issues. Help in shaping the Commission's policy, public outreach, and funding activities. Help in shaping the Commission's policy, public outreach, and funding activities. Author background drafts on teacher recruitment, selection/hiring, and induction.

11/85-4/88 **Director of Communications/Assistant to the President**
Lesley College (Cambridge, Massachusetts)

Advise President on policies relating to institutional quality and coherence, national affairs, educational policy, affirmative action, marketing, strategic planning, and advancement.
Draft major speeches, policies, and position papers on teacher education, undergraduate curriculum reform, national education and labor policies, and the future of higher education.
Member of College Senior Management and Planning Teams, responsible for developing three-year strategic and operating plans for the institution. Co-chair academic policy sub-committee. Develop first institution-wide mission statement.[1] Responsible for all college

[1] "Educating for the Professions That Put People First."

publications, media relations, and public relations programs. Oversee $500,000 publications budget, $170,000 office budget, and manage four person staff. Redesigned publications resulted in 40% increase in inquiries. College media profile dramatically increased (+2600%) over previous years.

2/83 - 11/85 **Director of Communications/Assistant to the President**
Bradford College

Senior college administrator at co-educational 425-student liberal arts college. Major architect, along with the President, in developing a national profile for Bradford's innovative "Practical Liberal Arts" curriculum. Developed programs to enhance the Bradford Plan in such areas as school/College collaborations, arts enrichment, critical discourse (writing, reading, speaking, and thinking skills across the curriculum), faculty development, and the co-curriculum.

Initiated and directed major gifts program resulting in more than $1 million dollars in successful grants from federal, corporate and foundation sources (NEH, FIPSE, EXXON, Ford Foundation, etc.). (Prior level of foundation giving was $600 annually.) Responsible for all College publications, media relations, government, community, and public relations programs. Directed commencement, College special events, and lecture series.

Significant national, regional, and local media visibility. CASE award winner for News and Information Programs. Bradford College named one of the most innovative colleges in American by U.S. News and World Report. 46% increase in inquiries; 29% increase in applications.

1/82-1/83 **Research Associate**
Carnegie Foundation for the Advancement of Teaching

One of four staff members for the Foundation's "Study of the American High School" (published as High School by Ernest L. Boyer), a nation-wide educational reform project. Collaborated in design of study's research agenda, focused interview guides, site visit protocols, and Foundation-initiated secondary school grants program. Analyzed field reports and made site visits on Foundation's behalf. Researched and wrote monographs and chapter drafts for High School. Prepared briefing material and policy papers for the National High School Advisory Panel and Carnegie Foundation President. Represented study before public and professional groups.

10/79 - 1/81 **Freelance Writer**
Jack Morton Productions
Paras/Kahane Productions

Conceived, wrote, and assisted in the production of trade association, corporate, and non-profit multimedia, film, filmograph, and video presentations. Developed other freelance communication projects; speech writing; proposal development; and brochure writing

and design.

10/79 - 6/80 **Paralegal/Researcher**
Hogan and Hartson

Assisted the firm's Community Service (pro bono) Administrator with legal and non-legal research and writing. Major areas of research: federal laws relating to education, housing discrimination, Section 504, and equal employment opportunity.

4/78-10/79 **Confidential Assistant to the Director**
Office for Civil Rights
U.S. Department of Health, Education, and Welfare

Provide personal assistance as reader and traveling aide to the Director, who was visually impaired. Staff participant in many of the decade's major civil rights debates including the Adams' litigation (post-secondary desegregation), Chicago School desegregation, and promulgation of Section 504 and Title Nine regulations. Assignments included, but were not limited to: substantive research; assistance in speech preparation, and correspondence preparation for the Director; assistance in copyediting material submitted for Federal Register publication and national dissemination.

8/75 - 12/75 **Writer/Editor**
Applied Urbanetics, Inc.

Editor and project coordinator, Catalog of National Institute of Education (NIE) Education Products 1985. Overall editorial and production responsibility for two-volume catalog of NIE-funded research projects.

Publications

Darling-Hammond, L and Haselkorn, D., "Reforming Teaching: Are We Missing the Boat?" Education Week (Commentary),Vol, XXVIII(27), 2009.

Levine, A. and Haselkorn, D., "Teaching at the Precipice: Strengthening Teacher Retention and Recruitment for the Long Haul." Education Week (Commentary), Vol. XXVIII(11), 2008.

Encore Performances: Tapping the Potential of Midcareer and Second-Career Teachers (Haselkorn, D. and Hammerness, K. Woodrow Wilson National Fellowship Foundation. 2008).

Teaching as a Second Career (Findings from a national opinion survey). Survey research: Peter D, Hart research Associates. Introduction and commentary: David C. Haselkorn. Woodrow Wilson National Fellowship Foundation. 2008).

McKenna, M. and Haselkorn, D, "NCLB and the Lessons of Columbine" USA Today Magazine, Vol.133 (2720), 2005.

"Why Shortcuts to Teaching Are Not the Rx We Need to Solve the Nation's Teacher Shortages" Education Week (Commentary), Vol. XXI(11), 2001.

The Essential Profession: American Education at the Crossroads (Haselkorn, D. and Harris, L. Recruiting New Teachers, Inc. 2001).

The Essential Profession: California Education at the Crossroads (Haselkorn, D. and Harris, L. Recruiting New Teachers, Inc. 2001).

How to Become a Teacher: A Complete Guide (Haselkorn, D. and Calkins, A., Recruiting New Teachers, Inc. 2000).

Learning the Ropes: Urban Induction Programs and Practices in the United States (Fideler, L. and Haselkorn, D., Recruiting New Teachers, Inc. 1999).

"Teacher Recruitment, Selection, and Induction: Policy Influences on Supply and Quality of Teachers" (Darling-Hammond, L., Berry, B., Haselkorn, D. and Fideler, L.). In Darling Hammond, L. and Sykes, G. (ed.), Teaching as the Learning Profession (Jossey-Bass, 1999).

The Essential Profession: A National Survey of Public Attitudes Toward Teaching, Educational Opportunity, and School Reform (Haselkorn, D. and Harris, L., Recruiting New Teachers, Inc. 1998).

The Essential Profession: A Survey of Public Attitudes in California Toward Teaching, Educational Opportunity, and School Reform (Haselkorn, D. and Harris, L. Recruiting New Teachers, Inc. 1998).

Take This Job and Love It: Making the Mid-Career Move To Teaching (Recruiting New Teachers, et al. Recruiting New Teachers, and Inc. 1998).

"Attracting, Preparing, and Supporting Teaching's Next Generation," (U.S. Department of Education. 1997).

"Shaping the Profession that Shapes America's Future, Initial Ideas for Teacher Development Across America and the Reauthorization of Title V of the Higher Education Act" (Haselkorn, et al. U.S. Department of Education. 1997).

"Tackling America's Teacher Deficit," Education Week (Backpage Commentary), Vol. XV(41), 1997.

Shaping the Profession That Shapes California's Future: The California Statewide Teacher Recruitment Action Plan (Haselkorn, et al. California Commission on Teaching, 1997).

"Breaking the Class Ceiling," Education Week (Backpage Commentary), Vol. XV(41), 1996.

Breaking the Class Ceiling: Paraeducator Pathways to Teaching (Recruiting New Teachers, Haselkorn, D. and Fideler, L. 1996).

"Teacher Recruitment, Selection, and Induction." Background Paper for the National Commission on Teaching and Americas Future (Haselkorn, D. and Berry, B., 1996)

Haselkorn, D. and Calkins, A. "Why Be a Teaching Professional: What Your Guidance Counselor Never Told You," Peterson's Guide to Colleges for Careers in Teaching. Princeton' Peterson's Guides (1996).

"The Schools We Want, The Teachers We Need," *Quality Teaching*, Vol. 4 (1), 1994.

Careers in Teaching Handbook (Recruiting New Teachers, Haselkorn, D., and Calkins, A. 1993).

State Policies to Improve the Teacher Workforce: Shaping the Profession that Shapes America's Future (Haslkorn, et al. Recruiting New Teachers, Inc. 1993).

Teaching's Next Generation: A National Study of Precollegiate Teacher Recruitment Programs (Haselkorn, et al. Recruiting New Teachers, Inc. 1993).

Ranslow, P.B., and Haselkorn, D. "Bradford College: Curriculum Reform and Renewal," Opportunity in Adversity: How Colleges Can succeed in Hard Times. San Francisco: Jossey-Bass, 1986.

Editor, "Opportunity for Excellence: The Lessons Learned by Five Colleges" (Conference Report of Ford Foundation Liberal Arts Project, 1985).

Levine A., and Haselkorn, D.; "Liberal Education's Civic Agenda," The Forum For Liberal Education, Vol. 7 (4), 1985.

Levine, A., and Haselkorn, D. "For the Sake of the Children: The Demise of Education Consensus in America," National Forum, Vol. 64 (2), 1984.

Awards

2001 Distinguished Achievement Award for Excellence in Education Publishing of the Association of Education Publishers for How To Become a Teacher: A Complete Guide.

1999 Distinguished Achievement Award for Excellence in Education Publishing of the Association of Education Publishers for Take This Job and Love It: Making the Mid-Career Move to Teaching.

1997 National Academy for Television Arts and Sciences, Finalist for National PSA Emmy Award.(I Teach)

1994 Distinguished Achievement Award for Excellence in Education Publishing of the Education Press Association for Teaching's Next Generation.

1994 Distinguished Achievement Award for Excellence in Education Publishing of the Education Press Association for Careers in Teaching Handbook.

1993 Bronze Effie (American Marketing Association Award for Excellence and Effectiveness in Public Service Advertising).(Heroes)

1992 Best of New York Citation of Excellence of the American Advertising Federation.(Heroes)

1992 Special recognition Award of The Council of the Great City Schools.

1992 Point of Excellence Award for Distinguished Contributions in Education of the Kappa Delta Pi.

1993 Kohl International Teaching Award.

1992 National Education Association Award for Advancement of Learning Through Broadcasting.

1991 National Academy for Television Arts and Sciences, Finalist for National PSA Emmy Award. (Be a Teacher. Be a Hero.)

1984 Council for the Advancement and Support of Education (CASE) Exceptional Achievement Award for News and Information Programs.

Other Experience

Board Member, National Board for Professional Teaching Standards and member of Executive Committee (2003-2009),

Chair, Ad Hoc Committee on Governance, National Board for Professional Teaching Standards

Member, Chancellor's Blue Ribbon Advisory Panel on Human Resources, NYC Public Schools

Keynote Speaker California Statewide Beginning Teacher Support and Assessment (BTSA) Conference, 2008

Advisor, Ensuring Access Panel, Center for the Future of Teaching and Learning (2005-2006)

Panelist and Presenter, AACTE Annual Meeting (2005)

Panelist/Presenter National Academy of Education-sponsored Town Meeting on NCLB (2004)

Presenter/Facilitator, Blackboard Invitational Summit on Online-Learning (2004)

Panelist, National Clearinghouse on Alternative Teacher Certification (2004).

Panelist, AERA Symposium on Alternative Routes to Teaching (2003).

Keynote Speaker, Florida Teacher Quality, Recruitment, and Retention Symposium (2003).

Panelist and Presenter, Hechinger Institute Colloquium on Politics and the Press (2002).

Panelist and Presenter, Education First Washington Policymaker Forum in No Child Left Behind (2002).

Panelist and Presenter, American Youth Policy Forum Capitol Hill Seminar on Teacher Quality and ESEA (2002).

Keynote Presenter, Texas State Teacher Recruitment Interagency Planning Committee, Texas Education Agency (2001).

Guest Speaker, Hawaii Business Roundtable, Hawaii Senate and Assembly Education Committees, and Hawaii Teaching Standards Board (2001).

Panelist, AERA Symposium on Teacher Recruitment (2001).

Keynote Speaker, Broward County Academy of Teaching Excellence/South Florida Annenberg Project District-wide Professional Development Workshop (2001).

Keynote Speaker, L.A. Community College District Symposium on Teacher recruitment and Retention (2001).

Plenary Speaker, ECS/NGA Title II Technical Assistance Workshop (2001).

Keynote Speaker, Minnesota Teacher Quality Policy Forum (2000).

Keynote Speaker, California Center for the Future of Teaching and Learning, Fall Forum (2000).

Keynote Speaker, Performance Institute, National Summit on Recruiting, Hiring, Training, and Retaining Quality Teachers (2000).

Expert Witness, U.S. House of Representatives Subcommittee on Postsecondary Education Hearings on Teacher Quality (2000).

Session Moderator, "Teacher Quality: A Conversation Among Southern Governors," Southern Governors Association Summit (2000).

Keynote Speaker, Lesley University Board of Trustees Annual Meeting (2000).

Keynote speaker, California Education Policy Seminar (1999).

Presenter/Leader, Harvard Graduate School of Education Faculty Discussion Group: "Teacher Recruitment, Induction, and Development" (1999).

Keynote speaker, DeWitt Wallace Reader's Digest Fund Pathways to Teaching Careers National Scholars Conference (1999).

Consultant/Member, Illinois Task Force on Minority Teacher Recruitment (1999).

Presenter, Education Week Editorial Board Quality Counts Planning Meeting (1999).

Presenter, Shaping America's Future, an AFT/NEA Conference on Teacher Quality (1998).

Panelist/Expert, National Association of State Boards of Education Task Force on Teacher Quality (1998).

Keynote Speaker/Convener, 5th Annual Pathways to Teaching Conference, (1998).

Keynote Speaker, California Center for the Future of Teaching and Learning, Fall Forum (1998).

Lead Facilitator: A Conversation on Teacher Quality/The Council of the Great City Schools Annual Meeting (1998).

Keynote Speaker, California Intersegmental Coordinating Council Symposium on the Future of Teaching (1997).

Keynote Speaker, California Education Policy Seminar (1997).

Presenter, National Commission on Teaching and America's Future (Launch of Commission Report 1996).

Keynote Speaker, Project Induct—North Carolina Statewide Induction Program (1996).

Co-founder, Urban Education Service Corps, Urban Teacher Collaborative (national alliance for teacher development with the Council of Great City Schools, and the Council of Great City Colleges of Education).

Co-convener, (with the OERI, NABSE, and Phi Delta Kappa) "Ensuring Excellence and Diversity in the Teaching Profession, a National Shareholders Conference" (1996).

Consultant Convener, California Commission on Teacher Credentialing Task Force on Statewide Teacher Recruitment Strategies, (1996).

"America's Teacher Diversity Imperative," Plenary Address, Tenth Annual National Conference on Recruitment and Retention of Minorities in Education (1996).

Keynote Speaker, The 1996 Beginning Teacher Induction Network Conference (1996).

Keynote Speaker, American Association of School Personnel Administrators Annual Meeting (1996).

"Recruitment for Diversity," Convener and Moderator, Plenary Symposium Panel, American Association of Colleges of Teacher Education Annual Meeting (1996).

"Urban Education's Professional Development Challenge," Panel Presentation, American Association of Colleges of Education Annual Meeting (1996).

"Teaching at Its Best," Panel Presentation, National Association of State Boards of Education Annual Meeting (1996).

Panel Convener and Moderator "Urban Education's Professional Development Challenge: Issues and Opportunities. " Council of the Great City Schools of Education, 1995.

"America at the Crossroads: Precollegiate Teacher Recruitment and the Promise of Reform." Keynote Address Third Annual Pathways to Teaching Careers Precollegiate Teacher Recruitment Conference, (1995).

Conference Convener/Keynote Speaker: California's Teacher Development and Diversity Challenges (co-sponsored with the California Commission on Teacher Credentialing, 1994).

Keynote Speaker, First Annual Paraeducator Pathways to Teaching Careers Conference (1995).

Presenter, California Education Policy Seminar (1995).

"Shaping The Profession That Shapes America's Future," Keynote Address, Missouri State School Superintendent's Annual Meeting (1994).

"Systemic Teacher Development" Keynote address State Education Leadership Conference, Consortium for Policy Research in Education, Harvard Graduate School of Education - September, 1993.

"America's Education Human Resource Challenges," Keynote address, National Council for Accreditation of Teacher Education State Accreditation Teams Annual Meeting, Washington, D.C., - December 1993.

Co-convener (with National Conference of State Legislatures), "State Policies to Improve the Teacher Workforce,"1992.

Panel Convener, "Systemic Approaches to Human Resource Development," Council of Great City Schools 1992 Annual Meeting.

Former Trustee, Teaching Matters, New York, NY.

Former Trustee, The Shady Hill School, Cambridge, MA.

Consultant/Advisor, "Testing Assumptions: A National Survey of Teachers' Attitudes Towards School Reform" (LH Research for the Ford Foundation).

Member, National Advisory Panel, National Partnership for Excellence and Accountability in Teaching (NPEAT).

Member, National Advisory Group, NCATE Professional Development Schools Standards Project.

Advisory Panel Member, Center for Early Adolescence Panel on Strengthening Teacher Preparation for the Middle Grades.

Member, Advisory Board, New Teacher Recruitment and Retention Project, Teachers College, Columbia University.

Member, Advisory Board, Danforth Foundation, Dorothy Danforth Compton Fellowship Program.

Member, Advisory Board, National Foundation for the Improvement of Education Study of Professional Education.

Member, Advisory Board, Cambridge College (Cambridge, MA).

Member, Advisory Board, National Center for Transition to Teaching.

Member, California Public Education Partnership.

Member, Advisory Board, California Center for the Future of Teaching and Learning

Board Associate, National Center for Education and the Economy (1988-1993).

Member, Blue Ribbon Panel on Attracting Minorities into Teaching Mathematics of the SUMMA Project, Mathematical Association of America.

Project Director and Conference Coordinator, Ford Foundation-sponsored conference on the future of liberal arts colleges, 12/84.

Presenter, Pathways to Teaching Careers, a National convocation on increasing diversity in teaching sponsored by the DeWitt Wallace-Reader's Digest Fund.

Consultant/Initiator: School Choice: a national study of the Carnegie Foundation for the Advancement of Teaching (Princeton, NJ, 1992).

Consultant, National Board for Professional Teaching Standards.

Invited Speaker, American History of Education Society Annual Meeting. (Topic: Reform Movements in American Secondary Education, 1982).

Presidential political campaign policy and transition team experience.

Congressional Intern, The Honorable Dante B. Fascell (ret.), 1970.

Education

Attended Bennington, St. Johns, and Sarah Lawrence Colleges. No degree.

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WORK HISTORY

7/08 – present	Deputy Commissioner Massachusetts Department of Elementary and Secondary Education
7/00 – 6/08:	Superintendent of Schools Lowell (MA) Public Schools
9/95 - 1/00	Assistant Professor Lesley University School of Education Graduate Programs in Educational Administration and Teaching, Learning and Assessment Cambridge, MA
8/98 – 8/99:	Interim Superintendent of Schools Lexington (MA) Public Schools
7/86 – 8/95:	Superintendent of Schools Wellesley (MA) Public Schools
7/83 – 6/86:	Associate Superintendent for Curriculum and Instruction Wellesley (MA) Public Schools
7/78 – 6/83:	K-12 Professional Personnel and Curriculum Administrator Acting Superintendent of Schools (7/81-12/81) Administrative Assistant to the Superintendent (7/78-6/79) Franklin (MA) Public Schools
9/76 – 6/78: 9/72 – 6/75:	Junior High School Social Studies/Language Arts Teacher Arlington (MA) Public Schools
9/70 – 6/72:	High School Social Studies Teacher Methuen (MA) Public Schools

SELECTED PRESENTATIONS AND WORKSHOPS

Special Education: a systems approach to closing the achievement gap, keynote address at the Third Annual Special Education Day sponsored by SPEDCO, November 2007

The Hancock Case, a superintendent's perspective, address at the Legislators' Breakfast sponsored by EDCO, the Greater Boston Education Collaborative, spring 2004

'Two-fers', 'trade offs' and other ways to make budget building (and cutting) a tool for school improvement, guest lecture, Graduate School of Education, UMass Lowell, 2004

Leading as Teaching, keynote address at the Annual Conference of the Massachusetts Association of Secondary School Principals (MASSP), July 2003

The Lowell Program: an urban public school-university partnership, presentation at the National Staff Development Council's Annual Conference, December 2002

Leading as Teaching, keynote address at the "Aspiring Leader Conference", sponsored by the Massachusetts Department of Education, October 2002

Core Course Redesign Proposal, presentation to the faculty at Lesley College, May 1998

An Integrated College/Public School Model for Staff Development, Annual conference, Technology Learning and Staff Development for the 21st Century, Washington, D.C., May 1997, (co-presenter)

Collaboration: *a key to reform,* keynote address for the third annual MASCD High School Conference, Milford, MA, September 1995

High School-College Connections: *a Dialogue,* The College Board National Forum, Washington, DC, October, 1994 (co-leader)

High School College-Connections, Harvard Graduate School of Education, January 1994, (co-organizer and moderator for a three-day national *Dialogue* for leaders from nineteen high school-college/university teams from across the U.S.)

The Press and Public Schools, Boston University, 1993-1995 (guest lecturer)

Facing Tomorrow: a conversation with educational leaders, Harvard Graduate School of Education, May 1993 (moderator)

Getting Started with Systems Thinking in the Schools, American Association of School Administrators (AASA) Annual Conference, Orlando, February 1993 (co-presenter)

Systems Thinking and its Implications for Special Education, AASA Annual Conference, Orlando, February 1993 (co-presenter)

Making Change, opening address at annual conference of the Technology Education Association of Massachusetts, Worcester, January 1993 (speaker)

On Purposes and Beliefs, Keynote address, 4MAT Renewal Conference, Chicago, June 1992

Impacts of resource constraints: *school finance elections in Massachusetts,* American Education Finance Association Annual Conference, New Orleans, March 1992 (presenter)

Total quality: some implications for businesses and schools, keynote address, Partnerships for Excellence Conference sponsored by Department of Education and Business Roundtable, Southboro (MA), March 1992

An approach to improving African-American achievement, address at METCO Directors' annual Conference, Boston, May 1990

Workshops on urban economics and local history for Tufts University and Massachusetts Council for the Social Studies in Boston area school districts, 1975-1979

PUBLICATIONS

"Leading as Teaching", Perspectives, (Massachusetts ASCD), fall, 2004 (lead author)

"Using Systems Thinking to Improve Student Learning", Quality Network News, AASA, July/August, 1994 (co-author)

"Systems Thinking About Learning: The Paradigm Shift", Quality Goes to School, AASA, 1993 (co-author)

"Spending Matters", Boston Sunday Globe, November 3, 1991

Governing Yourself, Chicago, SRA, 1980: junior high school civics textbook (co-author)

Boston in the Colonial Period, Cambridge, ABT, 1979: text and activity book on urban history (co-author)

"Creating a Textbook: Linking Process and Content", Curriculum Review, August, 1978 (co-author)

SELECTED PROFESSIONAL ASSOCIATIONS & ACTIVITIES

Alumni Council, Harvard Graduate School of Education, member, 1989-1993; Chair, 1992-93
Boston Public Schools, School Improvement Coach, 1999-2000
Empowering Multicultural Initiative (EMI), an eight-town collaborative formed in 1990 to raise academic achievement of African-American students, funded in 1994 through a *Goals 2000* grant, Board Chair, 1991-95
Harvard Alumni Association, appointed representative of Harvard Graduate School of Education, 1993-95
Harvard Graduate School of Education, *The Harvard Seminar for New Superintendents*, faculty member, 1996-98
Harvard Graduate School of Education, *Urban Superintendents Program,* mentor, 2003-2004
Massachusetts Association of School Superintendents (MASS), member, 1981, 1986 - 2008
Massachusetts *Commission on the Common Core of Learning*, member, 1993-94
Massachusetts Department of Education, *Stakeholder Working Group on Accountability*, representative of Urban Superintendents' Network, 2007 - 2008
Massachusetts High Technology Council's *K-12 Education Leadership Group*, member, 2007 – 2008
The Readiness Project, Subcommittee on Accountability and Assistance, Co-chair, 2007-2008
Tri-County Superintendents' Regional Roundtable, Chair, 1989-90
Urban Superintendents' Network (Massachusetts), Co-Facilitator, 2000-2008

EDUCATIONAL BACKGROUND

Ed.D.	Boston University	1991	major: educational administration
	Dissertation:		A Study of Proposition 2 ½ Override Voting to Support Public Schools in Massachusetts' Municipalities in 1990
Ed.M.	Harvard University	1976	major: education
A.B.	Middlebury College	1970	major: history The Phi Beta Kappa Senior Prize

Other Coursework and Training

M.I.T.	Institute on Systems Dynamics	1991
Efficacy Institute	Efficacy Training for Administrators	1991
AASA	Leadership for Learning Organizations	1992
AASA	Statistical Methods for Total Quality Schooling	1993
Schoolworks	Massachusetts Charter School Inspection Training	1999
EDCO	*Leading the Learning: Professional Practice in a Standards-Based Environment,* a 45-hour course taught by Dr. Louise Thompson	1999
COSI	Spanish Language Institute	2001 & 2002
Research for Better Teaching	*The DNA of School Leadership*	2004 & 2005
National Institute for School Leadership (NISL)	*Executive Development Program for Principals*	2006 - 2008

Appendix A5: Priority Districts and Schools

Level 4 Schools and Districts

District	School
Boston	Agassiz Elementary School
	Blackstone Elementary School
	Dearborn Middle School
	Elihu Greenwood Elementary School
	English High School
	Harbor School
	Jeremiah E. Burke High School
	John F. Kennedy Elementary School
	John P. Holland Elementary School
	Orchard Gardens K–8 School
	Paul A. Dever Elementary School
	William Monroe Trotter Elementary School
Fall River	Henry Lord Middle School
	John J. Doran Elementary School
	Matthew J. Kuss Middle School
Holyoke	Morgan Elementary School
	William J. Dean Technical High School
Lawrence	Arlington Elementary School
	South Lawrence East Middle School
Lowell	Charlotte M. Murkland Elementary School
Lynn	E.J. Harrington Elementary School
	William P. Connery Elementary School
New Bedford	John Avery Parker Elementary School
Springfield	Alfred G. Zanetti Montessori Magnet School
	Brightwood School
	Chestnut Accelerated Middle School
	Elias Brookings K–5 School
	German Gerena Community School
	High School of Commerce
	Homer Street School
	John F. Kennedy Middle School
	M. Marcus Kiley Middle School
	White Street School
Worcester	Chandler Elementary Community School
	Union Hill School

Urban Superintendents Network
participating districts

Boston*
Brockton*
Cambridge
Chelsea
Chicopee
Everett
Fall River*
Fitchburg
Framingham
Haverhill
Holyoke*
Lawrence*
Leominster
Lowell*
Lynn*
Malden
New Bedford*
Pittsfield
Revere
Somerville
Springfield*
Taunton
Worcester*

* *Commissioner's Districts*

Readiness Centers Initiative

Governor Patrick's Education Action Agenda included a recommendation to establish regional Readiness Centers, multipurpose and collaborative centers focused on improving the quality of teaching both across the education continuum and across Massachusetts. The Executive Office of Education (EOE) established six Readiness Centers in October 2009, and they are managed and operated by regional consortia of partners that include public and private institutions of higher education, school districts, early education and out-of-school-time providers, educational collaboratives, non-profit organizations, and business and community partners.

Core Functions of the Readiness Centers

- Provide high-quality professional development and instructional services to educators in early education and out-of-school-time programs, K-12 institutions, and higher education institutions to address both local/regional needs and statewide priorities

- Convene stakeholders from early education, elementary and secondary education, higher education, and other sectors to collaboratively address key education priorities, leverage resources, build statewide capacity, and increase integration and coherence across the education continuum

The Readiness Centers are beginning to provide professional development and instructional services to address local/regional needs and the following statewide priorities: 1) closing persistent achievement gaps among different groups of students; 2) improving the quality of instruction for English language learners, students receiving special education services, and in STEM courses of study; 3) using data more effectively to assess student progress and inform instruction; and 4) improving the quality of early education and out-of-school-time services in Massachusetts. In addition, they are leveraging existing relationships and building new partnerships among stakeholders to improve the delivery mechanisms through which services are provided to educators and also collaboratively address the following education priorities: 1) developing and implementing a rigorous and aligned P-20 curriculum; 2) developing and retaining an effective educator workforce; 3) improving reading proficiency for children from birth through grade three; 4) increasing college and career readiness; and 5) increasing student engagement and success in STEM fields of study.

Each Readiness Center is also providing a site and basic operational support for a District and School Assistance Center that is providing targeted assistance and focused professional development to selected districts and schools that are identified pursuant to regulations of the Board of Elementary and Secondary Education.

Leadership and Governance

In collaboration with the Departments of Early Education and Care (EEC), Elementary and Secondary Education (ESE), and Higher Education (DHE); the Standing Committee on Professional Education for the State Colleges Council of Presidents (SCOPE); and other partners, the EOE has established an organizational structure to sustain this initiative. The Readiness Centers Network includes all of the regional partners and state representatives, and supports successful partnerships among the Readiness Centers by disseminating information about effective professional development models and instructional

practices and developing strategies that address common needs across all regions. In addition, the Readiness Centers Coordinating Committee, which includes representatives from each region and also state representatives, is the leadership team for this initiative.

The six Readiness Centers and the primary regional partners are as follows.

Berkshire Readiness Center – Massachusetts College of Liberal Arts, Berkshire Community College, and the Berkshire Compact for Higher Education

Central Massachusetts Readiness Center – Fitchburg State College, Massachusetts Elementary School Principals' Association, Worcester State College, Mount Wachusett Community College, Quinsigamond Community College, Ashburnham Westminster Regional School District, Auburn Public School District, Fitchburg Public Schools, Dudley-Charlton Regional School District, Worcester Public Schools, FLLAC Educational Collaborative, and the French River Education Center

Greater Boston Readiness Center – Framingham State College, University of Massachusetts Boston, Wheelock College, Massachusetts Bay Community College, and the Greater Boston Regional Collaboratives Organization

Northeast Regional Readiness Center – Salem State College, University of Massachusetts Lowell, North Shore Community College, Middlesex Community College, Northern Essex Community College, Merrimack College, Endicott College, and Gordon College

Pioneer Valley Readiness Center – Westfield State College, University of Massachusetts Amherst, Hampshire Educational Collaborative, and the Lower Pioneer Valley Educational Collaborative

Southeastern Massachusetts Readiness Center – Bridgewater State College, University of Massachusetts Dartmouth, Bristol Community College, Cape Cod Community College, Massasoit Community College, Massachusetts Maritime Academy, Brockton Workforce Investment Board, New Bedford Workforce Investment Board, Southeast Collaboratives Regional Organization, Lighthouse Superintendents' Group, and the Lighthouse Assistant Superintendents' Group

Impact and Added Value

The Readiness Centers are having positive impact and adding value by:

- Increasing the effectiveness of educators across the continuum and across Massachusetts by increasing the quality, alignment, and coherence of professional development/instructional services;
- Maximizing the power of collaboration and convening local, regional, and state stakeholders to address critical issues in education;
- Building new mechanisms for sharing information about best practices and effective models; and
- Building local, regional, and statewide capacity to create a truly coherent and seamless education system in Massachusetts.

For additional information about the Readiness Centers initiative, please contact Saeyun Lee in the EOE at saeyun.lee@state.ma.us.

Readiness Centers Network

The Readiness Centers Network (RCN) is promoting and supporting the development of effective partnerships among the entities that are managing and operating six Readiness Centers in Massachusetts.

Primary Functions

- Disseminate information about best practices and replicable professional development, instructional, and other educational models to the regional partners for the Readiness Centers and other stakeholders across the state

- Establish mechanisms that will promote effective and consistent communication among the regional partners

- Support the development and implementation of strategies that can address common goals across the regions (including increasing the quality, alignment, and coherence of professional development and instructional services; allocating existing resources more efficiently and effectively; and leveraging existing relationships and developing new partnerships among stakeholders to achieve the primary goals of the Readiness Centers initiative)

- Support the assessment of progress to date, both with regard to the establishment of the Readiness Centers and the impact of services and activities on student, educator, and other outcomes

The RCN is also serving as the primary system through which the Executive Office of Education (EOE) and the Departments of Early Education and Care (EEC), Elementary and Secondary Education (ESE), and Higher Education (DHE) are providing technical assistance and support to the regional partners.

Leadership and Membership

The RCN was established and is being managed by the EOE with the support of several partners: representatives from EEC, ESE, and DHE; Carol Keirstead, RMC Research Corporation; Jan Phlegar, Learning Innovations at WestEd; and Frederick Clark, the Standing Committee on Professional Education (SCOPE) for the Council of State College Presidents.

The members of the RCN include representatives from the regional partners for the Readiness Centers, including but not limited to members of the governing boards or executive committees for each region, and the Executive Director for each Readiness Center. Each region must be represented by a diverse array of stakeholders from early education and care, elementary and secondary education, and higher education. Representatives from the EOE, EEC, ESE, DHE, and SCOPE are also serving as members of the RCN.

Roles and Responsibilities of the State Partners

To oversee the establishment and management of the RCN and ensure that stated goals are being achieved, the EOE (in collaboration with state and regional partners) is identifying evolving priorities, defining and coordinating the efforts of the contributing partners, convening the regional partners on a regular basis, and coordinating the delivery of statewide technical assistance and support. In addition, the EOE is actively seeking fiscal and other resources to sustain the Readiness Centers initiative in the short- and long-term.

EEC, ESE, and DHE are supporting the RCN by providing information related to early education and care, elementary and secondary education, and higher education respectively to the regional partners as needed or requested; and working in collaboration with the EOE to achieve stated goals.

Carol Keirstead and Jan Phlegar are supporting the RCN by providing technical assistance to EOE staff members (and EEC, ESE, and DHE staff members as appropriate), assisting with the design of initial RCN meetings, facilitating/documenting RCN meetings, and disseminating the proceedings and products to all participants.

SCOPE is supporting the RCN by leveraging existing partnerships among the state colleges to advance the goals of the Readiness Centers initiative, contributing to the development of a common rubric to evaluate professional development activities, and contributing to the creation and maintenance of the RCN website that will provide information and also link proposed websites for the Readiness Centers. SCOPE will also support the organization of a statewide annual research and practice conference for multiple stakeholders.

The outcomes have included the development of a cohesive vision for the Readiness Centers initiative, increased collaboration among the regional partners and state agencies, the development of strategic plans for meeting the goals of the Readiness Centers initiative and the RCN, and the creation of preliminary outcomes and measures to guide the first phase of implementation.

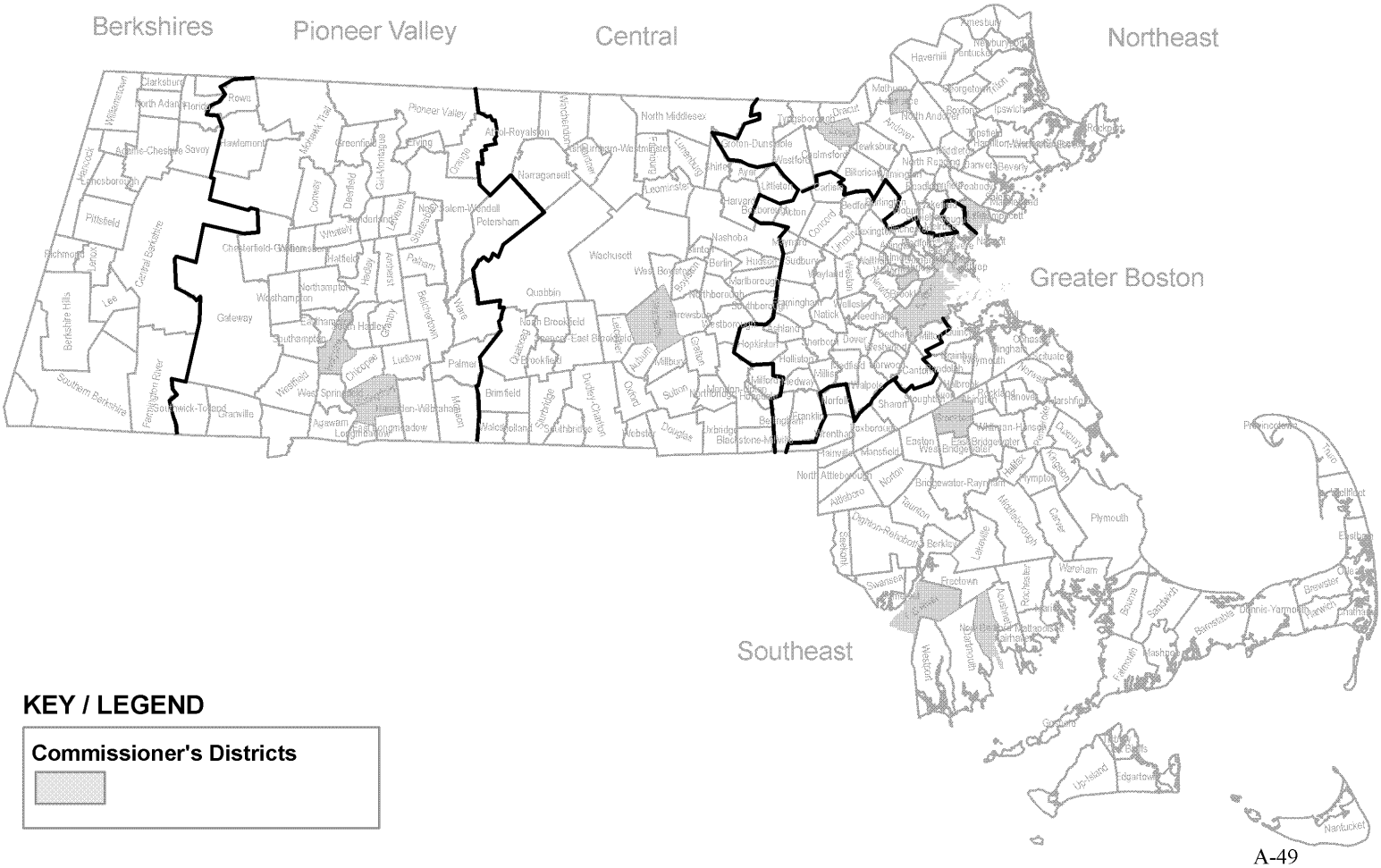
Schedule of RCN Meetings

The EOE convened the first RCN meeting on Friday, November 13, 2009, and subsequent meetings were convened in December 2009 and also March and April 2010.

The EOE will convene at least three RCN meetings per year, and will also organize an annual conference. In addition, in collaboration with the EEC, ESE, DHE, and other partners, the EOE will continue to disseminate information (including guidance documents and information about best practices) to the RCN members as appropriate.

For more information about the RCN, please contact Saeyun Lee in the EOE at saeyun.lee@state.ma.us.

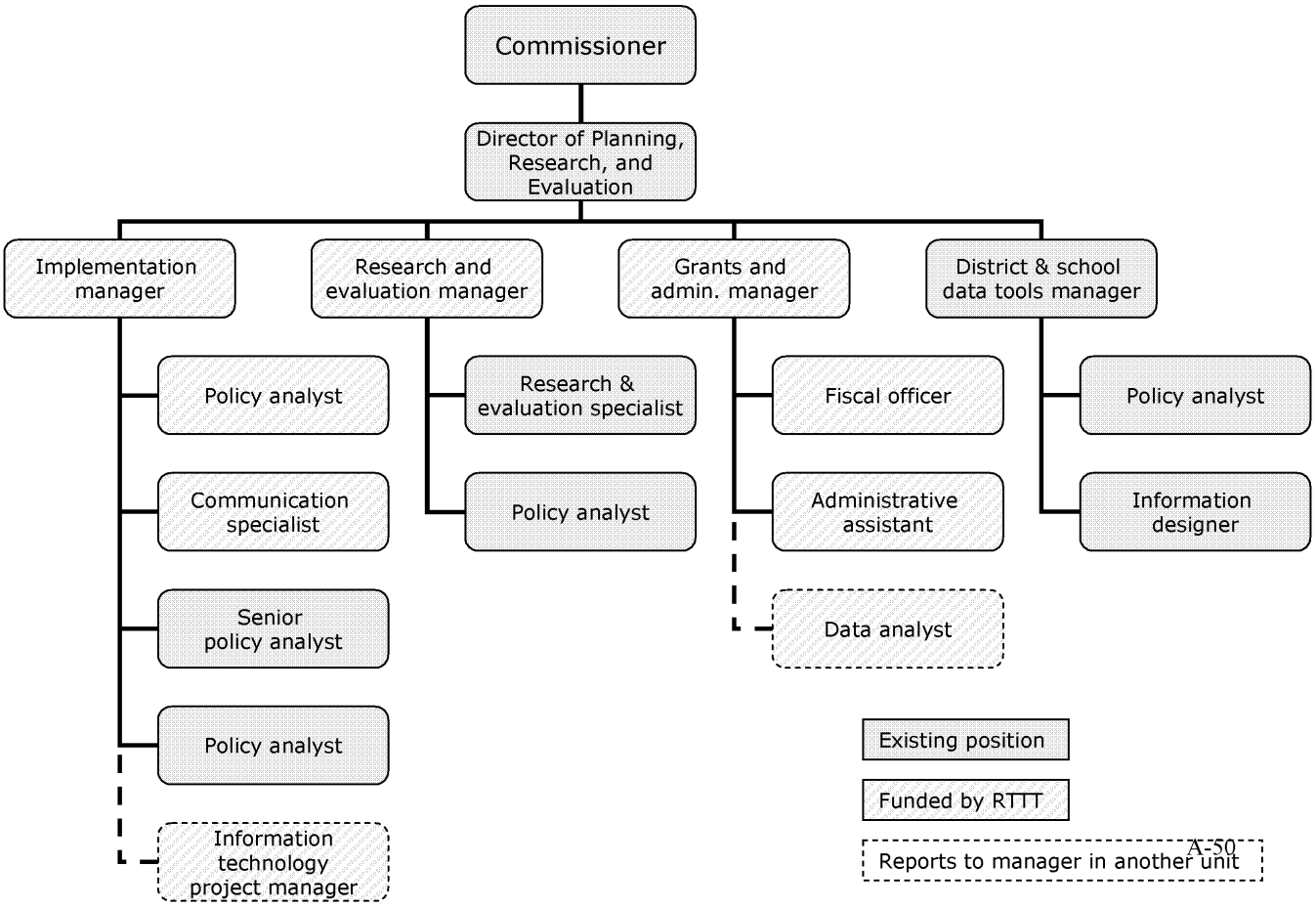
District and School Assistance Center (DSAC) Regions



KEY / LEGEND

Commissioner's Districts

Appendix A9: Race to the Top Program Management Structure



Appendix A10: Job Descriptions for Program Management Staff

Implementation manager
Provides general oversight on implementation; drives results through effective program management; establishes goals and benchmarks for all projects; coordinates with staff embedded in program units; ensures district accountability and support.

Grants and administration manager
Coordinates grant review with program units; disburses funds; reports on and monitors grants; provides assistance to districts on grant requirements; oversees all operational functions.

Fiscal officer
Provides fiscal accountability; reports on and monitors budgets; manages contracts issued under RTTT; reviews and processes all fiscal documents funded from RTTT; maintains internal spending plan and monitors expenditures to ensure proper reconciliation of funds.

Research and evaluation manager
Designs the overall evaluation strategy for the grant; designs and manages individual program evaluations to measure effectiveness of policies and programs; identifies effective and ineffective practices and key learnings from program implementation.

Policy analyst
Supports effective implementation through performance measure tracking and reporting, advisory memos, etc; develops reports and analysis to support accountability for progress and performance.

Data analyst
Provides data for federal and state reporting, program monitoring, evaluation, and research purposes; conducts other data analysis.

Data systems program manager
Oversees all data systems implementations for RTTT initiatives.

IT project manager
Oversees development and implementation of all information technology projects funded through Race to the Top.

Communication specialist
Develops a communications strategy and implements it with the field; disseminates best practices and lessons learned; coordinates advisory group meetings and convening events with participating districts; produces publications.

Administrative assistant
Supports the OSPRE team in all the above functions.

Appendix A11: Budget Summary and Project Budgets, With Narrative

BUDGET PART I: BUDGET SUMMARY TABLE

Budget Part I: Summary Budget Table (Evidence for selection criterion (A)(2)(i)(d))					
Budget Categories	**Project Year 1**	**Project Year 2**	**Project Year 3**	**Project Year 4**	**Total**
1. Personnel	$2,973,000	$3,363,890	$3,297,138	$2,783,454	$12,417,482
2. Fringe Benefits	$1,041,441	$1,189,755	$1,201,892	$1,023,356	$4,456,445
3. Travel	$397,562	$339,062	$317,142	$317,140	$1,370,906
4. Equipment	$441,434	$700,889	$171,710	$0	$1,314,033
5. Supplies	$121,700	$33,050	$28,150	$56,900	$239,800
6. Contractual	$22,508,049	$18,156,337	$17,749,610	$13,343,535	$71,757,531
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$434,810	$1,757,908	$125,147	$92,000	$2,409,865
9. Total Direct Costs (lines 1–8)	$27,917,996	$25,540,891	$22,890,790	$17,616,385	$93,966,062
10. Indirect Costs	$1,765,282	$2,177,679	$1,770,396	$1,508,920	$7,222,278
11. Funding for Involved LEAs	$175,800	$175,800	$87,900	$0	$439,500
12. Supplemental Funding for Participating LEAs	$3,755,564	$6,079,231	$6,679,199	$6,858,167	$23,372,160
13. Total Costs (lines 9–12)	$33,614,643	$33,973,601	$31,428,284	$25,983,472	$125,000,000
14. Funding Subgranted to Participating LEAs (50% of Total Grant)	$33,614,643	$33,973,601	$31,428,284	$25,983,472	$125,000,000
15. Total Budget (lines 13–14)	$67,229,285	$67,947,203	$62,856,568	$51,966,944	$250,000,000

BUDGET PART I: BUDGET SUMMARY NARRATIVE

Massachusetts' proposed Race to the Top budget totals $250 million. The budget includes $23.4 million in supplemental funding for participating LEAs, an allocation from the state's share of funds to support LEAs in implementing critical initiatives. This budget focuses on investments that will continue to reap benefits after the four-year grant period, rather than activities that will be difficult to sustain without grant funding. We have also chosen to contract for many services rather than add agency staff, maintaining a lean central office by leveraging the expertise and capacity of our state's technology, business, and nonprofit sectors. Further, we will coordinate, reallocate, or repurpose approximately an additional $33.8 million (19% of available funds) and 53.0 FTEs (10% of agency staff) from federal and state funding sources to support our proposed activities (see Appendix A10). We have included $9.2 million (3.7% of the budget) for independent program evaluation to support our commitment to holding ourselves accountable for results, identifying best practices, and making work available nationally for others to learn from.

The list of projects is included on the following page. The project-level budget narrative includes a project-level budget table with 4-year costs in the required budget categories for each project, as well as a detailed description of and justification for the line-item costs. The project-level descriptions also include information on projected state-LEA cost-sharing, in the form of the estimated percentage of total costs that the state will contribute to specific line items and projects. In addition, the project-level budget narratives include information on other funding sources (e.g., Title IG) that will be used to leverage Massachusetts' proposed Race to the Top investments.

List of Projects Included in the Project-Level Budget Narrative

Project Name	Proposal Section*	Other Associated Criteria*	Total Costs**
1. Overall program and grant management	(A)(2)(i)	(A)-(E)	$16,557,678
2. Disseminate the Common Core Standards	(B)(3)		$582,858
3. Create a unified PreK–12 teaching and learning system	(B)(3)	(C)(3), (D)(5)	$10,284,234
4. Expand implementation of proven secondary school programs, policies, and incentives	(B)(3)	(E)(2)	$3,289,775
6. Transform state data systems	(C)(2)	(A)-(E)	$10,690,257
7. Invest in the data systems and technology necessary to support the statewide PreK–12 teaching and learning system	(C)(3)	(B)(3), (D)(5)	$12,522,114
8. Strengthen and expand educator training and supports for data use	(C)(3)	(A)-(E)	$4,854,971
9. Improve teacher and principal effectiveness based on performance	(D)(2)		$17,772,666
10. Ensure equitable distribution of effective teachers and principals	(D)(3)	(E)(2)	$11,404,495
11. Improve the effectiveness of teacher and principal preparation programs	(D)(4)		$9,335,676
12. Provide effective support to teachers and principals	(D)(5)	(B)(3), (C)(3), (E)(2)	$8,141,044
13. Develop a specialized corps of turnaround teacher and leader teams	(E)(2)	(D)(3), (D)(5)	$5,005,507
14. Build capacity of proven partners to support struggling schools	(E)(2)		$2,488,465
15. Build district capacity to intervene in struggling schools	(E)(2)	(C)(2)	$6,784,860
16. Develop, attract, and manage lead partners and turnaround operators to execute the restart model at Level 4 and 5 schools	(E)(2)		$3,785,400
17. Support Innovation Schools	(F)(3)		$1,500,000

*Note that most of the proposed projects are interconnected across multiple Race to the Top criteria, as described in the proposal narrative. The above table lists the proposal section in which the description of each project is primarily located in one column; the next column lists other associated criteria.

**Total costs include state direct and indirect costs and Supplemental Funding for Participating LEAs, but do not include the 50% of the budget subgranted to Participating LEAs.

Budget: Indirect Cost Information

To request reimbursement for indirect costs, please answer the following questions:

Does the State have an Indirect Cost Rate Agreement approved by the Federal government?

YES ●
NO ○

If yes to question 1, please provide the following information:

Period Covered by the Indirect Cost Rate Agreement (mm/dd/yyyy):

From: 07/01/2009 To: 06/30/2010

Approving Federal agency: _X_ED ___Other

(Please specify agency): _____

Directions for this form:

1. Indicate whether or not the State has an Indirect Cost Rate Agreement that was approved by the Federal government.

2. If "No" is checked, ED generally will authorize grantees to use a temporary rate of 10 percent of budgeted salaries and wages subject to the following limitations:
   (a) The grantee must submit an indirect cost proposal to its cognizant agency within 90 days after ED issues a grant award notification; and
   (b) If after the 90-day period, the grantee has not submitted an indirect cost proposal to its cognizant agency, the grantee may not charge its grant for indirect costs until it has negotiated an indirect cost rate agreement with its cognizant agency.

3. If "Yes" is checked, indicate the beginning and ending dates covered by the Indirect Cost Rate Agreement. In addition, indicate whether ED, another Federal agency (Other) issued the approved agreement. If "Other" was checked, specify the name of the agency that issued the approved agreement.

INDIRECT COST RATE AGREEMENT
STATE EDUCATION AGENCY

COPY

ORGANIZATION:

Massachusetts Department of Education
350 Main Street
Malden, MA 02148

DATE: JUL 3 1 2009

AGREEMENT NO. 2008-204

FILING REFERENCE: This replaces previous Agreement No. 2006-180A dated October 14, 2008

The purpose of this Agreement is to establish indirect cost rates for use in awarding and managing of Federal contracts, grants, and other assistance arrangements to which Office of Management and Budget (OMB) Circular A-87 applies. The rates were negotiated by the U.S. Department of Education pursuant to the authority cited in Attachment A of OMB Circular A-87.

This agreement consists of four parts: Section I - Rates and Bases; Section II - Particulars; Section III - Special Remarks; and, Section IV -Approvals.

Section I - Rate(s) and Base(s)

	Effective Period				Coverage	
TYPE	From	To	Rate	Base	Location	Applicability
Fixed	07-01-08	06-30-09	14.3%	1/	All	Restricted 2/
Fixed	07-01-08	06-30-09	24.4%	1/	All	Unrestricted 3/
Predetermined	07-01-09	06-30-10	14.3%	1/	All	Restricted 2/
Predetermined	07-01-09	06-30-10	24.4%	1/	All	Unrestricted 3/

1/ Total direct cost less: capital expenditures, alterations, renovations, flow-through funds, and the portion of each competitive bid sub-award in excess of $25,000 regardless of the period covered by that sub-award.

2/ For use on Federal programs which require use of a restricted rate as defined by 34 CFR 75.563 and 34 CFR 76.563.

3/ For use on Federal programs which do not require the use of a restricted rate as defined by 34 CFR 75.563 and 34 CFR 76.563.

Treatment of Fringe Benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs. However, in accordance with Office of Management and Budget Circular A-87, Attachment B (8)(d)(3), payments to separating employees for unused leave are treated as indirect costs.

Capitalization Policy: Items of equipment costing $1,000 or more with a useful life in excess of one year are capitalized.

Section II - Particulars

SCOPE: The indirect cost rate(s) contained herein are for use with grants, contracts, and other financial assistance agreements awarded by the Federal Government to the Massachusetts Department of Education and subject to OMB Circular A-87.

LIMITATIONS: Application of the rate(s) contained in this agreement is subject to all statutory or administrative limitations on the use of funds, and payment of costs hereunder is subject to the availability of appropriations applicable to a given grant or contract. Acceptance of the rate(s) agreed to herein is predicated on the conditions: (A) that no costs other than those incurred by the State Education Agency were included in indirect cost pools as finally accepted, and that such costs are legal obligations of the State Education Agency and applicable under the governing cost principles; (B) that the same costs that have been treated as indirect costs are not claimed as direct costs; (C) that similar types of information which are provided by the State Education Agency, and which were used as a basis for acceptance of rates agreed to herein, are not subsequently found to be materially incomplete or inaccurate; and (D) that similar types of costs have accorded consistent accounting treatment.

ACCOUNTING CHANGES: Fixed or predetermined rates contained in this agreement are based on the accounting system in effect at the time the agreement was negotiated. When changes to the method of accounting for cost affect the amount of reimbursement resulting from the use of these rates, the changes will require the prior approval of the authorized representative of the cognizant negotiation agency. Such changes include, but are not limited to, changing a particular type of cost from an indirect to a direct charge. Failure to obtain such approval may result in subsequent cost disallowances.

FIXED RATE: The negotiated rate is based on an estimate of the costs which will be incurred during the period to which the rate applies. When the actual costs for such period have been determined, an adjustment will be made in a subsequent negotiation to compensate for the difference between the cost used to establish the fixed rate and the actual costs.

NOTIFICATION TO OTHER FEDERAL AGENCIES: Copies of this document may be provided to other Federal agencies as a means of notifying them of the agreement contained herein.

AUDIT: If a rate in this Agreement contains amounts from a cost allocation plan, future audit adjustments which affect this cost allocation plan will be compensated for during the rate approval process of a subsequent year.

Section III - Special Remarks

1. This Agreement is effective on the date of approval by the Federal Government.

2. Questions regarding this Agreement should be directed to the Negotiator.

3. Approval of the rate(s) contained herein does not establish acceptance of the Organization's total methodology for the computation of indirect cost rates for years other than the year(s) herein cited.

Section IV - Approvals

For the State Education Agency:

Massachusetts Department of Education
350 Main Street
Malden, MA 02148

Signature

Name

ANTHONY P. DeLORENZO
CHIEF FISCAL OFFICER

Title

9-3-2009

Date

For the Federal Government:

US Department of Education
OCFO/FIPAO/ICG
830 First Street, NE
Washington, DC 20202-4450

Signature

Mary Gougisha
Name

Director, Indirect Cost Group
Title

JUL 31 2009

Date

Paul J. Brickman
Negotiator

(202) 377-3831
Telephone Number

BUDGET PART II: PROJECT-LEVEL BUDGET NARRATIVE

Budget Part II: Project-Level Budget Table
Project Name: Overall program and grant management
Associated with Criteria: (A)(2)(i)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$695,000	$715,850	$737,326	$759,445	$2,907,621
2. Fringe Benefits	$243,459	$250,762	$258,285	$266,034	$1,018,540
3. Travel	$60,240	$60,240	$60,240	$60,240	$240,960
4. Equipment	$5,000	$0	$0	$0	$5,000
5. Supplies	$46,600	$11,500	$11,500	$11,500	$81,100
6. Contractual	$3,042,500	$2,487,500	$2,387,500	$2,387,500	$10,305,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$117,000	$67,000	$67,000	$67,000	$318,000
9. Total Direct Costs (lines 1-8)	$4,209,799	$3,592,852	$3,521,851	$3,551,719	$14,876,220
10. Indirect Costs	$433,051	$413,056	$414,032	$421,319	$1,681,458
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$0	$0	$0	$0
13. Total Costs (lines 9-12)	$4,642,849	$4,005,908	$3,935,882	$3,973,038	$16,557,678

Project Name: Overall program and grant management
Associated with Criteria: (A)(2)(i)

1) Personnel

- *Implementation manager:* The state will hire 1 FTE to provide general oversight on implementation; drive results through effective program management; establish goals and benchmarks for all projects; coordinate with staff embedded in program units; and ensure district accountability and support.
- *Research and evaluation manager:* The state will hire 1 FTE to design the overall evaluation strategy for the grant; design and manage individual program evaluations to measure effectiveness of policies and programs; and identify effective and ineffective practices and key learnings from program implementation.
- *Policy analyst:* The state will hire 1 FTE to support effective implementation through performance measure tracking and reporting, and advisory memos; and to develop reports and analysis to support accountability for progress and performance.
- *Operations and grant manager:* The state will hire 1 FTE to oversee all operational functions; coordinate grant review with program units; disburse funds; report on and monitor grants; and provide assistance to districts on grant requirements.
- *Fiscal officer:* The state will hire 1 FTE to provide fiscal accountability; report on and monitor budgets; manage contracts issued under RTTT; and maintain internal spending plan and monitor expenditures to ensure proper reconciliation of funds.
- *Communication specialist:* The state will hire 1 FTE to develop a communication strategy and implement it with the field; disseminate best practices and lessons learned; coordinate advisory group meetings and convenings with participating districts; and produce publications.
- *IT project manager:* The state will hire 1 FTE to oversee all data systems implementations for RTTT initiatives.
- *Data analyst:* The state will hire 1 FTE to provide data for federal and state reporting, program monitoring, and evaluation; and to conduct other data analysis for research purposes.
- *Administrative assistant:* The state will hire 1 FTE to support the project management team in all the above functions.

Note that all personnel estimates in all project budgets include an estimated inflation rate of 3% in Years 2-4.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Implementation manager	100%	$85,000	$85,000	$87,550	$90,177	$92,882	$355,608
Research and evaluation manager	100%	$80,000	$80,000	$82,400	$84,872	$87,418	$334,690
Policy analyst	100%	$65,000	$65,000	$66,950	$68,959	$71,027	$271,936
Operations and grant manager	100%	$85,000	$85,000	$87,550	$90,177	$92,882	$355,608
Fiscal officer	100%	$85,000	$85,000	$87,550	$90,177	$92,882	$355,608
Communication specialist	100%	$65,000	$65,000	$66,950	$68,959	$71,027	$271,936
IT project manager	100%	$110,000	$110,000	$113,300	$116,699	$120,200	$460,199
Data analyst	100%	$65,000	$65,000	$66,950	$68,959	$71,027	$271,936
Administrative assistant	100%	$55,000	$55,000	$56,650	$58,350	$60,100	$230,099

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Total	35.03%	$243,459	$250,762	$258,285	$266,034	$1,018,540

3) Travel

- *Grant and project management:* To visit participating districts for program monitoring, site visits, and other program management support functions. Assumes six staff each make two instate trips per month at 100 miles per trip at $0.40 per mile, and other staff make 3 instate trips per year at 100 miles per trip at $0.40 per mile.
- *US ED travel:* Assumes OSPRE director plus two staff will need to attend out-of-state meetings with US ED twice per year.
- *Professional development:* Travel for professional development of RTTT staff members. Assumes each staff person attends one conference or similar event per year at $2,000 per trip.

- *External advisory council:* Estimated costs of travel expenses for External Advisory Group. Assumes one in-person meeting per year (and one conference call), with 8 national members at $2,000 per trip plus 2 international members at $4,000 per trip.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Grant and project management	24x6 people, 3x4 people	$40	$6,240	$6,240	$6,240	$6,240	$24,960
US ED travel	2x3 people	$2,000	$12,000	$12,000	$12,000	$12,000	$48,000
Professional development	1x9 people	$2,000	$18,000	$18,000	$18,000	$18,000	$72,000
External advisory council	1x8 national, 1x2 international	$2,000 natl., $4,000 intl.	$24,000	$24,000	$24,000	$24,000	$96,000

4) Equipment

- *Audience voting system*: A system to accommodate gathering audience feedback at stakeholder meetings and regional networking sessions for up to 150 audience members.

Equipment	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Audience voting system	Gather audience feedback	$5,000	$5,000				$5,000

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$4,500	$4,500	$4,500	$4,500	$18,000
Conference supplies	Name tags, folders, and other non-printed materials for	$5,000 per year	$5,000	$5,000	$5,000	$5,000	$20,000

	conferences						
Desktop computer equipment	Desktop computers and monitors	$1,400 per person	$12,600	$0	$0	$0	$12,600
Printers	One black-and-white and one color printer to meet the needs of 9 new employees, plus 3 additional printers to support the work of other RTTT-embedded staff	$2,000	$10,000	$0	$0	$0	$10,000
Software	For research and evaluation manager and policy analyst	$1,500	$4,500	$0	$0	$0	$4,500
Other supplies	Other supplies needed to support project work	$2,000	$2,000	$2,000	$2,000	$2,000	$8,000
Copier	Project management staff and other RTTT-embedded staff will require one black-and-white networked copier	$8,000	$8,000	$0	$0	$0	$8,000

6) Contractual

- *Graphic design:* Contract with graphic designer to design overall "look and feel" for RTTT materials and to design individual print products as needed.
- *Copyediting:* Copyediting services for publications and other written materials.
- *Meeting logistics:* Contract to manage logistics for convening advisory groups.
- *Professional development for all staff involved in RTTT:* Contract for professional development for all ESE staff involved in RTTT on effective project management and organizational change management.
- *Grant management addition:* Contract to build an addition to the grant management system to allow reporting on progress against grant activities and goals
- *Contract management:* Vendor to manage IT contracts, procurement, and RFPs.

- *DSAC LEA support:* Contracts to hire 6 half-time staff, based in DSACs, to support LEA implementation of RTTT plans and dissemination of best practices
- *Program evaluation:* Budget to evaluate all project initiatives as described in (A)(2).

Product/ Service	Cost per Procure-ment	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Graphic design	$80,000	n/a	$20,000	$20,000	$20,000	$20,000	$80,000
Copyediting	$40,000	n/a	$10,000	$10,000	$10,000	$10,000	$40,000
Meeting logistics	$30,000	n/a	$7,500	$7,500	$7,500	$7,500	$30,000
Professional development	$300,000	n/a	$250,000	$50,000	$0	$0	$300,000
Grant management addition	$250,000	n/a	$250,000	$0	$0	$0	$250,000
Contract management	$405,000	n/a	$205,000	$100,000	$50,000	$50,000	$405,000
Program evaluation	$9.2M	n/a	$2.3M	$2.3M	$2.3M	$2.3M	$9.2M

7) Training Stipends

None

8) Other

- *Other conference costs*: Covers cost of space rental and food for the annual half-day technical assistance sessions; meetings of external and implementation advisory groups; and other convenings of participating LEAs.
- *Printing*: Covers cost of printing technical assistance and best practices materials, including materials for conferences.
- *Professional development fees for RTTT project management staff*: Professional development of RTTT project management staff. $1,000 per staff person per year for conference registration fees, purchasing materials, etc.
- *Project management software*: Server-based project management software to support effective coordination and implementation of projects.

Other Expenditure	Cost per Item	# of items	Year 1	Year 2	Year 3	Year 4	Total

Other conference costs	Varies	n/a	$30,000	$30,000	$30,000	$30,000	$120,000
Printing	Varies	n/a	$28,000	$28,000	$28,000	$28,000	$112,000
Professional development fees	$1,000 per person	9 per year	$9,000	$9,000	$9,000	$9,000	$36,000
Project management software	$50,000	n/a	$50,000	$0	$0	$0	$50,000

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$433,051	$413,056	$414,032	$421,319	$1,681,458

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

PROJECTS DESCRIBED IN SECTION B

Project Name	Proposal Section
2. Disseminate the Common Core Standards	(B)(3)
3. Create a unified PreK–12 teaching and learning system	(B)(3)
4. Expand implementation of proven secondary school programs, policies, and incentives	(B)(3)

Budget Part II: Project-Level Budget Table **Project Name:** Disseminate the Common Core Standards **Associated with Criteria:** (B)(3) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$0	$0	$0	$0	$0
2. Fringe Benefits	$0	$0	$0	$0	$0
3. Travel	$39,500	$0	$0	$0	$39,500
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$0	$0	$0	$0	$0
6. Contractual	$422,000	$50,000	$0	$0	$472,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$30,000	$0	$0	$0	$30,000
9. Total Direct Costs (lines 1-8)	$491,500	$50,000	$0	$0	$541,500
10. Indirect Costs	$35,258	$6,100	$0	$0	$41,358
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$0	$0	$0	$0
13. Total Costs (lines 9-12)	$526,758	$56,100	$0	$0	$582,858

Project Name: Disseminate the Common Core Standards
Associated with Criteria: (B)(3)

1) Personnel
None

2) Fringe Benefits
None

3) Travel

- *Meetings to conduct comparative analyses of standards:* 5 day-long meetings at $1,500 each to analyze Common Core standards and compare to Massachusetts English Language Arts and Mathematics Curriculum Frameworks.
- *Meetings to augment the K–12 Common Core standards with unique Massachusetts standards:* Four meetings to decide what (if any) Massachusetts will add to the Common Core standards ($2,000 per meeting for room, food, travel, and substitute reimbursement for 20 attendees at each meeting).
- *Fall 2010 overview sessions:* 12 meetings to disseminate standards through DSACs or webinars led by existing staff ($2,000 per meeting).

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Meetings to conduct comparative analyses of standards	n/a	n/a	$7,500	$0	$0	$0	$7,500
Meetings to augment the K-12 Common Core standards with unique Massachusetts standards	n/a	n/a	$8,000	$0	$0	$0	$8,000
Summer 2010 overview sessions	n/a	n/a	$24,000	$0	$0	$0	$24,000

4) Equipment
None

5) Supplies
None

6) Contractual

- *Uploading new standards online:* Loading Common Core standards into Massachusetts' standards database and coding online content to new standards.
- *Dissemination workshops:* 12 2-day discipline-specific workshops held in summer 2010 involving 50 people at each workshop. These sessions will be held at DSACs, led by consultants at $6,000 per meeting.
- *Creating guidance documents for dissemination:* ESE staff and discipline-specific Curriculum Framework Advisory Panels work with consultants to produce guidance documents on applications of the Common Core standards.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Uploading new standards online	$200,000	1 year	$150,000	$50,000	$0	$0	$200,000
Dissemination workshops	$6,000 per workshop	12 2-day workshops	$72,000	$0	$0	$0	$72,000
Creating guidance documents for dissemination	$200,000	1 year	$200,000	$0	$0	$0	$200,000

7) Training Stipends

None

8) Other

Product/ Service	Cost per Item	# of Items	Year 1	Year 2	Year 3	Year 4	Total
Printing	$5 per copy	6,000 copies of standards manuals for LEAs	$30,000	$0	$0	$0	$30,000

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total

24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$35,258	$6,100	$0	$0	$41,358

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table **Project Name:** Create a unified PreK–12 teaching and learning system **Associated with Criteria:** (B)(3) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$470,000	$516,600	$632,523	$651,498	$2,270,621
2. Fringe Benefits	$164,641	$192,349	$268,478	$276,532	$902,001
3. Travel	$228,100	$228,100	$228,100	$228,100	$912,400
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$17,200	$3,550	$3,550	$37,150	$61,450
6. Contractual	$2,154,151	$1,604,012	$610,000	$520,000	$4,888,163
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$25,000	$25,000	$25,000	$25,000	$100,000
9. Total Direct Costs (lines 1-8)	$3,059,092	$2,569,611	$1,767,651	$1,738,281	$9,134,635
10. Indirect Costs	$251,306	$266,106	$311,747	$320,440	$1,149,599
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$0	$0	$0	$0
13. Total Costs (lines 9-12)	$3,310,398	$2,835,718	$2,079,398	$2,058,721	$10,284,234

Project Name: Create a unified PreK–12 teaching and learning system
Associated with Criteria: (B)(3)

1) **Personnel**

Model Curricula

- *Administrator for Design Teams:* The state will hire 1 FTE to oversee the Curriculum Design Team coordinators and design the state plan for development, implementation, and evaluation of model curriculum units over the four years of the project. This position would also build ESE internal capacity to continue model curriculum development post-RTTT.
- *Curriculum Design Team coordinators:* The state will hire 2 FTEs to work with the administrator to oversee development, implementation, and evaluation in the 7 content areas for which they are responsible. These positions would also conduct training for current ESE staff and for LEAs in curriculum design.
- *Publisher:* The state will hire 1 FTE responsible for proofreading, editing materials, assisting with design, and posting online documents. This position would also be the department liaison for online technology resources associated with model curricula.

Assessment Tools – Formative/Interim Assessments

- *Online testing coordinator:* The coordinator will be responsible for overseeing all aspects of selecting and coding items for the interim and formative item banks, the creation of model interim assessments, and will serve as the "business lead" liaison to the technical team that will build/modify and deploy online assessments and concomitant linkages to and reports generated by ESE data systems for all levels of users.
- *Help desk specialists:* The state will hire .5 FTE in year 2 and 2 FTE in years 3 & 4 to assist in the rollout and implementation of the teaching and learning system.

Assessment Tools – Extended Performance Tasks

- *Project manager/contractor liaison:* The state will hire 1 FTE to coordinate with ESE and contractors on program design, development, and implementation. The manager will also oversee contractor deliverables, focusing on K–12 academic areas.
- *Vocational/technical task specialist:* The state will hire .5 FTE to manage development of the vocational/technical performance tasks.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Model Curricula: Administrator for Curriculum Design Teams	100%	$90,000	$90,000	$92,700	$95,481	$98,345	$376,526
Model Curricula: Curriculum Design Team coordinators	2 FTEs at 100%	$65,000	$130,000	$133,900	$137,917	$142,055	$543,872

Model Curricula: Publisher	100%	$50,000	$50,000	$51,500	$53,045	$54,636	$209,181
Formative/Interim Assessments: Online Testing Coordinator	100%	$80,000	$80,000	$82,400	$84,872	$87,418	$334,690
Formative/Interim Assessments: Help desk specialists	50% yr 2 / 200% yrs 3,4	$65,000		$32,500	$133,900	$137,917	$304,317
Extended Performance Tasks: Project manager/ contractor liaison	100%	$80,000	$80,000	$82,400	$84,872	$87,418	$334,690
Extended Performance Tasks: Vocational/technical task specialist	50%	$80,000	$40,000	$41,200	$42,436	$43,709	$167,345

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Total	35.03%	$164,641	$192,349	$268,478	$276,532	$902,001

3) Travel

Model Curricula

- *Staff travel*: $1,000 allocated for instate travel and $2,000 for out-of-state travel per FTE for training and conferences in Years 1 and 2. In Years 3 and 4, $2,000 allocated for instate travel and $1,000 for out-of-state travel per FTE.
- *Meetings for content areas:* Space rental for 5 days in the summer and 2 days during the school year for 285 attendees ($30,000 per day for rental, food, technology, and materials).

Assessment Tools – Formative/Interim Assessments:

- *Online testing coordinator:* $500 for instate trips; $2,000 for 1 out-of-state trip.
- *Convening interim assessment advisory committee:* An advisory committee comprised of a total of 12 individuals (practitioners and assessment experts) will be convened 3-4 (primarily) "day trips" per year in schools & other no-space cost settings.

Assessment Tools – Extended Performance Tasks

- *Project manager/contractor liaison:* This position will travel regionally to contractor meetings. This position will attend at least one out-of-state professional development event each year.
- *Vocational/technical task specialist:* This position will have more limited travel, predominantly instate to support implementation and professional development.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Model Curricula: Staff travel	20 instate trips per year, 1 out-of-state trip per year per FTE	$50 per instate trip; $2,000 per out-of-state trip	$9,000	$9,000	$9,000	$9,000	$36,000
Model Curricula: Meetings for content areas	n/a	n/a	$210,000	$210,000	$210,000	$210,000	$840,000
Formative/ Interim Assessments: Technical specialist/ contractor liaison	10 instate trips and 1 out-of-state trip per year	$500 per instate trip; $2,000 per out-of-state trip	$2,500	$2,500	$2,500	$2,500	$10,000
Formative/ Interim Assessments: Convening interim assessment advisory committee	n/a	n/a	$3,600	$3,600	$3,600	$3,600	$14,400
Extended performance tasks: Project manager/ contractor liaison	40 instate trips; 1 out-of-state trip per year	$50 per trip instate; $2,000 per trip out-of-	$2,500	$2,500	$2,500	$2,500	$10,000

		state					
Extended performance tasks: Vocational/technical task specialist	10 instate trips per year	$50	$500	$500	$500	$500	$2,000

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Model Curricula: Office supplies	Basic office supplies for staff	$500 per person per year	$2,000	$2,000	$2,000	$2,000	$8,000
Model Curricula: Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$8,000	$0	$0	$0	$8,000
Model Curricula: Computers	Laptop computers for teacher teams	35 teams @ $1,000 per team				$35,000	$35,000
Formative/ Interim Assessments: Office supplies	Basic office supplies for staff	$500 per person per year	$200	$50	$50	$50	$350
Formative/ Interim Assessments: Desktop computer equipment	Desktop & laptop computers and monitors	$1,400 per desktop/ $2,200 per laptop	$2,200	$1,400	$1,400	$0	$5,000
Extended performance tasks: Office	Basic office supplies for	$500 per person per	$400	$100	$100	$100	$700

supplies	staff	year					
Extended performance tasks: Desktop computer equipment	laptop computers and monitors	$2,200 per person	$4,400	$0	$0	$0	$4,400

6) Contractual

Model Curricula

- *National experts:* National experts will be brought in to lead trainings at curriculum development sessions at $4,000 per day for 10 days in Years 1-2, decreasing to 5 days for Years 3-4.
- *Standards and revision alignment:* Standards Revisions and Alignment; Consultants to revise MA standards to align them with the Common Core; meetings for approximately 30 members of Curriculum Framework Review Panels; Year I: English Language Proficiency, Arts, Health; Year II: History, Career and Vocational Technical Education, Year III Foreign Language

Digital Library

- *WGBH:* Identify new resources, maintain and update existing resources; develop a metadata exchange, cataloguing, and integrated search process to include other state partners' resources; create online community of practice and a Teacher TV library of best practices and videos; develop an online tutorial for teachers to document best practices and disseminate statewide; provide online and face-to-face awareness session on how to use the resources; expand bandwidth for the system

Formative/Interim Assessments

- *Assessment contractor:* The contractors will be responsible for selecting and coding items for the interim and formative item banks, the creation of psychometrically sound interim assessments, and ensure compatibility with the technical infrastructure and linkages required by the teaching & learning system (see section C).

Extended Performance Tasks

- *Assessment contractor*: The contractor will be responsible for seeding, refining, validating and distributing EPTs. Also responsible for convening and supporting regional forums (in no-space cost settings), EPT-ADCs, developing and deploying online trainings, reports, and for auditing scoring of sample of student tasks and producing technical analyses and reports.

Product/ Service	Cost per Procure-ment	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Model Curricula: National experts	$4,000 per day	10 days in each of Years	$40,000	$40,000	$20,000	$20,000	$120,000

		1-2; 5 days in each of Years 3-4					
Model Curricula: Standards and revision alignment	$120,000	3 years	$40,000	$40,000	$40,000	$0	$120,000
Digital Library: WGBH	$2,077,258	4 years	$324,151	$574,012	$150,000	$100,000	$1,148,163
Formative/Interim Assessments: Assessment contractor	$1,500,000	4 years	$1,200,000	$600,000	$100,000	$100,000	$2,000,000
Extended performance tasks: Assessment contractor	$1,500,000	4 years	$550,000	$350,000	$300,000	$300,000	$1,500,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$251,306	$266,106	$311,747	$320,440	$1,149,599

11) Funding for Involved LEAs
None

12) Supplemental Funding for Participating LEAs
None

13) Total Costs
See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table **Project Name:** Expand implementation of proven secondary school programs, policies, and incentives **Associated with Criteria:** (B)(3) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$75,000	$77,250	$79,567	$81,954	$313,771
2. Fringe Benefits	$26,272	$27,061	$27,872	$28,708	$109,913
3. Travel	$14,000	$10,000	$10,000	$10,000	$44,000
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$2,500	$500	$500	$500	$4,000
6. Contractual	$200,000	$190,000	$290,000	$150,000	$830,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$317,772	$304,811	$407,939	$271,162	$1,301,684
10. Indirect Costs	$40,936	$46,314	$47,077	$41,764	$176,091
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$410,000	$620,000	$580,000	$202,000	$1,812,000
13. Total Costs (lines 9-12)	$768,708	$971,125	$1,035,016	$514,926	$3,289,775

Project Name: Expand implementation of proven secondary school programs, policies, and incentives
Associated with Criteria: (B)(3)

1) Personnel

College and Career Readiness

- *College and Career readiness program coordinator:* This individual will be coordinate the implementation and management of the STEM Early College High School, Pre-AP Program Development Initiative.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
College Career and Readiness: Program coordinator	100%	$75,000	$75,000	$77,250	$79,567	$81,954	$313,771

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Total	35.03%	$26,272	$27,061	$27,872	$28,708	$109,913

3) Travel

College and Career readiness

- *Out-of-state travel*: Travel costs for two out-of-state conferences per year.
- *Kick-off conference*: Conference for STEM Early College High Schools
- *In-state travel*: Ongoing annual networking and technical assistance sessions
- *In-state network meetings*: There will be 2 meetings conducted each year.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
College and Career Readiness: Out-of-state travel	1 per year	$2,000	$2,000	$2,000	$2,000	$2,000	$8,000
College and Career Readiness: Kick-off conference	n/a	n/a	$4,000	$0	$0	$0	$4,000

College and Career Readiness: In-state travel	n/a	n/a	$2,000	$2,000	$2,000	$2,000	$8,000
College and Career Readiness: In-state network meetings	n/a	n/a	$6,000	$6,000	$6,000	$6,000	$24,000

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
College and Career Readiness: Office supplies	Basic office supplies for staff	$500 per person per year	$500	$500	$500	$500	$2,000
College and Career Readiness: Laptop computer equipment	Desktop computers and monitors	$2,000 per person	$2,000	$0	$0	$0	$2,000

6) Contractual

College and Career Readiness

- *STEM ECHS Technical assistance:* ESE will hire a Technical assistance partner to support implementation of the STEM ECHS model in 6 schools.
- *ECHS coordination:* Interagency agreement with DHE to coordinate the ECHS programs across campuses and to develop policies to support dual enrollment.

Competency Tracking

- *Implementing/maintaining tracking system:* The contractor will upgrade and refine the vocational educational Competency Tracking system to improve accessibility and speed.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
College and Career Readiness: Technical	$400,000	4 years	$100,000	$100,000	$100,000	$100,000	$400,000

assistance partner							
College and Career Readiness: ECHS coordination	$180,000	3 years	$100,000	$40,000	$40,000	$0	$180,000
Competency Tracking: Implementing/ maintaining tracking system	$250,000	4 years	$0	$50,000	$150,000	$50,000	$250,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$42,936	$46,314	$47,077	$41,764	$176,091

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

College and Career Readiness

- *Technical assistance and implementation support – STEM community college model:* Grants to districts to start up a STEM Early College High School on a community college campus (or at a high school in collaboration with a community college). Courses may be

delivered online or by high school faculty approved by the participating college. The school may have a grade 9-12, 11-12, or other grade configuration.

- *Technical assistance and implementation support – University model:* Grants to districts to start up a STEM Early College High School on a university or 4-year college campus. This is a grade 9-12 configuration.
- *Pre-AP training and alignment*: Funding to support pre-AP programs and services through teacher professional development and curriculum alignment in middle and high schools (grades 6 through 10).

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
College and Career Readiness: TA and implementation support – STEM community college model	n/a	$75,000	$125,000	$100,000	$0	$300,000
College and Career Readiness: TA and implementation support – University model	n/a	$75,000	$135,000	$120,000	$90,000	$420,000
College and Career Readiness: Pre-AP training and alignment		$260,000	$360,000	$360,000	$112,000	$1,092,000

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

College and Career Readiness: The LEAs will share in the cost of the STEM ECHS implementation, both the community college and the university models as well as in the costs for technical assistance activities and the Pre-AP training and alignment.

BUDGET PART I: PROJECTS DESCRIBED IN SECTION C

Project Name	Proposal Section
6. Transform state data systems	(C)(2)
7. Invest in the data systems and technology necessary to support the statewide PreK–12 teaching and learning system	(C)(3)
8. Strengthen and expand educator training and supports for data use	(C)(3)

Budget Part II: Project-Level Budget Table **Project Name:** Transform state data systems **Associated with Criteria:** (C)(2) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$593,000	$754,990	$560,155	$0	$1,908,145
2. Fringe Benefits	$207,728	$264,473	$196,222	$0	$668,423
3. Travel	$9,000	$9,000	$9,000	$9,000	$36,000
4. Equipment	$170,434	$98,889	$171,710	$0	$441,033
5. Supplies	$22,800	$6,500	$3,000	$500	$32,300
6. Contractual	$1,269,313	$897,150	$804,825	$112,500	$3,083,788
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$260,310	$45,908	$30,647	$0	$336,865
9. Total Direct Costs (lines 1-8)	$2,532,585	$2,076,910	$1,775,560	$121,500	$6,506,554
10. Indirect Costs	$303,252	$288,133	$219,362	$8,296	$819,043
11. Funding for Involved LEAs	$175,800	$175,800	$87,900	$0	$439,500
12. Supplemental Funding for Participating LEAs	$1,170,064	$1,170,064	$585,032	$0	$2,925,160
13. Total Costs (lines 9-12)	$4,181,701	$3,710,907	$2,667,854	$129,796	$10,690,257

Project Name: Transform state data systems
Associated with Criteria: (C)(2)

1) **Personnel**

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Transition to a Data Mart Architecture

- *Project manager:* The state will hire 1 FTE in Years 1-3 to oversee the delivery of P–16 expansion, including all elements from the timeline in section (C)(2).
- *Sr. Business/data analyst:* The state will hire 1 FTE in Year 1 and .5 FTE in year 2 to develop and validate user reports and analytical tools. This position will analyze data from National Student Clearinghouse and develop requirements for other data sources.
- *Business/data analyst:* The state will hire 1 FTE in Year 1 and .5 FTE in year 2 to develop and validate user reports and analytical tools. This position will analyze data from National Student Clearinghouse and develop requirements for other data sources.
- *ETL developer:* Expand data model, create ETL and develop cubes.
- *Report developer:* Develop reports for finance and kind of community data
- *QA/data analyst:* Write test plans and verify reports.
- *COGNOS architect/modeler:* This position will redesign the Education Data Warehouse data model to accommodate finance, discipline and kind of community data.

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Enhance Utility to the Field

- *Project manager:* The state will hire 1 FTE in Years 1-3 to manage vendor and implement dashboards and reports for portal.

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Expand SIF

- *Data collections specialist*: The state will hire 1 FTE to support data collections

Improve the Usability of ESE's Public Website

- *Project manager:* The state will hire 1 FTE in Years 1-3 to oversee improvements to and streamlining of ESE website

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Data Mart Architecture: Project manager	100% in Years 1-3	$85,000	$85,000	$87,550	$90,177	$0	$262,727
Data Mart Architecture: Sr. Business/data analyst	100% in Yr 1; 50% in Yr 2	$65,000	$65,000	$33,475			$98,475
Data Mart Architecture: Business/data	100% in Year 1; 50% in	$55,000	$55,000	$28,325	$0	$0	$83,325

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
analyst	Yr 2						
Data Mart Architecture: ETL developer	50% in Yr 1; 100% in Years 2-3	$85,000	$42,500	$87,550	$90,177	$0	$220,227
Data Mart Architecture: Report developer	50% in Year 1; 200% in Year 2; 100% in Yr 3	$85,000	$42,500	$175,100	$90,177	$0	$307,777
Data Mart Architecture: QA/data analyst	50% in Yr 1; 100% in Years 2-3	$60,000	$30,000	$61,800	$63,654		$155,454
Data Mart Architecture: COGNOS architect/ modeler	50% in Years 1-2	$120,900	$60,000	$61,800	$0	$0	$121,800
Enhance Utility: Project manager	100% in Years 1-3	$70,000	$70,000	$72,100	$74,263	$0	$216,363
SIF: Data collections specialist	100%	$63,000	$63,000	$64,890	$66,837	$0	$194,727
Improve Usability: Project manager	100%	$80,000	$80,000	$82,400	$84,672		$247,272

2) Fringe Benefits

Position	Fringe	Year 1	Year 2	Year 3	Year 4	Total

	Benefit %					
Total	35.03%	$207,728	$264,473	$196,222	$0	$668,423

3) Travel

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Transition to a Data Mart Architecture

- *Staff travel:* Two Statewide Longitudinal Data Systems conferences per year with two attendees; one national conference per year with one attendee.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Transition to a Data Mart Architecture: Staff travel	2 SLDS conferences per year for 2 people; 1 national conference for 1 person	$1,500 per SLDS conference per person; $3,000 per national conference	$9,000	$9,000	$9,000	$9,000	$36,000

4) Equipment

Equipment	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Transition to a Data Mart Architecture: Racks and network equipment	3 servers for additional capacity	$25,000	$25,000	$0	$0	$0	$25,000
SIF: Reporting server			$25,274		$12,637		$37,911
SIF: ODS servers			$30,258	$60,549			$90,807
SIF: ZIS servers			$50,550	$0	$101,094	$0	$151,644
ODS/ Validator			$25,275		$50,547		$75,822
SAN/switch upgrade				$38,340			$38,340
Racks			$14,077		$7,432		$21,509

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Transition to a Data Mart Architecture: Office supplies	Basic office supplies for staff	$500 per person per year	$3,500	$3,500	$2,000	$0	$9,000
Transition to a Data Mart Architecture: Desktop computer equipment	Desktop computers and monitors	$1,400 per person	$7,000	$0	$0	$0	$7,000
Transition to a Data Mart Architecture: Developer computer equipment	Developer desktop computer and monitor	$3,000 per person	$6,000	$0	$0	$0	$6,000
Transition to a Data Mart Architecture: Statistical software license	1 SPSS license for the business analyst	$1,500	$0	$1,500	$0	$0	$1,500
Enhance Utility: Office supplies	Basic office supplies	$500 per person per year	$500	$500	$0	$0	$1,000
Enhance Utility: Desktop computer equipment	Desktop computers and monitors	$1,400 per person	$1,400	$0	$0	$0	$1,400
SIF: Office supplies	Basic office supplies	$500 per person per year	$500	$500	$500	$0	$1,500
SIF: Desktop computer equipment	Desktop computers and monitors	$1,400 per person	$1,400	$0	$0	$0	$1,400
Improve	Basic office	$500 per	$500	$500	$500		$1,500

Usability: Office supplies	supplies	person per year					
Improve Usability: Laptop	Laptop computer	$2,000	$2,000				$2,000

6) Contractual

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Transition to a Data Mart Architecture

- *Network administrator:* To manage and administer user rights and other network systems.

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Enhance Utility to the Field

- *Building portals:* Contract with vendor to provide services for ETL developer, Framework Manager and Business Analyst/QA.
- *Designing portals*: Consultants to create dashboards and conduct user testing for portals.
- *Training for dashboards*:
- *Effort for RFI*: Evaluate the recommendation – 3 people 1.5 months & evaluation and pilot 5 months

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Expand SIF

- *District SIF implementation*: Expand SIF implementation statewide to the remaining 311 LEAs.

Improve the Usability of ESE's Public Website

- *Analyze business process of data uploads to profiles:* Vendor to document and streamline data shared through ESE, design architecture for data, analyze requirements and write applications for process improvements, write test cases and conduct usability testing, and analyze the business process of data uploads and automate these processes. Vendor will also work to make website more intuitive to navigate.
- *Improve usability of profiles:* Developer to finalize web design. This vendor will differentiate access to confidential data for users, develop specifications for providing parent access to data, and determine feasibility and cost of providing parent access to data.

Product/ Service	Cost per Procure-ment	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Transition to a Data Mart Architecture: Network administrator			$15,000	$0	$0	$0	$15,000
Enhance Utility: Build	$540,000		$0	$82,500	$345,000	$112,500	$540,000

portals							
Enhance Utility: Design portals			$25,000	$0	$0	$0	$25,000
Enhance Utility: Training for dashboards			$10,000				$10,000
Enhance Utility: Effort for RFI			$100,000				$100,000
SIF: District SIF implementation		3 years	$243.400	$158,400	$79,200		$481,000
Improve Usability: Analyze business process		3 years	$398,205	$243,750	$170,625	$0	$812,580
Improve Usability: Improve usability of profiles		3 years	$477,708	$412,500	$210,000	$0	$1,100,208

7) Training Stipends

None

8) Other

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Enhance Utility to the Field

- *Software for dashboards*

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Expand SIF

- *Oracle processor license:* With diagnostic pack; 1st year support.
- *SQL server standard processor license:*
- *SQL server EE processor license:*
- *Other software:* Windows 2008 server license, backup exec agent, SSL certs.

Other Expenditure	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Enhance Utility: Software	$50,000	$50,000				$50,000
SIF: Oracle processor licenses		$166,950				$166,950
SIF: SQL server standard processor license		$10,711		$21,422		$32,133
SIF: SQL server EE processor license		$22,322	$44,643			$66,965
SIF: software for ODS		$10,327	$1,265	$9,225	$0	$20,817

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$303,252	$288,133	$219,362	$8,296	$819,043

11) Funding for Involved LEAs

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
SIF: District SIF	n/a	$175,800	$175,800	$87,900	$0	$439,500

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
implementation						

12) Supplemental Funding for Participating LEAs

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
SIF: District SIF implementation	n/a	$1,170,064	$1,170,064	$585,032	$0	$2,925,160

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table **Project Name:** Invest in the data systems and technology necessary to support the statewide PreK–12 teaching and learning system **Associated with Criteria:** (C)(3) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$170,000	$175,100	$180,353	$185,764	$711,217
2. Fringe Benefits	$59,551	$61,338	$63,178	$65,073	$249,139
3. Travel	$3,000	$0	$0	$0	$3,000
4. Equipment	$0	$390,000	$0	$0	$390,000
5. Supplies	$3,800	$1,000	$1,000	$1,000	$6,800
6. Contractual	$2,203,125	$2,761,875	$2,495,625	$1,396,875	$8,857,500
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$1,620,000	$0	$0	$1,620,000
9. Total Direct Costs (lines 1-8)	$2,439,476	$5,009,313	$2,740,156	$1,648,712	$11,837,656
10. Indirect Costs	$70,785	$466,330	$72,780	$74,563	$684,458
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$0	$0	$0	$0
13. Total Costs (lines 9-12)	$2,510,261	$5,475,642	$2,812,936	$1,723,275	$12,522,114

Project Name: Invest in the data systems and technology necessary to support the statewide PreK–12 teaching and learning system
Associated with Criteria: (C)(3)

1) Personnel

Develop a "Test Builder Engine" that Enables Educators to Assemble, Score, and Access Results from Assessments

- *Project manager:* The state will hire 1 FTE in Years 1-3 to manage the overall development process for the 'test builder' for interim and formative assessments.

Develop and Implement a Digital Library

- *Project Manager:* The state will hire 1 FTE in Years 1-3 to manage the digital library implementation

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Test Builder: Project manager	100% in Years 1-3	$85,000	$85,000	$87,550	$90,177	$92,882	$355,608
Digital Library: Project manager	100% in Years 1-3	$85,000	$85,000	$87,550	$90,177	$92,882	$355,608

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Total	35.03%	$59,551	$61,338	$63,178	$65,073	$249,139

3) Travel

Develop a "Test Builder Engine" that Enables Educators to Assemble, Score, and Access Results from Assessments

- *Travel to LEAs for installation/trainings/input:* Expected costs of travel to participating LEAs to gather LEA input and to assist in installation and initial training.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Test Builder: Travel to LEAs for installation/trainings/input			$3,000	$0	$0	$0	$3,000

4) Equipment

Equipment	Detail	Cost of	Year	Year 2	Year	Year	Total

		Item	1		3	4	
Develop "test builder"for interim and formative assessments	Hardware for application and database server for development, test, and production environments	$175,000	$0	$175,000	$0	$0	$175,000
Digital Library:	Servers, racks & network equipment	$215,000		$215,000			$215,000

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$1,000	$1,000	$1,000	$1,000	$4,000
Desktop computer equipment	Desktop computers and monitors	$1,400 per person	$2,800	$0	$0	$0	$2,800

6) Contractual

Develop a "Test Builder Engine" that Enables Educators to Assemble, Score, and Access Results from Assessments

- *Develop "test builder" for interim and formative assessments*: Contract to build an interim/formative assessment platform.
- *Network administrator*: To administer user access and other network systems.

Develop and Implement a Digital Library

- *Build the Digital Library platform*: This contractor will build and implement the Digital Library platform to host and organize content created through the model curriculum development process and the Digital Library materials vetting process, as described in section (B)(3).

Product/ Service	Cost per Procure-ment	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Test Builder: Develop "test builder" for interim and formative	$5,220,000	4 years	$1,076,250	$1,620,000	$1,567,500	$956,250	$5,220,000

assessments							
Test Builder: Network administrator			$3,750	$3,750	$3,750	$3,750	$15,000
Digital Library: Build the Digital Library platform	$3,622,500	4 years	$1,123,125	$1,138,125	$924,375	$436,875	$3,622,500

7) Training Stipends

None

8) Other

Other Expenditure	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Test Builder: Oracle licenses	$560,000		$560,000			$560,000
Test Builder: Single sign-on	$200,000		$200,000			$200,000
Test Builder: OCR processing	$100,000		$100,000			$100,000
Digital Library: Oracle licenses	$560,000		$560,000			$560,000
Digital Library: Single sign-on	$200,000		$200,000			$200,000

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total

Rate						
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$70,785	$466,330	$72,780	$74,563	$684,458

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table **Project Name:** Strengthen and expand educator training and supports for data use **Associated with Criteria:** (C)(3) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$65,000	$141,950	$72,100	$38,625	$317,675
2. Fringe Benefits	$22,770	$49,725	$25,257	$13,530	$111,282
3. Travel	$1,000	$1,000	$1,000	$1,000	$4,000
4. Equipment	$266,000	$0	$0	$0	$266,000
5. Supplies	$1,900	$4,000	$500	$250	$6,650
6. Contractual	$950,000	$330,000	$1,530,000	$1,165,000	$3,975,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$1,306,670	$526,675	$1,628,857	$1,218,405	$4,680,607
10. Indirect Costs	$46,523	$54,089	$48,521	$25,231	$174,364
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$0	$0	$0	$0
13. Total Costs (lines 9-12)	$1,353,193	$580,764	$1,677,378	$1,243,636	$4,854,971

Project Name: Strengthen and expand educator training and supports for data use
Associated with Criteria: (C)(3)

1) Personnel

- *Training program manager:* The state will hire 1 FTE in Years 1-2 and 0.50 FTEs in Year 3 to develop specifications of the data training program and select the data use training vendor (described in the contractual section).
- *Moodle developer:* The state will hire 1 FTE in Years 1-2 and 0.50 FTEs in Years 3-4 to configure and maintain Moodle, the learning management system that hosts online training.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Training program manager	100% in Years 1-2; 50% in Year 3	$65,000	$65,000	$66,950	$33,475	$0	$165,425
Moodle developer	100% in Year 2; 50% in Years 3-4	$75,000	$0	$75,000	$38,625	$38,625	$152,250

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Total	35.03%	$22,770	$49,725	$25,257	$13,530	$111,282

3) Travel

- *Staff travel for training program manager:* 20 trips each year at $50 per trip for attending trainings on data use.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Staff travel for training program manager	20 trips	$50 per trip	$1,000	$1,000	$1,000	$1,000	$4,000

4) Equipment

Equipment	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Servers for training	3 servers at $18,000 per	$18,000	$54,000	$0	$0	$0	$54,000

modules	server						
Servers for Moodle	$500,000 for additional server capacity	$200,000	$200,000	$0	$0	$0	$200,000
Racks and network equipment			$12,000				$12,000

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$500	$1,000	$500	$250	$2,250
Desktop computer equipment	Desktop computers and monitors	$1,400 per person	$1,400	$0	$0	$0	$1,400
Developer computer equipment	Developer desktop computers and monitors	$3,000 per person	$0	$3,000	$0	$0	$3,000

6) Contractual

- *Training developer:* Contractor to develop 10 new training modules on data use and analysis, with a portion of costs delayed until Year 3 when development of the teaching and learning system will be complete.
- *Vendor for creating online courses:* Contractor to implement online delivery for 16 training modules (6 existing offline modules plus the 10 new modules described above), with a portion of costs delayed until Year 3 when development of the teaching and learning system will be complete.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Training developer	n/a	n/a	$180,000	$0	$120,000	$0	$300,000
Vendor for creating online courses	n/a	n/a	$240,000	$0	$80,000	$0	$320,000
Vendor to evaluate			$200,000				$200,000

scalability and create design for Moodle							
Vendor to deliver training					$1,000,000	$1,000,000	$2,000,000
Training support	6 DSAC positions to support training with districts		$330,000	$330,000	$330,000	$165,000	$1,155,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$46,523	$54,089	$48,521	$25,231	$174,364

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

PROJECTS DESCRIBED IN SECTION D

Project Name	Proposal Section
9. Improve teacher and principal effectiveness based on performance	(D)(2)
10. Ensure equitable distribution of effective teachers and principals	(D)(3)
11. Improve the effectiveness of teacher and principal preparation programs	(D)(4)
12. Provide effective support to teachers and principals	(D)(5)

Budget Part II: Project-Level Budget Table **Project Name:** Improve teacher and principal effectiveness based on performance **Associated with Criteria:** (D)(2) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$235,000	$242,050	$249,312	$256,791	$983,152
2. Fringe Benefits	$82,231	$84,790	$87,334	$89,954	$344,398
3. Travel	$2,882	$2,882	$2,882	$2,880	$11,526
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$7,200	$1,500	$1,500	$1,500	$11,700
6. Contractual	$5,005,000	$3,285,000	$2,920,000	$2,920,000	$14,130,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$5,332,403	$3,616,222	$3,261,027	$3,271,125	$15,480,777
10. Indirect Costs	$153,086	$147,918	$144,211	$146,674	$591,889
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$700,000	$550,000	$450,000	$1,700,000
13. Total Costs (lines 9-12)	$5,485,489	$4,464,140	$3,955,238	$3,867,799	$17,772,666

Project Name: Improve teacher and principal effectiveness based on performance
Associated with Criteria: (D)(2)

Note: This project budget includes all six strategies outlined in Section D2, given the overlapping nature of the strategies. Those strategies are:

1. Measuring student growth for each individual student
2. Differentiating levels of effectiveness
3. Using effectiveness measures in educator evaluation
4. Ensuring evaluations include timely and constructive feedback from principals, including data on student growth
5. Using evaluations to inform decisions
6. Reinforcing effectiveness and continuous improvement through state-level reforms

1) Personnel

- *Project manager (Strategies 1-6):* The state will hire 2 FTEs to oversee implementation of all strategies described in Section D2 to strengthen effectiveness, including work to define measures, refine evaluation guidelines, and create new tiered licensure system. The project managers will work with key personnel in the Center for Educator Policy, Preparation and Licensure.
- *Policy analyst (Strategies 1-6):* The state will hire 1 FTE to support the program manager through secondary research on effective policy and practice from other states, which will be used to inform ongoing work to strengthen educator effectiveness.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Project manager	200%	$85,000	$170,000	$175,100	$180,353	$185,764	$711,217
Policy analyst	100%	$65,000	$65,000	$66,950	$68,959	$71,027	$271,936

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Total	35.03%	$82,231	$84,790	$87,334	$89,954	$344,398

3) Travel

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
In-state travel for project manager			$2,882	$2,882	$2,882	$2,880	$11,526

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$1,500	$1,500	$1,500	$1,500	$6,000
Desktop computer equipment	Desktop computers and monitors	$1,400 per person	$4,200	$0	$0	$0	$4,200
Software	1 SPSS license for the policy analyst	$1,500	$1,500	$0	$0	$0	$1,500

6) Contractual

- *Develop statewide evaluation framework and tools (Strategies 2, 3):* Contract to convene Evaluation Task Force and other stakeholder meetings, develop "default" evaluation system, rubrics, models for using test builder engine, evidence of student growth, and other tools to measure effectiveness.
- *EPIMS update (Strategy 3):* ESE will contract with an IT consultant to make necessary updates to EPIMS to collect evaluation data from LEAs.
- *Expand data collection for evaluations (Strategy 3):* ESE will contract with database developers to expand data collection related to teacher/principal evaluations.
- *Technical assistance and training on the evaluation framework (Strategy 4):* ESE will contract with vendor(s) to develop a training module on the new evaluation system, as well as other training materials and convenings as needed.
- *Implementation support staff (Strategy 4):* ESE will issue contracts to support 3 strategic HR systems / evaluation specialists in each of the 6 DSACs, plus 3 additional specialists serving the Commissioner's Districts, to support implementation statewide.
- *Develop licensure system (Strategy 6):* ESE will contract with national expert(s) to develop licensure tiers, performance assessments and career ladders for teacher leaders and principals.
- *Superintendent induction program:* Contract to develop a strand in the superintendent induction program related to strengthening HR systems, supervision and evaluation

Product/ Service	Cost per Procureme	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total

	nt						
Develop statewide evaluation framework and tools	$2,000,000	1 year	$2,000,000	$0	$0	$0	$2,000,000
EPIMS update	$250,000	2 years	$125,000	$125,000	$0	$0	$250,000
Expand data collection for evaluations	$30,000	1 year	$30,000	$0	$0	$0	$30,000
Technical assistance and training	$900,000	1 year	$250,000	$450,000	$100,000	$100,000	$900,000
Implementation support staff	$1,200,000 * 7 locations	4 years	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$8,400,000
Develop licensure system	$2,000,000	4 years	$500,000	$500,000	$500,000	$500,000	$2,000,000
Superintendent induction program	$550,000	3 years	$0	$110,000	$220,000	$220,000	$550,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total

24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$153,086	$147,918	$144,211	$146,674	$591,889

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

- *Aligning HR systems with evaluations (Strategy 5):* Funding for 3 LEAs to implement new evaluation systems, re-align HR and implement alternative compensation programs.
- *Technical assistance on evaluation system and HR alignment (Strategies 3, 5):* Funding for LEAs piloting HR alignment to contract technical assistance over the first two years.

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
Aligning HR systems with evaluations	$1.5M towards pilot costs	$0	$600,000	$450,000	$450,000	$1,500,000
Technical assistance to LEAs	$200k over 2 years	$0	$100,000	$100,000	$0	$200,000

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

Technical assistance for all Participating LEAs to customize evaluation systems (Strategy 3): ESE will provide funding to support evaluation, including a portion of implementation costs and technical assistance. LEAs will be encouraged to use RTTT funding towards technical assistance for the implementation of evaluation systems at all Participating LEAs in Year 4.

Training on evaluation for principals and teachers (Strategy 4): ESE will provide supplemental funding for training materials and support staff for the new evaluation systems. LEAs will be encouraged to fund costs for training principals and teachers on the new evaluation systems in the same year.

Budget Part II: Project-Level Budget Table
Project Name: Ensure equitable distribution of effective teachers and principals
Associated with Criteria: (D)(3)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$75,000	$77,250	$79,568	$81,955	$313,772
2. Fringe Benefits	$26,273	$27,061	$27,872	$28,709	$109,914
3. Travel	$0	$0	$0	$0	$0
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$1,900	$500	$500	$500	$3,400
6. Contractual	$1,275,000	$625,000	$675,000	$575,000	$3,150,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$1,378,173	$729,811	$782,940	$686,163	$3,577,086
10. Indirect Costs	$49,574	$43,874	$44,637	$39,324	$177,409
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$62,500	$1,279,166	$2,179,167	$4,129,167	$7,650,000
13. Total Costs (lines 9-12)	$1,490,247	$2,052,851	$3,006,744	$4,854,654	$11,404,495

Project Name: Ensure equitable distribution of effective teachers and principals
Associated with Criteria: (D)(3)

Note: This project budget includes multiple strategies outlined in Section D3, given the overlapping nature of the strategies. The strategies in D3 are:

1. Publish and monitor data regarding educator effectiveness
2. Expand the supply of effective educators through recruitment and preparation initiatives
3. Concentrate strategic placement of effective educators in turnaround schools
4. Increase the retention of effective teachers

This project budget includes funding for Strategies 1, 2, and 4, while the budget for Strategy 3 falls under the budget for the project "Develop a specialized corps of turnaround teacher and leader teams" as described in section (E)(2).

1) Personnel

- *Project manager (Strategies 1, 2, 4):* The state will hire 1 FTE to oversee recruitment and distribution initiatives at ESE, including the RFP process for preparation programs.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Project manager	1 FTEs at 100%	$75,000	$75,000	$77,250	$79,568	$81,955	$313,772

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Project manager	35.03%	$26,273	$27,061	$27,872	$28,709	$109,914

3) Travel

None

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$500	$500	$500	$500	$2,000
Desktop computer	Desktop computer and	$1,400 per	$1,400	$0	$0	$0	$1,400

equipment	monitor	person					

6) Contractual

- *UTeach (Strategy 2):* STEM Prep. - 1 site set-up that will run after the grant period 1. increase in teachers prepared in the STEM areas; 2. 250 new teachers prepared in the STEM fields through grant period.
- *Marketing Campaign (Strategy 2):* Expand the pool of prospective teachers in high need fields and hard to staff schools and help to raise esteem for teaching as a profession. Link to new USED recruitment effort.
- *Diversity summit (Strategy 2):* Will assist to develop policies and programs to increase the cultural competence of existing workforce, increase pool of diverse candidates and close the achievement gap.
- *Mass TeLLS (Strategy 4):* Will assist school leaders & teachers to develop positive working conditions and will be an important asset to recruit & retain effective teachers. ($100,000 per survey)
- *Online SPED and ELL courses (Strategy 2):* -Increases pool of licensed candidates and reduces the number of waivers. Funds to develop online course through new T&L platform and Readiness centers, plus related expenses

Product/ Service	Cost per Procure-ment	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
UTeach	$2M	4 years	$500,000	$500,000	$500,000	$500,000	$2M
Marketing Campaign	$500,000	4 years	$275,000	$75,000	$75,000	$75,000	$500,000
Diversity summit	$50,000	1 year	$0	$50,000	$0	$0	$50,000
Mass TeLLS	$100,000 per survey	1 year	$100,000	$0	$100,000	$0	$200,000
Online SPED & ELL courses	$200,000	4 years	$400,000	$0	$0	$0	$400,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$49,574	$43,874	$44,637	$39,324	$177,409

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

- *Create and support a cadre of mentors (Strategy 4):* Develop online courses for mentors of ELL, SPED and STEM field teachers.
- *National Board certification (Strategy 4):* Develop a new core of "master educators" by supporting up to 200 teachers and principals through National Board certification (200 teachers @ $2500 per certification).
- *Incentives for Highly Effective Educators (Strategies 2 & 4):* Provide incentives for Board certified educators to work in high-need schools in Years 1 and 2 (payment to be structured over 4 years, to represent a recruitment and retention incentive). For Years 3 and 4, this will be available to educators classified as 'highly effective' in the new evaluation system. The state will contribute 63% of the RTTT funds. These will be supplemented with School Turnaround Grant funds.
- *Reimbursement for SPED & ELL courses:* Beginning in Year Two of the grant, we will offer teachers reimbursements for the costs of taking this coursework, taking the MTEL, and anything else needed to add (this is geared to teachers who hold a license already) a SPED or ELL license. Cost per teacher is $2K: - In Year Two, we will support 100 teachers in each field (SpEd/ELL) – total cost: $800K - In Year Three, we will support 150 teachers in each field – total cost: $1.2M - In Year Four, we will support 200 teachers – total cost: $1.6.

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
Create and	$5,000 per	$0	$416,667	$416,667	$416,667	$1,250,000

support a cadre of mentors	mentor for 2 years of induction					
National Board certification	$2,500 per teacher certification	$62,500	$62,500	$62,500	$62,500	$250,000
Incentives for Highly Effective Educators	$2.55M (State share) (matched with $3M SIG funds)			$500,000	$2,050,000	$2,550,000
Reimburse-ment for SPED & ESL courses	$3.6M	$0	$800,000	$1,200,000	$1,600,000	$3,600,000

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

Mass TeLLS (Strategy 4): ESE will provide funding to conduct two surveys over the course of the Race to the Top grant. LEAs will be encouraged to use a portion of their funds towards the design, implementation and monitoring of school-level intervention plans on working conditions, based on findings from the Mass TeLLS reports.

School Climate Incentives

Districts and schools will have opportunity to pursue a number of initiatives (linked to district reviews and other indicators such as student surveys) to improve school climate, including:
- a teacher developer ($5,000 pay differential to these developers) to assist with novice teachers, development IPDP.
- SAM ($75K per school)
- Take One! (fees range from $395-355 per person)
- Teacher collaboration
- Targeted school climate improvements suggested from TeLLS
- Other

Budget Part II: Project-Level Budget Table **Project Name:** Improve the effectiveness of teacher and principal preparation programs **Associated with Criteria:** (D)(4) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$150,000	$204,500	$234,135	$241,159	$829,794
2. Fringe Benefits	$52,545	$71,636	$82,017	$84,478	$290,677
3. Travel	$1,920	$1,920	$0	$0	$3,840
4. Equipment	$0	$212,000	$0	$0	$212,000
5. Supplies	$3,800	$1,000	$3,100	$1,500	$9,400
6. Contractual	$785,800	$836,640	$772,500	$202,500	$2597,440
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$994,065	$1,327,696	$1,091,752	$529,637	$3,943,151
10. Indirect Costs	$81,317	$104,690	$114,498	$92,021	$392,525
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$1,250,000	$1,250,000	$1,250,000	$1,250,000	$5,000,000
13. Total Costs (lines 9-12)	$2,325,382	$2,682,386	$2,456,250	$1,871,659	$9,335,676

Project Name: Improve the effectiveness of teacher and principal preparation programs
Associated with Criteria: (D)(4)

1) Personnel

- *Project manager:* The state will hire 2 FTEs to oversee work to create new preparation program standards, including preparation and expansion RFPs, and serve as liaison to programs.
- *ELAR project manager:* The state will hire 1 FTE in Years 3-4 to oversee IT updates to ELAR based on changes to licensure system.
- *Data analyst:* The state will hire 1 FTE in Year 2 to document requirements for process.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Project manager	200%	$75,000	$150,000	$154,500	$159,135	$163,909	$627,544
ELAR project manager	100%	$75,000	$0	$0	$75,000	$77,250	$152,250
Data analyst	100%			$50,000			$50,000

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Total	35.03%	$52,545	$71,636	$82,017	$84,478	$290,677

3) Travel

- *Meetings with pilot group:* Two ESE staff members will meet monthly with the preparation programs in the program approval pilot in Years 1 and 2.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Meetings with pilot group	24 for each person	$80	$1,920	$1,920	$0	$0	$3,840

4) Equipment

Equip-ment	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Equipment for ELAR integration	Application server, database server, web server for production, testing and development to implement integration	$200,000	$0	$200,000	$0	$0	$200,000
Racks and network equipment				$12,000			$12,000

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$1,000	$1,000	$1,700	$1,500	$5,200
Desktop computer equipment	Desktop computers and monitors	$1,400 per person	$2,800	$0	$1,400	$0	$4,200

6) Contractual

- *Refine Effectiveness Indicators:* Based on work in (D)(2) and in consultation with national experts, refinement of effectiveness indicators to include and be used in approving and rating preparation programs.- Stronger preparation programs and ability to improve or close ineffective programs
- *Technical assistance on new program and reporting requirements and ELAR changes:* Technical assistance (statewide conferences) to all 90 sponsoring organizations for transition of new regulations, requirements, and ELAR changes.
- *Statewide Report cards on educator preparation programs posted annually on DESE website:* Annual report cards on prep programs. Sharing best practices.
- *ELAR updates - Business analyst:* Contract with business analyst to conduct ELAR reports based on changes to licensure, program approval, and reporting.
- *ELAR updates - Developer:* Personnel to develop updates to ELAR database based on changes in licensure, program approval, and reporting.

- *ELAR updates - Quality assurance specialist:* Personnel to oversee quality assurance for ELAR updates based on changes to licensure, program approval, and reporting.
- *ELAR integration into Data Warehouse - Consultants:* Consultants to provide set-up for each district, in addition to training, security, and integration of ELAR with the Education Data Warehouse.
- *ELAR integration into Data Warehouse - Business analyst and quality assurance specialist:* Contract 1 business analyst to produce reports and 1 quality assurance specialist to test integrity of data.
- *ELAR integration into Data Warehouse - Technical writer:* Contract technical writer for documentation of integration.
- *MEPID - Documentation:* Contract for requirement documentation and analysis needed to create unique identifier for educators (Massachusetts Educator Personnel ID).
- *MEPID - System design:* Contractor to design system that allows for 26 new ELAR fields and produces associated reports.
- *MEPID - Quality assurance:* Contractor to verify integration and assignment of unique identifier for educators.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Refine Effectiveness Indicators	$150,000	2 years	$75,000	$75,000			$150,000
Technical assistance	$100,000	1 year	$0	$0	$0	$100,000	$100,000
Statewide Report cards	$100,000	n/a	$0	$50,000	$50,000	$0	$100,000
ELAR updates - Business analyst	$82,500	1 year	$0	$0	$82,500	$0	$82,500
ELAR updates - Developer	$240,000	2 years	$0	$0	$120,000	$120,000	$240,000
ELAR updates - Quality assurance specialist	$165,000	2 years	$0	$0	$82,500	$82,500	$165,000
ELAR integration into Data Warehouse - Consultants	$1,000,000	3 years	$400,000	$300,000	$300,000	$0	$1,000,000

ELAR integration into Data Warehouse - Business analyst and quality assurance specialist	$487,500	3 years 1 FTE, 2 years 1 FTE	$195,000	$195,000	$97,500	$0	$487,500
ELAR integration into Data Warehouse - Technical writer	$270,000	3 years	$90,000	$90,000	$90,000	$0	$270,000
MEPID - Documentation	$180,900	n/a	$60,300	$120,600	$0	$0	$180,900
MEPID - System design	$121,500	n/a	$40,500	$81,000	$0	$0	$121,500
MEPID - Quality assurance	$50,040	n/a	$0	$50,040	$0	$0	$50,040

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to	$81,317	$104,690	$114,498	$92,021	$392,525

	first $25,000 annually and not on equipment					

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

- *Teacher preparation program expansion grants*: Support expansion of proven models of success in recruiting and effective preparing individuals w/ high academic achievement, diverse candidate, high-need school placement and retention (in addition, through accountability system, close those programs with repeated failure to demonstrate success) Work with Readiness Centers to help identify and promote effective programs and effective practices Require IHEs to partner with high-need LEAs to qualify.
- *Principal residency prep competitive grant*: Regional residency models of preparation using Readiness Ctrs and DSACs for placement in high need - 50 new principals ($60k/prioncipal)

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
Teacher preparation program expansion grants	$5M split with LEAs	$875,000	$875,000	$875,000	$875,000	$3,500,000
Principal residency prep competitive grant	$3M split with LEAs	$375,000	$375,000	$375,000	$375,000	$1,500,000

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

- *Principal prep competitive grant and Teacher prep program expansion grants:* The LEAs will share in the cost of the Teacher Preparation Competitive Grant and the Teacher Preparation Program Expansion Grants to ensure strong collaboration among preparing entities and districts, ensure district investment in the program, and strengthen prospects for long term sustainability.

Budget Part II: Project-Level Budget Table **Project Name:** Provide effective support to teachers and principals **Associated with Criteria:** (D)(5) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$80,000	$82,400	$84,872	$87,418	$334,690
2. Fringe Benefits	$28,024	$28,865	$29,731	$30,623	$117,242
3. Travel	$4,000	$4,000	$4,000	$4,000	$16,000
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$2,500	$500	$500	$500	$4,000
6. Contractual	$2,070,160	$1,870,160	$1,870,160	$1,670,160	$7,480,640
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$2,500	$0	$2,500	$0	$5,000
9. Total Direct Costs (lines 1-8)	$2,187,184	$1,985,925	$1,991,763	$1,792,701	$7,957,572
10. Indirect Costs	$46,854	$46,547	$47,971	$42,100	$183,471
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$0	$0	$0	$0
13. Total Costs (lines 9-12)	$2,234,038	$2,032,471	$2,039,734	$1,834,801	$8,141,044

Project Name: Provide effective support to teachers and principals
Associated with Criteria: (D)(5)

1) Personnel

- *Professional development coordinator*: This full-time position will coordinate all PD and training provided through RTTT, develop tools to evaluate the effectiveness of PD based on the NSDC framework, and disseminate best practices.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Professional development coordinator	100%	$805,000	$80,000	$82,400	$84,872	$87,418	$334,690

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Total	35.03%	$28,024	$28,865	$29,731	$30,623	$117,242

3) Travel

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
In-state and out-of-state travel			$4,000	$4,000	$4,000	$4,000	$16,000

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$500	$500	$500	$500	$2,000
Laptop computer		$2,000	$2,000				$2,000

6) Contractual

- *Professional Learning Communities expansion:* Hire consulting services and technical assistance to support expansion of Professional Learning Community tools developed by ESE to LEAs. The state will contribute 20% of estimated total costs.
- *DSAC personnel:* Provide grants to DSACs to hire additional personnel at 12 DSACs.
- *Funding for Readiness Centers:* Provide grants to fund Readiness Centers to initiate professional development focused on Teaching/Learning and P–16.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Professional Learning Communities consultant services	$800,000	3 years	$400,000	$200,000	$200,000	$0	$800,000
DSAC personnel	$60,000 per FTE, plus fringe benefits	4 years	$920,160	$920,160	$920,160	$920,160	$3,680,640
Funding for Readiness Centers	$125,000 per Readiness Center per year	4 years	$750,000	$750,000	$750,000	$750,000	$3,000,000

7) Training Stipends

None

8) Other

- *NSDC survey:* ESE will conduct the National Staff Development Council's Standards Assessment Inventory in a representative subset of 100 schools in Years 1 and 3.

Other Expenditure	Cost per Item	# of items	Year 1	Year 2	Year 3	Year 4	Total
NSDC survey	$25 per school	100 schools per survey	$2,500	$0	$2,500	$0	$5,000

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$46,854	$46,547	$47,971	$42,100	$183,471

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

ESE will fund multiple initiatives to provide support for teachers and principals: creating capacity at the DSACs and Readiness Centers; developing online and video modules that will be accessed by educators statewide; and providing funding for principal training and expansion of the Professional Learning Community tools developed at ESE.

LEAs will be encouraged to spend their portion of Race to the Top funds towards additional professional development opportunities, based on their local needs. The following is a list of potential additional supports.

- *Summits on interim/formative assessments:* Conducting summits in the Eastern and Western parts of MA to instruct participants on how to integrate interim/formative assessments into curriculum and instruction.
- *LEA training and professional development summit on curriculum embedded tasks:* Summer institutes for district assessment staff and district curriculum coordinators attending to be trained as trainers. Train participants in the administration of tasks and on scoring student responses.
- *Summits on high priority professional development areas:* Over the course of Race to the Top, conduct summits in each of the high-priority professional development areas.
- *In-person training for Competency Tracking System:* Face-to-face meetings at the DSACs for general training and orientation, with one representative from each district.
- *Professional development for staff using the Digital Library:* Contracts with professional development providers (and/or non-profit educational organizations) to develop and provide training services to district administrators, curriculum coordinators, and teachers in participating LEAs on the use of the Digital Library.
- *Contracting with local educators to provide regional technical assistance on model curriculum:* Contracted educators in each content area and grade level in each DSAC/region will support local schools with implementation of model curriculum; each educator will be paid an annual stipend.
- *Supplemental professional development and support for select districts on interim/formative assessments:* Supplemental professional development and support for districts with existing interim and formative assessment systems to support transition to ESE's new platform.
- *Additional district level training on teaching and learning system:* Additional support for teachers and principals in urban districts; districts to choose professional development programs.
- *Expand offerings for high priority areas:* Increased participation in professional development programs current offered at the DSACs, with a focus on high priority professional development needs.

PROJECTS DESCRIBED IN SECTION E

Project Name	Proposal Section
13. Develop a specialized corps of turnaround teacher and leader teams	(E)(2)
14. Build capacity of proven partners to support struggling schools	(E)(2)
15. Build district capacity to intervene in struggling schools	(E)(2)
16. Develop, attract, and manage lead partners and turnaround operators to execute the restart model at Level 4 and 5 schools	(E)(2)

Budget Part II: Project-Level Budget Table **Project Name:** Develop a specialized corps of turnaround teacher and leader teams **Associated with Criteria:** (E)(2)(ii) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$150,000	$154,500	$159,135	$163,909	$627,544
2. Fringe Benefits	$52,545	$54,121	$55,745	$57,417	$219,828
3. Travel	$12,000	$0	$0	$0	$12,000
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$5,800	$1,000	$1,000	$1,000	$8,800
6. Contractual	$900,000	$1,050,000	$400,000	$0	$2,350,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$1,120,345	$1,259,621	$615,880	$222,326	$3,218,173
10. Indirect Costs	$65,964	$63,348	$58,775	$54,248	$242,334
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$310,000	$331,000	$452,000	$452,000	$1,545,000
13. Total Costs (lines 9-12)	$1,496,309	$1,653,969	$1,126,655	$728,574	$5,005,507

Project Name: Develop a specialized corps of turnaround teacher and leader teams
Associated with Criteria: (E)(2)(ii)

1) Personnel

- *Project managers:* The state will hire 2 FTEs to manage the turnaround teacher and turnaround leader pipelines to coordinate the process of program design, fund distribution, and regional rollout. They will be responsible for the details of the initiative proposed in the plan associated with (E)(2).

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Project managers	2 FTEs at 100%	$75,000	$150,000	$154,500	$159,135	$163,909	$627,544

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Project managers	35.03%	$52,545	$54,121	$55,745	$57,417	$219,829

3) Travel

- *Convening of experts:* To facilitate the programs, ESE will hold a 3-day convening for 20 experts and providers in the summer of 2010, at a cost of $200/person/day.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Convening of experts	20x1 person	$600 per person	$12,000	$0	$0	$0	$12,000

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$1,000	$1,000	$1,000	$1,000	$4,000
Desktop computer	Desktop computers and	$1,400 per person	$2,800	$0	$0	$0	$2,800

equipment	monitors						
Printer	Shared printer for project managers	$2,000	$2,000	$0	$0	$0	$2,000

6) Contractual

- *Consulting design support:* Consulting to support design of teacher and leader programs.
- *Regional grants:* Capacity-building grants to institutions of higher education, residency programs, and other training/induction providers in each of 4 regions (1 in Year 1, 2 in Year 2, 1 in Year 3). Intended to support allocation of 4 FTEs across providers in each region for that year to start the programs.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Consulting design support	$750,000	1 year	$500,000	$250,000	$0	$0	$750,000
Regional grants	$400K/region	1 year per region	$400,000	$800,000	$400,000	$0	$1,600,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$65,964	$63,348	$58,775	$54,248	$242,334

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

- *Teacher recruitment:* Funding for providers to recruit and screen proven, experienced teachers (50 in Year 1, 100 in Year 2, 150 each in Years 3-4). The state will contribute 20% of estimated total costs.
- *Principal recruitment*: Funding for providers to recruit and screen proven, experienced principals via "executive search" (10 in Year 1, 11 in Year 2, 12 in Years 3-4). The state will contribute 20% of estimated total costs.
- *Principal support and training:* Funding for providers to for training, induction, and associated stipends for principals (10 in Year 1, 11 in Year 2, 12 in Years 3-4). The state will contribute 20% of estimated total costs.

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
Teacher recruitment	$10,000 per teacher	$100,000	$100,000	$200,000	$200,000	$600,000
Principal recruitment	$35,000 per principal	$70,000	$77,000	$84,000	$84,000	$315,000
Principal support and training	$70,000 per principal	$140,000	$154,000	$168,000	$168,000	$630,000

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table **Project Name:** Build capacity of proven partners to support struggling schools **Associated with Criteria:** (E)(2)(ii) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$75,000	$77,250	$79,568	$81,955	$313,772
2. Fringe Benefits	$26,273	$27,061	$27,872	$28,709	$109,914
3. Travel	$1,280	$1,280	$1,280	$1,280	$5,120
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$1,900	$500	$500	$500	$3,400
6. Contractual	$356,000	$434,000	$434,000	$434,000	$1,658,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$460,453	$540,091	$543,220	$546,443	$2,090,206
10. Indirect Costs	$80,386	$105,186	$105,950	$106,736	$398,258
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$0	$0	$0	$0
13. Total Costs (lines 9-12)	$540,839	$645,277	$649,170	$653,179	$2,488,465

Project Name: Build capacity of proven partners to support struggling schools
Associated with Criteria: (E)(2)(ii)

1) Personnel

- *Priority Provider manager:* The state will hire 1 FTE to manage the Priority Provider program, coordinating the process of identifying, vetting, and distributing Race to the Top grants to qualified supporting partners who fulfill the 11 essential conditions for school turnaround. S/he will be responsible for the details of the initiative to invest in school improvement supports proposed in the plan associated with (E)(2).

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Priority Provider manager	100%	$75,000	$75,000	$77,250	$79,568	$81,955	$313,772

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Priority Provider manager	35.03%	$26,273	$27,061	$27,872	$28,709	$109,914

3) Travel

- *District and school visits:* To assist in evaluating the effectiveness of supporting partners, the Priority Provider manager will make 8 district/school visits per quarter, averaging 100 miles at $0.40/mile.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
District and school visits	32x1 person	$40	$1,280	$1,280	$1,280	$1,280	$5,120

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$500	$500	$500	$500	$2,000

Desktop computer equipment	Desktop computer, monitor, and printer for Priority Provider Manager	$1,400 per person	$1,400	$0	$0	$0	$1,400

6) Contractual

As described in the proposal narrative, it is expected that the per-school costs for supports in Level 4 schools will be funded by Title IG grants. The state will invest its funds in startup costs associated with program design, and will contribute 40% of the estimated total costs necessary to scale up data usage, ELO, and social-emotional supports to new LEAs through capacity-building grants.

- *Process development and assessment:* Vendor contract to build the Priority Provider process, as described in detail in section E(2)(ii).
- *Capacity-building grants:* Capacity-building grants to partners who provide support on social-emotional conditions, extended learning opportunities, and effective data usage to scale up to new districts ($80,000 per partner per district). 8 grants in Year 1, 12 each in Years 2-4. The state will contribute 40% of estimated total costs.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Process development and assessment	$250,000	5,000 hours	$100,000	$50,000	$50,000	$50,000	$250,000
Capacity-building grants	$1,408,000	n/a	$256,000	$384,000	$384,000	$384,000	$1,408,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total

24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$80,386	$105,186	$105,950	$106,736	$398,258

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table **Project Name:** Build district capacity to intervene in struggling schools **Associated with Criteria:** (E)(2)(ii) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$140,000	$144,200	$148,526	$152,982	$585,708
2. Fringe Benefits	$49,042	$50,513	$52,029	$53,590	$205,173
3. Travel	$20,640	$20,640	$640	$640	$42,560
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$3,800	$1,000	$1,000	$1,000	$6,800
6. Contractual	$1,275,000	$1,135,000	$1,310,000	$560,000	$4,280,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$1,488,482	$1,351,353	$1,512,195	$768,211	$5,120,241
10. Indirect Costs	$94,790	$113,790	$110,335	$105,704	$424,619
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$178,000	$354,000	$708,000	$0	$1,240,000
13. Total Costs (lines 9-12)	$1,761,272	$1,819,143	$2,330,530	$873,915	$6,784,860

Project Name: Build district capacity to intervene in struggling schools

Associated with Criteria: (E)(2)(ii)

1) Personnel

- *Project manager:* The state will hire 1 FTE to identify, manage, and evaluate providers of district-level support, as defined in the initiative described in (E)(2)(ii).
- *Wraparound zone coordinator:* The state will hire 1 FTE to coordinate implementation of the wraparound zones.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Project manager	100%	$70,000	$70,000	$72,100	$74,263	$76,491	$292,854
Wraparound zone coordinator	100%	$70,000	$70,000	$72,100	$74,263	$76,491	$292,854

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Total	35.03%	$49,042	$50,513	$52,029	$53,590	$205,173

3) Travel

- *District and school visits:* To assist in evaluating the effectiveness of supporting partners, the Priority Provider manager will make 4 district visits per quarter, averaging 100 miles at $0.40/mile.
- *Convene state partners*: 2-day convening in Years 1 and 2 of 100 partners from MassPartners, MASS, and MASC on governance and leadership. Expected cost of $200/person including travel and site costs.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
District and school visits	16x1 person	$40	$640	$640	$640	$640	$2,560
Convene state partners	100x1person	$200	$20,000	$20,000	$0	$0	$40,000

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$1,000	$1,000	$1,000	$1,000	$4,000
Desktop computer equipment	Desktop computer, monitor, and printer	$1,400 per person	$2,800	$0	$0	$0	$2,800

6) Contractual

- *Consulting design support:* Consulting contract for design of the district systems of support programs.
- *Grants to state associations:* Capacity-building grants based on 1 FTE per year each for 3 state associations over Years 1-4 to build support for governance and leadership.
- *Consultant on wraparound zones:* Consultant to support districts in implementing wraparound zones in Years 1 through 3.
- *Consultants on HR systems:* Support for experts on HR systems to work with LEAs as needed (4 in Year 1, 8 in Years 2-4). The state will contribute 20% of estimated total costs.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Consulting design support	$500K	1 year	$500,000	$0	$0	$0	$500,000
Grants to state associations	$960K	4 years	$240,000	$240,000	$240,000	$240,000	$960,000
Consultant on wraparound zones		3 years	$375,000	$375,000	$750,000	$0	$1,500,000
Consultants on HR systems	$200K per LEA per year	4 years	$160,000	$320,000	$320,000	$320,000	$1,120,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$94,790	$113,790	$110,335	$105,704	$424,619

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

- *Grants to support wraparound zones*: Grants to LEAs to support wraparound zones (1 zone in Y1, 2 in Y2, 4 in Y3). Additional costs of implementation to be paid by district local RTTT share and/or STG grants.

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
Grants to support wraparound zones		$178,000	$354,000	$7,080,000	$0	$1,240,000

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table **Project Name:** Develop, attract, and manage lead partners and turnaround operators to execute the restart model at Level 4 and 5 schools **Associated with Criteria:** (E)(2)(ii) **(Evidence for selection criterion (A)(2)(i)(d))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$0	$0	$0	$0	$0
2. Fringe Benefits	$0	$0	$0	$0	$0
3. Travel	$0	$0	$0	$0	$0
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$0	$0	$0	$0	$0
6. Contractual	$600,000	$600,000	$1,250,000	$1,250,000	$3,700,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$600,000	$600,000	$1,250,000	$1,250,000	$3,700,000
10. Indirect Costs	$12,200	$12,200	$30,500	$30,500	$85,400
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$0	$0	$0	$0
13. Total Costs (lines 9-12)	$612,200	$612,200	$1,280,500	$1,280,500	$3,785,400

Project Name: Develop, attract, and manage lead partners and turnaround operators to execute the restart model at Level 4 and 5 schools
Associated with Criteria: (E)(2)(ii)

1) Personnel
None

2) Fringe Benefits
None

3) Travel
None

4) Equipment
None

5) Supplies
None

6) Contractual

a. *Consulting design support*: Consulting to support design of nonprofit management organization.
b. *Startup funding for management organization*: ESE will coordinate with philanthropy to identify and incubate an organization to manage and evaluate turnaround operators in the state. The 3-year budget for this organization is projected at $6.6M. RTTT will fund $1M of startup costs over Years 1 and 2, with philanthropy supporting the remainder of the budget.
c. *Turnaround operator per-school costs*: Funding for school turnaround operators, managed and evaluated by the new management organization. The state will fund the estimated $250,000 per-school turnaround operator costs, with associated funding needs covered by Title IG. The state expects to support 5 schools in each of Years 3 and 4.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Consulting design support	$200K	2 years	$100,000	$100,000	$0	$0	$200,000
Startup funding for management organization	$1M	2 years	$500,000	$500,000	$0	$0	$1,000,000
Turnaround operator per-	$250K per school per	2 years	$0	$0	$1,250,000	$1,250,000	$2,500,000

school costs	year						

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs applied to first $25,000 annually and not on equipment	$12,200	$12,200	$30,500	$30,500	$85,400

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table **Project Name:** Planning and implementation support to LEAs launching Innovation Schools **Associated with Criteria:** (F)(2) **(Evidence for selection criterion (F)(2))**					
Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$0	$0	$0	$0	$0
2. Fringe Benefits	$0	$0	$0	$0	$0
3. Travel	$0	$0	$0	$0	$0
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$0	$0	$0	$0	$0
6. Contractual	$0	$0	$0	$0	$0
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$0	$0	$0	$0	$0
10. Indirect Costs	$0	$0	$0	$0	$0
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$375,000	$375,000	$375,000	$375,000	$1,500,000
13. Total Costs (lines 9-12)	$375,000	$375,000	$375,000	$375,000	$1,500,000

Project Name: Planning and implementation support to LEAs launching Innovation Schools
Associated with Criteria: (F)(2)

3) Personnel
None

4) Fringe Benefits
None

3) Travel
None

4) Equipment
None

5) Supplies
None

7) Contractual
None

7) Training Stipends
None

8) Other
None

9) Total Direct Costs
See Project-Level Budget Table.

10) Indirect Costs
None

11) Funding for Involved LEAs
None

12) Supplemental Funding for Participating LEAs
Planning and implementation support for Innovation Schools: State share of costs for planning and implementation support to LEAs launching Innovation Schools. The state will contribute 50% of estimated total costs

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
Planning and implementation support for		$375,000	$375,000	$375,000	$375,000	$1,500,000

Innovation Schools						

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

Schools participating in this program may use RTTT funds to supplement any planning or implementation costs beyond that covered by these grants.

Appendix A12: Massachusetts Federal and State Accounts Under Consideration for Coordination, Reallocation, or Repurposing to Support ESE's RTTT Proposal

Federal accounts

Account Number	Account Name	Admin & TA share of total FY10 award	Approx % of admin/TA to be coord.	Approx FTE to be coordinated	Comments
7043-7001	IDEA (SPED)	$ 5,732,969	25%	1.0	Math PD at DSACs on working with SWDs
7043-1001	Title 1	$ 20,841,909	25%	3.0	DSACs, analysis support
7043-2001	Teacher Quality(Title II-A)	$ 1,734,887	50%	10.0	Educator preparation
7043-4002	After School - 21st Century	$ 910,081	25%	0.5	Coordinate with RTTT beginning in year 2
7043-3001	Title III- English Lang. Acquis.	$ 591,956	50%	2.0	PD focus on common core and priority districts
7060-2002	Ed Tech State Grants (ARRA)	$ 527,283	10%	0.0	Year 1 only: tools for tiered instruction in alt HS
7038-0107	Adult Ed.	$ 1,683,647	10%	1.0	Coordinate with wraparound strategy
7043-1006	School Improvement Grants	$ 2,934,571	100%	0.0	Coordinate with school turnaround strategy
7043-7002	Sped Early Childhood	$ 1,000,000	10%	0.0	Coordinate with wraparound strategy
7043-6001	Title VI State Assessments	$ 7,665,358	10%	5.0	Formative & benchmark assessment
7043-2002	Ed.Tech- Title II-D	$ 214,174	0%	0.5	Coordinate with wraparound strategy
7043-2003	Math & Science- Title II-B	$ 238,708	50%	0.0	PD focus on common core and priority districts
7044-0020	Prog. Improvement	$ 1,160,000	25%	0.0	PD focus on common core and priority districts
7047-9008	Learn & Serve America Competitive	$ 250,000	25%	0.0	Coordinate with wraparound strategy
7043-6501	McKinney Homeless	$ 257,164	25%	0.0	Coordinate with wraparound strategy
7035-0166	Even Start	$ 60,625	25%	0.0	Coordinate with wraparound strategy
	Subtotal	**$ 45,803,332**	**$ 12,608,162**	**23.0**	

State accounts

Account number	Account name	FY10 budget	Approx % of line to be coordinated	Approx FTE to be coordinated	
7010-0005	Department of Education - Admin.	$ 13,168,887	0%	5.0	OSPRE & Commissioner's Office staff
7010-0033	Consolidated Literacy Program	$ 4,175,489	50%	0.0	PD focus on common core and priority districts
7010-1022	Certificate of Occupational Proficiency	$ 20,995	100%	0.0	Fully funded in RTTT
7027-1004	P.D. for Eng. Language Acquisition	$ 397,937	50%	0.0	PD focus on common core and priority districts
7030-1002	Kindergarten Grants	$ 25,948,947	25%	1.0	Coordinate with RTTT beginning in year 2
7035-0002	Adult Learning Centers	$ 28,085,096	10%	1.0	Coordinate with wraparound strategy
7061-0029	District and school accountability	$ 1,189,083	100%	7.0	Key element of RTTT turnaround strategy
7061-9200	DOE Information Technology - Admin.	$ 589,164	10%	1.0	Coordinate on data collection
7061-9400	Student Assessment (MCAS)	$ 25,267,854	10%	5.0	Formative and benchmark assessment
7061-9404	Supports to Close the Achievement Gap	$ 9,294,804	25%	0.0	Coordinate with RTTT beginning in year 2
7061-9408	Targeted Assistance to Schools & Districts	$ 6,874,476	30%	10.0	Office of School Redesign + others; incr in year 2
7061-9412	Expanded Learning Time Grants	$ 15,672,375	5%	0.0	Middle schools may coord with Early College HS
7061-9611	After-School Grant Program	$ 2,000,000	25%	0.0	Coordinate with RTTT beginning in year 2
7061-9804	P.D. for Mathematics	$ 386,227	50%	0.0	PD focus on common core and priority districts
	Subtotal	**$ 133,071,334**	**$ 21,241,015**	**30.0**	
	Grand total		**$ 33,849,178**	**53.0**	
	Percent of total		**18.9%**	**10.1%**	

Appendix A13: Stakeholder Letters of Support

A total of 165 stakeholders have signed letters of support for Massachusetts' proposal. The letters follow; below is a list of the organizations that have submitted letters in order of appearance in the appendix.

Legislators
U.S. Congressional Delegation
(Phase 1 letter included here; Phase 2 letter to be hand-delivered to USED on June 1, 2010)
State Senate and House leadership and chairs of the Joint Committee on Education

Teachers and principals associations
Massachusetts Teachers Association
Massachusetts Elementary School Principals Association
Massachusetts Secondary School Administrators Association

Other K–12 education associations
Massachusetts Association of School Committees
Massachusetts Association of School Superintendents
Massachusetts Charter Public Schools Association
Massachusetts Parent Teacher Association
MassPartners for the Public Schools

Other education associations and agencies
Commonwealth Readiness Project co-chairs
Massachusetts Board of Higher Education
Massachusetts Department of Early Education and Care
Massachusetts Department of Higher Education
Massachusetts Association of Colleges for Teacher Education
Readiness Centers Network
State Colleges of Massachusetts
State Student Advisory Council

Community and civil rights groups
Black Leaders for Excellence in Education
Multicultural Dropout Outreach Collaborative
NAACP New England Area Conference

STEM stakeholders
Governor's STEM Advisory Council, Lieutenant Gov. Timothy Murray
Massachusetts Biotechnology Council
National Center for Technology Literacy and Museum of Science
Robert H. Goddard Council
STEM Early College Pathway Initiative: Boston, Lowell, and Springfield
STEM Pipeline Fund

Business associations
Massachusetts Business Alliance for Education
Massachusetts Competitive Partnership, Inc.

Nonprofits and other associations
Boston Plan for Excellence in the Public Schools
Mass Insight Education
Massachusetts 2020
Teachers 21

Foundations
Boston Education Funders
Boston Foundation
Nellie Mae Foundation
Strategic Grant Partners

Other
Robert Schwartz, Academic Dean, Harvard Graduate School of Education

Congress of the United States
Washington, DC 20515

January 14, 2010

The Honorable Arne Duncan
Secretary
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

We are writing to enthusiastically endorse Massachusetts' Phase I application for the Race to the Top Fund.

As you know, Massachusetts is a national leader in education reform and improvement, and our students consistently rank among the highest performers on U.S. and international measures of reading, mathematics and science achievement. Still, we recognize the need to continue working to close persistent achievement gaps and ensure that each and every one of our students receives a world-class public education. Massachusetts' Race to the Top application aims to accomplish this goal by building on the strong foundation of our landmark 1993 Education Reform Act and launching a second phase of major education reforms designed to propel student achievement to new heights.

Massachusetts' application emphasizes four ambitious yet achievable goals: providing all students with a more personalized educational experience; developing and retaining an effective, diverse, and culturally competent educator workforce; concentrating high-quality instruction, additional supports for students and families, and tools for educators in the lowest-performing schools; and increasing the readiness of all students for college and careers.

The application also articulates a series of bold and innovative strategies to reach each of the above goals. For example, Massachusetts plans to establish a new teaching and learning system that will give educators unprecedented access to formative, benchmark, and interim assessments that are closely aligned to rigorous content standards. Our application will promote the establishment of a greatly enhanced student data system that will allow educators to run sophisticated, real-time reports assessing students' academic mastery and continued learning needs.

We hope to use Race to the Top funding to establish a new teacher licensure system to ensure that teachers are expertly qualified in different domains, as well as a teacher career ladder that will encourage educators to move into new leadership roles. Finally, we will use program funding to implement dramatic new turnaround strategies authorized by the state legislation, which you joined us in promoting last July. Taken together, we believe these initiatives will not

only be a powerful impetus for dramatic change in Massachusetts, but also allow our state to continue to serve as a national model for educational improvement and reform.

We appreciate the leadership that you and President Obama have shown to make this unprecedented opportunity available to states and respectfully request that you will give Massachusetts' application the fullest consideration.

Sincerely,

Edward J. Markey
U.S. Representative

John F. Kerry
U.S. Senator

Barney Frank
U.S. Representative

Paul G. Kirk
U.S. Senator

Richard E. Neal
U.S. Representative

John W. Olver
U.S. Representative

Bill Delahunt
U.S. Representative

Jim P. McGovern
U.S. Representative

John F. Tierney
U.S. Representative

Michael E. Capuano
U.S. Representative

Stephen F. Lynch
U.S. Representative

Niki Tsongas
U.S. Representative

THE GENERAL COURT OF MASSACHUSETTS
STATE HOUSE, BOSTON 02133-1053

May 27, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

On behalf of the Massachusetts General Court and the citizens of the Commonwealth of Massachusetts, we are writing to express our enthusiastic support for Massachusetts' Phase 2 proposal to the Race to the Top Fund.

As you know, Massachusetts' students consistently outperform their national and international peers in the areas of reading, math, and science on multiple measures of assessment. We are extremely proud of our success to date, but also recognize that we have a tremendous amount of work to do to close persistent achievement gaps and ensure that each and every one of our students receives a high-quality education. In 1993, our General Court put in place a strong foundation through enactment of the landmark Education Reform Act, and this year our state legislature reaffirmed its support for education reform through groundbreaking legislation enacted in January 2010. The Legislature's support for *An Act Relative to the Achievement Gap* underscores our belief in providing meaningful intervention tools to address persistent underperformance in our schools, lifting charter school caps in our most challenged districts, and promoting innovation in all Massachusetts schools and districts. These are three essential steps Massachusetts is taking to achieve our educational goals and close achievement gaps.

The Commonwealth's Race to the Top proposal, coupled with the passage of the Achievement Gap legislation, will allow us to catalyze an ambitious second phase of education reform in Massachusetts. Our proposal emphasizes four ambitious and achievable goals: 1) attract, develop, and retain an effective, academically capable, diverse, and culturally competent educator workforce; 2) provide curricular and instructional resources that support teacher effectiveness and success for all students; 3) concentrate great instruction and support for educators, students, and families in our lowest performing schools and their districts; and 4) increase our focus on college and career readiness for all students.

The Commonwealth's proposal articulates a series of bold and innovative strategies to reach each of these goals that will not only be a powerful impetus for dramatic change in Massachusetts, but will also allow our state to continue to serve as a national model for educational improvement and reform.

We are grateful to you and President Obama for providing this opportunity to the Commonwealth, and we look forward to working to ensure *all* of our students receive a high-quality educational experience. On behalf of the Massachusetts General Court, we hope that you will grant your fullest consideration

to the Commonwealth of Massachusetts' Race to the Top proposal. Please do not hesitate to contact us if we can provide additional information.

Sincerely,

Speaker Robert A. DeLeo
Massachusetts House of Representatives

President Therese Murray
Massachusetts State Senate

Representative Martha M. Walz
Chairwoman
Massachusetts Joint Committee on Education

Senator Robert A. O'Leary
Chairman
Massachusetts Joint Committee on Education

Massachusetts Teachers Association

Anne Wass, President
Paul F. Toner, Vice President
David A. Borer, Executive Director-Treasurer

May 28, 2010

The Honorable Arne Duncan, Secretary of Education
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Reference: Massachusetts Race to the Top Application

Dear Secretary Duncan:

The Massachusetts Teachers Association is writing to you in support of the Massachusetts Race to the Top application. As leaders of the largest professional education association and union in the state, we believe that we must participate in this process so that we can play an important role in developing new policies in the areas of teacher evaluation, using data to improve instruction, providing incentives for teachers to work in hard-to-staff schools and giving our lowest performing schools the support and oversight they need to help their students achieve.

As an association, we have reservations and concerns about the general philosophy of the Race to the Top grant. In addition, as we have stated previously, we oppose the mandated improvement strategies for underperforming schools. These mandates could force some of our larger districts to transfer or terminate at least 50 percent of the staff in several schools, even if educational leaders in the district believe that such a move would be disruptive and counterproductive for students.

Despite these concerns, we worked closely with the Massachusetts Department of Elementary and Secondary Education in preparation of the Round 2 application and we have encouraged our local affiliates to be part of this process of change. We look forward to partnering in the future closely with the Massachusetts Department of Elementary and Secondary Education, parents, principals, school committees, superintendents and other community stakeholders to support our teachers in developing better conditions for teaching and learning in all of our schools. We believe we all must work together to make a positive difference in the education of our students and the professional lives of our members.

Massachusetts has one of the most unionized educator work forces in the country, and our students consistently rank at or near the top in every category on the National Assessment of Educational Progress (NAEP) and the Trends in International Mathematics and Science Study (TIMSS). However, Massachusetts – like the rest of the nation – does have significant

achievement gaps among our student populations. We are ready to work with all partners to develop new and better strategies to help close these gaps. The fact that we have done so well with so many of our students puts us in an excellent position to tackle this most difficult of problems: helping low-income, minority and limited English proficient students succeed in school even when they face significant personal, economic and societal challenges.

Each school faces unique challenges; one solution will not work for all. Our vision of the RTTT implementation is that educators and policy leaders will acknowledge the experience and skills that everyone brings to the table and design workable models to help our disadvantaged students and schools become more successful. Together, state and local policy-makers, our Commonwealth's educators and their unions have laid the foundation upon which we can build a better system that is equitable for all.

That foundation includes a willingness to embrace innovation. Many of our district schools already offer alternative models of instruction, and the MTA is a leading advocate of both the Expanded Learning Time initiative and the Partnership for 21st Century Skills. We look forward to discussing additional innovative proposals and hope that the federal government will support states and districts as they experiment with their own models. We thank you for visiting the first innovation school in Revere, Massachusetts recently. It is an exciting model that we hope more places will adopt.

We look forward to advancing the goal of helping all of our students succeed and urge you to select Massachusetts as one of the Race to the Top states. Thank you for your consideration.

Sincerely,

(b)(6)

Anne Wass
President

(b)(6)

Paul Toner
Vice President

193719

Massachusetts Elementary School Principals' Association, Inc.

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FAX: (508) 485-9965
E-MAIL: mespa@mespa.org

May 24, 2010

The Honorable Arne Duncan
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan,

On behalf of the Massachusetts Elementary School Principals' Association, Inc. (MESPA), I am writing to inform you of MESPA's support for the Massachusetts Race to the Top Application.

MESPA is the professional association representing elementary and middle level principals with some 1,100 members across the state. Our Core Values are Leadership, Learning, Service and Community, and MESPA is committed to providing programs, activities, professional development, licensure programs and degree programs, networking opportunities and current research for principals and their staff members. As an example, MESPA was the first association in the country to develop an alternative program to prepare educators to become principals that has received national recognition and has prepared over 300 principals; the first to develop a doctoral program in educational leadership for principals and others administrators in conjunction with a local university (Boston College and now Lesley University); the first to develop a technology center,; and the first to develop a comprehensive professional development program that is research-based and geared toward improving practice. These activities are part of our mission to improve schools through enlightened leadership that begins with pre-service and continues through post-service.

The Massachusetts Race to the Top assurance areas around leadership are of immense interest to us because they include a comprehensive approach to working with leaders and teachers that will provide research and standards-based professional development, leadership coaching, leadership training, support to school districts, and a fair system of accountability. MESPA will actively support these activities as it has the capacity and the programs to do so. MESPA has partnered with the Department of Elementary and Secondary Education for many years. For example, we are a lead partner in the Central Massachusetts Readiness Center, have developed the coaching program used by the state, and worked with principals, assistant principals and aspiring principals through state funded programs.

MESPA supports the thoughtful, comprehensive and innovative program that has been developed in this application. It sets high standards, provides considerable support to educators, and holds them accountable for reaching all students. MESPA has provided input to the development of key aspects of the program and expects that it will continue to offer its services toward implementation. The award of a grant to Massachusetts will provide needed funding to build the capacity of individuals, institutions, districts, and the state to implement and sustain the proposed strategies. The funding for professional development, coaching, teacher and leadership development, and all around high standards will allow our state not only to continue to sit at or near the top of performance in the country, as evidenced by national assessments, but to continue to improve its service to students and educators. We ask that you support Massachusetts' efforts by selecting it as one of the states to receive this award.

Sincerely,

Nadya Aswad Higgins

Nadya Aswad Higgins,
Executive Director

MASSACHUSETTS SECONDARY SCHOOL ADMINISTRATORS' ASSOCIATION, INC.

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FAX: (508) 541-9888 • E-MAIL: mssaa@mssaa.org • http://www.mssaa.org

May 25, 2010

The Honorable Arne Duncan, Secretary
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Reference: Massachusetts' Race to the Top Application

Dear Secretary Duncan:

The Massachusetts Secondary Schools Administrators' Association (MSSAA) writes this letter in support of the Massachusetts' Race to the Top grant application. The MSSAA supports the best possible educational opportunities for middle level and high school students throughout Massachusetts by initiating leadership training and providing services designed to improve administration and instruction. The Association advocates positions on significant statewide educational matters. MSSAA supervises and administers nonathletic activities and provides extensive professional development opportunities for its members to enhance their effectiveness as educational leaders. The Association provides many opportunities for networking and other forms of educational exchange.

Massachusetts is not alone in facing achievement gaps and, along with the Nation's educational leaders, is searching for solutions. The challenge is to create a high performing public education system with the capacity and resources to meet the needs of all students; i.e. those who come to school with advantages and those who do not.

We believe that the Race to the Top Fund will allow Massachusetts to implement innovations to ensure a first-class educator workforce and a high-quality education for every child. We are anticipating our DESE will expect MSSAA to have a fundamental role in the detailed development of the four Massachusetts' Race to the Top initiatives.

MSSAA supports the opportunities for school improvement, and increased funding set forth in the RTTT initiative. We ask that you look favorably on Massachusetts' application.

Thank you.

Joan Scribner, President

David Thomson, President-elect

Richard F. Neal, Executive Director

masc

Massachusetts Association of School Committees, Inc.

One McKinley Square, Boston, Massachusetts 02109
(617) 523–8454 (800) 392–6023 fax: (617) 742–4125 www.masc.org

Kathleen D. Robey, President
Glenn Koocher, Executive Director

May 24, 2010

Hon. Arne Duncan
U.S. Department of Education
400 Maryland Avenue SW
Washington, DC 20202

Dear Secretary Duncan:

MASC is a member driven association whose mission is to support Massachusetts' elected school leaders in their increasingly complex governance role. Through a wide range of programs and services including training workshops and institutes, policy development and administrator search services, legal and advocacy support, and as an information clearinghouse, the Association provides important guidance and expertise to its members and serves to communicate the school committee perspective to government leaders, the media, administrative agencies and other education-related associations.

On behalf of the Massachusetts Association of School Committees, we urge strongly that the Massachusetts Race to the Top (RTTT) Round 2 application be approved and funded. After careful review, we believe that the goals, strategies, and action plan reflected in the application are skillfully designed to help our districts, including those with children in greatest social and economic need, generate significant improvement in student achievement and in the quality of instructional and administrative leadership. We see this application as a vehicle to ensure the continued advancement of our public schools for which we have engaged actively in collaboration with other educational leaders.

MASC has been particularly active working on the "Great Teachers and Leaders" portion of the proposal. The goals of this section are especially well aligned with the priorities of school committees and local civic leaders. In addition, our association's priority to mobilize social and economic resources to support children and families at risk is served by other sections of the application.

We look forward to bringing our state school committees to the table with superintendents, administrators, principals, teachers, staff and parents to fulfill the goals that the RTTT-2 application sets forth. You may be assured of our cooperation and collaboration with our state Executive Office of Education and Department of Elementary and Secondary Education to make the most efficient use of the resources, energy and time inherent in making Race to the Top a legacy that will be remembered for modeling best practices, innovation, academic excellence, and long term school and student success from pre-kindergarten to college and career.

Yours truly,

(b)(6)

Kathleen D. Robey
President

(b)(6)

Glenn S. Koocher
Executive Director

Massachusetts Association of School Superintendents, Inc.

May 20, 2010

The Honorable Arne Duncan
U. S. Department of Education
400 Maryland Avenue, SW
Washington, D. C. 20202

Dear Secretary Duncan:

The Massachusetts Association of School Superintendents strongly supports and endorses the Race To The Top application submitted by the Massachusetts Department of Elementary and Secondary Education.

Our organization represents all 277 district superintendents in the Commonwealth of Massachusetts. We are proud of our long standing work to make Massachusetts the leader in public education. Our rigorous standards and assessments, strong data systems, high levels of accountability and continuous focus toward improvement of student learning for all provide the necessary conditions to lead the Race To The Top initiatives.

Our association is proud of its work to support district leadership in its important role of instructional leadership. We provide strong professional development programs for current and future district leaders including initiatives in Instructional Rounds, Adaptive Leadership, the use of data for instructional improvement, supervision and evaluation and other critical offerings. Currently, we are developing a comprehensive three year education program for all new superintendents as well as specific support systems for superintendents engaged in turnaround schools. Finally, we have been active in setting state policy for increased accountability and reform of our education system.

Race To The Top provides Massachusetts an opportunity to be the example for others to follow. While our success is unquestioned, we have much more work to be done. With RTTT support we can advance our work with education workforce development, improve our capacity and focus on underperforming schools and provide the tools for improved instruction and student performance for all.

The Massachusetts Association of School Superintendents is committed to making the goals of our RTTT proposal a success. Our proven track record of success only foreshadows the possibilities Massachusetts provides as a beacon of what public education can be.

Your support is greatly appreciated.

Sincerely,

(b)(6)

Thomas A. Scott, Ed.D
Executive Director

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Massachusetts Charter Public School Association

10 Tremont St, 6th floor, Boston, MA 02108, 617-523-0881
132 Main St, Haydenville, MA 01039 413-268-3361
info@masscharterschools.org ~ www.massacharterschools.org

May 26, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue SW
Washington, DC 20202

Dear Secretary Duncan:

The Massachusetts Charter Public School Association is pleased to extend its enthusiastic support to Massachusetts' Race to the Top proposal. Over 95% of the Commonwealth Charter Schools in Massachusetts have signed on to help implement Massachusetts' ambitious plans to strengthen standards and assessments, build data systems to support instruction, foster great teachers and leaders, and turn around our lowest achieving schools.

As you know, Massachusetts is a national leader in both the rigor of its charter school authorizing process and the positive educational impact our charter schools have on students. We have been eager to expand in our state's low performing districts, where thousands of students are on charter school waitlists, but until now have been limited by our state's charter school cap. The new "smart cap" legislation passed in January by our state strengthens our state's Race to the Top application, but far more importantly, it will allow our best charter school organizations to serve thousands more students in Massachusetts' lowest performing districts.

We are particularly excited by the opportunities Race to the Top would provide to build stronger connections between charter and traditional district schools around curriculum, instruction, educator effectiveness measures, and professional development, so that we can learn from one another's experiences and foster a stronger education system statewide. As you know, dissemination of best practices is at the heart of the charter school mission and we think that Race to the Top will finally break down some of the walls between charters and districts that have made this dissemination so difficult.

We are in discussions with our member schools on how we work collectively to further enhance our benefits from Race to the Top and provide efficiencies and collective action

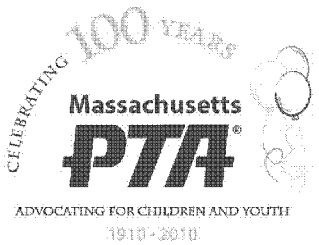
towards developing and implementing new paths toward closing the achievement gaps that still permeate our public school system.

We in the Massachusetts charter school community applaud and support your initiative in developing the Race to the Top fund. We think it has already had a profound impact on Massachusetts public education and the application hasn't even been submitted yet! We look forward to further collaboration with your office, the Massachusetts public education sector and our charter schools to continue to push Massachusetts along the path of reform.

Sincerely,

(b)(6)

Marc Kenen, Ed.D.
Executive Director



The Honorable Arne Duncan
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan,

The Massachusetts Parent Teacher Association (PTA®) is part of the National PTA, the largest volunteer child advocacy not-for-profit association in the United States. Massachusetts PTA is currently organized in 109 local units of approximately 16,000 members - and growing. We are parents, educators, students, family members and other citizens active in our schools and communities. One of the first states to become associated with the national association, Massachusetts PTA is a leader in reminding our government leaders of their obligation to children.

Since its founding in 1897 (before women could vote and social activism was scorned), PTA advocates have been at the heart of our nation's greatest advances for youth. From universal kindergarten to a juvenile justice system, members have spoken up and made significant impacts in the education, health, and welfare of children. Today, we speak up for family engagement language in laws; safe, healthy, and technologically advanced schools, and equal opportunity for all children, regardless of their socioeconomic background.

Educating all of our students with equity is the greatest social justice issue of our time. The Race to the Top competition grants seek to level the playing field for all children's education. The goals, proposed initiatives, and strategies of the Massachusetts application align with Massachusetts PTA in the areas of school governance, funding for public education, and teacher qualifications. It is our belief that schools collaborating with parents and families to co-construct strategies for effective engagement empowers families and improves schools for significant reform so students succeed.

Specifically, Massachusetts PTA's positions on School Governance, Public Education Funding, and Teacher Quality/Qualifications dedicate us to:

- support, expand, and improve opportunities that welcome parents in the school;
- support, expand, and improve opportunities for parents to become knowledgeable about the governance and operations of schools;
- support, expand, and improve opportunities for parents to participate in school-based decision-making;

- support, expand, and improve efforts to increase funding to provide quality education for all students;
- support, expand, and improve efforts that ensure public funds are used exclusively for public schools;
- support, expand, and improve student preparation for high school graduation and access to post-secondary education and the workforce;
- support, expand, and improve programs that recruit, develop, and retain highly qualified educators

A Japanese proverb warns:

> *Vision without action is a daydream;*
> *Action without vision is a nightmare.*

With a comprehensive vision and action plan for student success, as enumerated within the Massachusetts Race to the Top application, plus a shared understanding of our responsibility to all of our children, I believe we will reach our shared goal of helping each child in the Commonwealth graduate from high school, prepared for success in college and career, and for the challenges that lie ahead.

Sincerely,

Mary Ann Stewart,
Massachusetts PTA | President
*every***child**.*one***voice**.

May 21, 2010

The Honorable Arne Duncan, Secretary
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Reference: Massachusetts' Race to the Top Application

Dear Secretary Duncan:

MassPartners for Public Schools requests your support of the Massachusetts' Race to the Top application. MassPartners is a collaboration of organizations representing teachers, parents, principals, school committees and superintendents. We share a commitment to improving public schools, to educating all children to high standards, and to supporting accountability in the educator workforce.

The hard work of students, parents, educators, business leaders, and policy makers in Massachusetts has been impressive and the results are clear. As you know, our students consistently rank at or near the top in every category on the National Assessment of Educational Progress (NAEP) and the Trends in International Mathematics and Science Study (TIMSS) test.

Massachusetts is not alone in facing achievement gaps and the nation is searching for solutions. The challenge is to create a high performing public education system with the capacity and resources to meet the needs of students who come to school with disadvantages and attend high poverty schools.

We believe that Race to the Top funds will provide Massachusetts with needed funding to implement innovations to ensure a first-class educator workforce and a high-quality education for every child. As members and conveners of the State Implementation Group, we offer our support to our state education office and know that our collaborative partnership will lead to success.

Each school faces unique challenges; our vision of the RTTT implementation is that experienced education and policy leaders, in partnership with parents and communities, will work together to put in place workable models to help our disadvantaged students and schools become successful. Massachusetts has laid the foundation upon which we can build a better system that is equitable for all. We hope that you will act favorably upon the Massachusetts application. Thank you.

Massachusetts Association of School Committees
Glenn Koocher
Executive Director

Massachusetts Association of School Superintendents
Thomas A. Scott
Executive Director

Massachusetts Elementary School Principals' Association
Nadya Aswad Higgins
Executive Director

Massachusetts Parent Teacher Association
Mary Ann Stewart
President-elect

Massachusetts Secondary School Administrators' Association
Phillip F. Flaherty
Assistant Director

Massachusetts Teachers Association
Anne Wass
President

. . . . . .

MassPartners
Patricia A. Sweitzer
Administrator
231 Butler Road
Monson, MA 01057
Telephone: 413-267-3200
psweitzer@masspartners.com

Sincerely,

Phillip Flaherty, Chair, MassPartners for Public Schools
Assistant Director
Massachusetts Secondary School Administrators' Association
www.mssaa.org

Paul Toner, Vice-Chair, MassPartners for Public Schools
Vice-President, Massachusetts Teachers Association
www.massteacher.org

Anne Wass, President
Massachusetts Teachers Association
www.massteacher.org

Nadya Aswad Higgins, Executive Director
Massachusetts Elementary School Principals' Association
www.mespa.org

Glenn Koocher, Executive Director
Massachusetts Association of School Committees
www.masc.org

Thomas Scott, Executive Director
Massachusetts Association of School Superintendents
www.massupt.org

Mary Ann Stewart, President
Massachusetts Parent Teacher Association
www.masspta.org

COMMONWEALTH READINESS PROJECT

May 25, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

We were privileged to serve as Co-Chairs of Governor Deval Patrick's Commonwealth Readiness Project, and we are most pleased to submit this letter of support for the Massachusetts' Race to the Top Phase II application.

As stated in our previous letter in support of RTTT, Governor Patrick called on a diverse group of education, business and civic leaders to look to the future of public education in the Commonwealth and offer a set of recommendations to transform our state system of public education into a comprehensive, integrated, student-centered education system that begins before kindergarten and continues through grade 12 and beyond. The final set of recommendations – The Readiness Project – was submitted to Governor Patrick on June 25, 2008.

The report outlined a clear vision and set of recommendations with the success of every student – no matter his/her ZIP code, age or socioeconomic status – at the center. Four key goals provided the foundations for twenty-four final recommendations. To generate the dramatic and widespread improvements in education the Governor charged, we established the following broad goals:

- Meet the learning needs of each student and provide the understanding, encouragement, support, knowledge and skills each requires to exceed the state's high expectations and rigorous academic standards;
- Ensure that every student in the Commonwealth is taught by highly competent, well-educated, strongly supported and effective educators;
- Prepare every student for postsecondary education, career and lifelong economic, social and civic success; and
- Unleash innovation and systemic change throughout the Commonwealth's schools, school districts, colleges and universities as well as in the partnerships and collaborations among education institutions, communities, businesses and nonprofits.

The recommendations of the Readiness Project provide the groundwork and foundation for Massachusetts' national leadership and accomplishments in student achievement and in education reform, as well as for Massachusetts' Race to the Top Phase II application. The goals of the RTTT Phase II application –

1. attract, develop and retain an effective, academically capable, diverse, and culturally competent educator workforce;
2. provide curricular and instructional resources that support teacher effectiveness and success for all students;
3. concentrate great instruction and supports for educators, students, and families in our lowest performing schools and their districts; and
4. increase our focus on college and career readiness for all students

are in complete alignment with the Readiness Project goals and recommendations.

The RTTT Phase II application also highlights the successful effort of the Governor and Legislature to remove the cap on expanding access to charter public schools in the lowest-performing districts in the state, preserving the current funding formula and encouraging innovation, autonomy and flexibility within school districts. Our application will build on the progress already made through this and other efforts, and will provide much needed and required resources to accelerate implementation, provide bold and responsive action, and improved educational opportunities for our most disadvantaged students.

The Commonwealth of Massachusetts is in a unique position to continue its proud tradition of leadership in education and to make good on Governor Patrick's commitment to education improvement. We urge you to provide us this once-in-a-generation opportunity.

Thank you for your consideration.

Sincerely,

Jackie Jenkins-Scott	Dr. Thomas Payzant	Joe Tucci, President
President	Professor of Practice	Chairman & CEO
Wheelock College	Harvard Graduate School of Education	EMC Corporation

Massachusetts Board of Higher Education

One Ashburton Place, Room 1401
Boston, MA 02108-1696

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Charles F. Desmond, *Chairman*

May 25, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

It is with great enthusiasm that the Massachusetts Board of Higher Education expresses its support for the Phase Two Race to the Top proposal that is being submitted on behalf of the Commonwealth to the U.S. Department of Education by the Massachusetts Department of Elementary and Secondary Education.

This month the Board approved the Massachusetts Vision Project. The goal of the Vision Project is that Massachusetts will have the best-educated citizenry and workforce in the nation without gaps among population subgroups. Accomplishing this goal requires partnering with K-12 to enhance the college readiness of high school students and improve the state's college-going rates, increasing rates of degree and certificate completion among students enrolled at our public campuses, and reducing disparities in educational attainment among ethnic/racial, income and gender groups.

Higher education access and preparation go hand in hand and require appropriate measures to ensure that students entering college are ready for college work. The Board of Higher Education has a long history of close collaboration with the K-12 sector to develop policies that support more rigorous admission standards for the state colleges and university, academic support and pathways for students at risk, incentives for high school graduates who demonstrate high achievement in rigorous high school courses, and strong educator preparation, especially in STEM fields.

The strategic initiatives described in the Phase Two Massachusetts proposal provide a strong basis for achieving the Race to the Top fund's overarching goals of developing great teachers and leaders, embedding rigorous standards and assessments, turning around lowest-achieving schools, using data systems to support instruction and investing in STEM. Successful attainment of each of these goals is foundational to Massachusetts achieving and sustaining national leadership in education.

Mr. Secretary, as you and President Obama are determined to do all that you can to advance the quality and effectiveness of our nation's education system, so are the members of the Board of Higher Education and I determined, along with our colleagues in the Board of Elementary and Secondary Education and Executive Office of Education,

to do all that we can to make the Massachusetts public education system the best in the nation. Race to the Top funds will leverage years of pre-existing collaborative effort and unparalleled investment in our education infrastructure to catalyze achievement among all student groups for decades to come. To that end, the Board of Higher Education strongly encourages approval of the Massachusetts Phase 2 application.

Sincerely,

Dr. Charles Desmond
Chairman

c: Paul Reville, Secretary of Education
Mitchell Chester, Commissioner, Department of Elementary and Secondary Education
Richard Freeland, Commissioner, Department of Higher Education

May 24, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

The Massachusetts Department of Early Education and Care (EEC) strongly supports the *Race to the Top* proposal as prepared by the Massachusetts Department of Elementary and Secondary Education (ESE) for submission to the U.S. Department of Education.

EEC is working to continually build a system of early education and care which includes a governance structure, regulations, workforce and professional development, standards assessment and accountability, informed families and public and finance. Each of EEC's efforts are strategically designed to implement best practices, focus on identifying and improving quality and meet the needs of children at highest educational risk across the Commonwealth.

In 2010, EEC renewed its focus to align the components of the early education and care infrastructural system. Like any "system" the early education and care system is composed of a set of connected components, forming a complex unit with some overall purpose, goal, or function that is achieved only through the actions and interactions of all the components. Though always evolving through an evaluative process and systemic planning and alignment, EEC does have several current initiatives in a stable, growth oriented position.

EEC remains committed, along with our sister agencies, to align our priorities and initiatives, as outlined below, within four core goals;

1) **Attract, develop, and retain an effective, academically capable, diverse, and culturally competent educator workforce;**

   Educator and Provider Support (EPS) Funding
   For FY2011, EEC identified five key elements of professional development, through the EPS grant, that are the foundation for this work and that must be embedded in the system, including professional development:

   1. Must be evidenced-based and aligned with EEC's 8 Core Competencies Areas;
   2. Is a shared responsibility between educators and the providers that employ them; increasing the competency of educators increases the level of quality of the programs in which they work;
   3. Must be targeted and intentional if available resources are to meet the needs of specific age groups and unique populations;
   4. Must meet the needs of the early education and care and out of school time workforce in all settings; and

5. Must leverage resources across public and private agencies, including in-kind resources to provide statewide coverage in all required topics.

In the near term, EEC intends to focus its resources to support two interconnected areas; educators' degree attainment and/or competency development and providers' accreditation and upward progress on the Quality Rating and Improvement System.

To address the goals of supporting these two areas EEC is requiring the following areas of services:

1. Educator and Provider Planning;
2. Coaching and Mentoring; and
3. Competency Development.

Professional Qualifications Registry
EEC is continuing to develop a professional qualifications registry and will require that all educators register annually with the Department which will preliminarily allow EEC to generate basic data about the current Massachusetts' workforce. The registry will support the new Massachusetts' early education and care regulations, and will also link to the Quality Rating and Improvement System (QRIS), which is currently in a provisional stage, and will allow EEC staff to determine the qualifications of program staff in relation to the QRIS quality levels.

Institutions of Higher Education Mapping Project
EEC, in partnership with the Head Start State Collaboration Office, has selected a vendor to map the current network of two and four year public and private Institutions of Higher Education in Massachusetts that offer an Early Childhood Education program of study, elementary education program or program in a related field that leads to a certificate, and/or an associate's or a bachelor's degree. Research has begun and by June 2010, EEC will have a finished product to include a profile for each campus and a database that can be included as part of EEC's future professional qualifications registry.

2) Provide curricular and instructional resources that support teacher effectiveness and success for all students;

Early Literacy Grant
Through this initiative EEC seeks to increase the core competencies of family child care educators to increase quality early literacy opportunities for infants and toddlers in early education programs as well as to promote family involvement in book sharing, reading aloud and storytelling. EEC recognizes family child care educators are key partners in promoting early literacy development in children's first three years as they serve a significant portion of children enrolled in early education at these ages in Massachusetts and have opportunities for engagement with these children's families. EEC hopes to increase family child care educators' awareness and knowledge of early literacy development and further develop their skills in promoting early literacy skills during daily routines with the infants and toddlers.

Supporting Improvements in Physical Environments for Early Education and Care Programs Serving Infants and Toddlers Grant
This initiative focuses on improving early education and care programs that serve infants and toddlers by providing professional development to increase quality via enhancements to the physical environments of these programs and funds to support the purchase of equipment that focuses on health and safety and curriculum improvements for infants and toddlers. These programs often lack professional development opportunities focused on the link between improvements in their physical environment leading to increased outcomes in children and would benefit from additional training, support and funding for these enhancements.

Policy and Best Practices: Children who are English learners, Children with Developmental Delays and Families with Multiple Agency Involvement
EEC is working on the development of policy, best practices and recommended models for early education and care serving limited English proficient children and families and/or children with developmental delays or multiple system involvement.

Quality Rating and Improvement System (QRIS)
In mid-April 2010, EEC launched the provisional QRIS standards, and offered any eligible and interested program an opportunity to engage in an early version of the QRIS.

The QRIS program will allow programs to receive a rating based on the degree of quality in the program defined in terms of QRIS standards. The Massachusetts' QRIS Levels begin with Level 1 and currently advances toward Level 4 (Level 5 is not yet defined). At each level the standards and QRIS measurements are designed to gradually increase towards the full integration of practices known to be indicators of high quality education and care.

This pilot will allow EEC to learn more about how the QRIS rating process works for programs and make informed decisions regarding any needed enhancements to make the QRIS a more effective system, prior to full implementation. As part of the pilot, programs will be asked to share feedback on how the provisional standards align with program quality.

EEC expects to confirm and report aggregate-level data on program rating levels during December 2010. Full implementation of QRIS is expected in January 2011.

3) Concentrate great instruction and support for educators, students, and families in our lowest performing schools and their districts; and

Kindergarten Entry Enrichment Program (Summer 2010 and 2011)
Public schools and income eligible contracted providers will apply to provide preschool children who are not currently enrolled in early education and care programs and/or are educationally at-risk with experiences that will help prepare them for kindergarten.

Out-of-School Time Literacy and Learning Promotion Grant
EEC is pleased to announce this competitive grant opportunity for Out-of-School-Time Literacy and Learning Promotion. The goal of the Out-of-School Time Literacy and Learning

Promotion grant is to retain or increase students' academic gains, particularly in the area of literacy, by reinforcing their school day and year learning through high-impact activities and effective curricula during the summer months and throughout the school year. This grant will support increasing out of school time programs' capacity to implement high-impact learning activities through partnerships with public school districts for direct training, modeling of effective direct instructional practice; and coaching/feedback for staff.

Partnership with the Massachusetts Department of Elementary and Secondary Education (ESE) to Prioritize the Lowest Performing Schools and Their Districts
In support of our youngest citizens, EEC has partnered with Massachusetts Department of Elementary and Secondary Education on several activities as delineated below.

In support of a statewide approach to organize support and assistance to the school districts in Massachusetts with challenges, including serving among the highest percentages of students living in poverty statewide and containing more than 80 percent of the schools currently designated as underperforming, ESE has recognized ten "Commissioner's Districts". Multiple EEC initiatives prioritize these ten designated ESE districts in order to provide a coordinated approach to targeting resources to support these portions of the state. Two such initiatives include a summer-only early education and care program linked to closing the summer learning gap and an out-of-school-time grant which aims to retain or increase students' academic gains, particularly in the area of literacy, by reinforcing their school day and year learning through high-impact activities and effective curricula during the summer months and throughout the school year.

EEC continues to identify opportunities to cultivate best practices for intervening in the lowest-achieving schools in the state. To that end, EEC has entered into a Memorandum of Understanding (MOU) with one of the ten ESE "Commissioner's Districts". The MOU is to develop a comprehensive integrated service delivery and learning system designed to support collaboration, coordination and shared results for the children of Springfield from Pre-K to third grade including public schools, and other providers of early education and care including family child care, head start and center based care. Alignment of standards, curriculum, professional development to support teacher quality and assessment pre-kindergarten to third grade requires organization across multiple domains and stakeholders.

EEC has agreed to work with the Department of Elementary and Secondary Education to ensure alignment of priorities regarding Pre-K to 3 system building, beginning with a focus on formative assessment. ESE and EEC are actively working toward assigning of ESE's unique student identifier, the SASID, to children ages 0-5 in EEC programs.

EEC is committed to the implementation of universal high quality assessments for children and is currently engaged in multiple efforts, including the Universal Pre-Kindergarten Program (UPK) which prioritizes preschool programs that serve at-risk and low-income children. The UPK program promotes school readiness and positive outcomes for children, supports the use of child assessment systems/tools to ensure that programs are effectively measuring children's progress across all developmental domains and uses this information to

inform practice and the longer-term implementation of universally accessible, affordable, high quality early education.

In efforts to access and use data to improve instruction, EEC was pleased to be the recipient of a technical assistance grant from the Council of Chief State School Officers to assist in developing a statewide assessment system. EEC is currently working to build a statewide assessment system and is coordinating with the Department of Elementary and Secondary Education (ESE) to ensure alignment of formative and summative assessments and data collection efforts taking place in the Kindergarten to 12th grade system.

It is EEC's intention to support educator improvement and effectiveness through the state's regional Readiness Centers in the future by providing career and planning for individual educators and programs and leadership; coaching and mentoring to support the academic success of individual educators in higher education, implementing a career plan for educators to attain specific skills, knowledge and abilities, supporting improvements by programs that result in achieving a higher level on QRIS or accreditation; and developing competencies to attain an associates, bachelors or masters degree in early childhood education or a related field and attainment of specific competencies by educators.

With the understanding that early literacy is essential for success in school and life, EEC and ESE are collaborating on an Early Literacy Proficiency Gap Task Force. In Massachusetts, many students fail to demonstrate reading proficiency as evident in the 2009 ESE data in which 43% of 3rd grade students scored below proficient in reading on the Massachusetts Comprehensive Assessment System (MCAS) exam. All too often, these same students are identified as living in poverty, have special needs, are English language learners, or identify themselves as members of one or more of the major ethnic or racial minorities in Massachusetts.

The joint Task Force has provided recommendations which include building a shared statewide system of pre-service and in-service ongoing professional development in literacy that addresses a continuum of pre-kindergarten to 3rd grade standards, assessments, and research-informed instructional practices; convening a Task Force to review measurement options in order to identify formative and summative assessments with a focus on comprehensive assessment of literacy for uniform statewide implementation and guidance to districts in Pre-k to 3rd grade; providing access for all children in low performing school districts; and the development, promotion and provision of concrete vehicles and benchmarks for parent/school partnerships including literacy support in the home through oral language and print.

4) Increase our focus on college and career readiness for all students.

It is the mission of the Massachusetts Department of Early Education and Care (EEC) to provide the foundation that supports all children in their development as lifelong learners and contributing members of the community, and supports families in their essential work as parents and caregivers. EEC recognizes early education as one of the foundational attributes for all future school readiness and success, including college and career readiness.

In order to realize success, EEC is committed to a critical partnership with the Massachusetts Department of Elementary and Secondary Education (ESE) to ensure children receive strong support starting even before birth to allow for the development of an optimal foundation for growth and academic achievement as they prepare for their future success, specifically in kindergarten through 3rd grade.

The investment of Race to the Top funding will allow Massachusetts to bolster a more comprehensive sustainable approach to providing innovative supports to children/students, families and educators across the state and across the continuum of agencies that support the development of these populations within the educational framework in Massachusetts. The support of Race to the Top funds will advance our shared investment in targeted districts for preschool and out-of-school time programs in enhancing teacher quality and defining shared formative assessments.

Sincerely,

Sherri Killins
Commissioner

cc:
Paul Reville, Secretary of Education
Mitchell Chester, Commissioner, Department of Education
J.D. Chesloff, Chairman, Board of Early Education and Care

Massachusetts Department of Higher Education

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Richard M. Freeland, *Commissioner*
Charles F. Desmond, *Chairman*
Massachusetts Board of Higher Education

May 25, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

The Massachusetts Department of Higher Education fully endorses the Phase Two Race to the Top Proposal as prepared by the Massachusetts Department of Elementary and Secondary Education for submission to the U.S. Department of Education. The Department is committed to the vision of Massachusetts as having the best-educated citizenry and workforce in the nation. The readiness of all students for college and career success, as well as the preparation of the educators who teach in and lead our elementary and secondary schools, is fundamental to achieving this vision.

Critical measures of educational attainment, however, reveal deep disparities between different population groups in Massachusetts. On the college-going rate of 18-24 year olds, there is a 10 percent gap between whites and all minorities, with the largest gap (21 percent) being between whites and Hispanics. Both public and private higher education in Massachusetts have race/ethnic disparities with regard to graduation rates with a 9.3 percent gap in six-year graduation rates of whites and all minorities at public four-year campuses. Reducing and ultimately eliminating these disparities is an urgent priority for three reasons. First, these disparities deepen social and economic inequities that are at odds with our basic commitment to social justice and equal opportunity. Second, the ethnic groups that are faring least well in educational attainment are also the most rapidly growing segments of our population. We need these students to be mainstays of the future workforce. Third, eliminating these disparities is one of the most powerful steps we can take to raise Massachusetts to national leadership in the overall educational attainment of our citizenry.

The Department of Higher Education has worked and continues to work closely with our colleagues in elementary and secondary education to end these disparities and make Massachusetts best in the nation in the education attainment of its citizens in all their diversity. Our P-16 policies, which center on preparation of effective educators, sharing of student longitudinal data, alignment of high school exit and college entrance requirements, and exposure of students to college experiences while they are still in high school, include the following priority initiatives:

- Implement the rigorous *MassCore* curriculum as a default program of studies statewide. Adopt four years of math education for high school graduation and college admissions to strengthen general college readiness and strengthen the elementary teacher pool.

- Dramatically expand the continuum of Early College opportunities, especially in STEM fields. Strengthen the infrastructure for the Commonwealth Dual Enrollment Program—which is a cornerstone for a range of early college opportunities including early college high schools—

by developing a statewide articulation agreement for dual enrollment courses as well as a statewide online tool for students and counselors to locate articulated dual enrollment courses available online or on campuses. Expand early assessment in mathematics, reading and writing to provide early notice to students about their college readiness.

- Utilize the Commonwealth's Readiness Centers to support ongoing regional meetings of high school and college math and English teachers for the examination of student work, curriculum alignment, and joint course development.

- Expand the *School-to-College* database and reporting to support informed, data-driven decisions by all education stakeholders.

- Communicate broadly Massachusetts' college and career readiness definition and agenda. Establish timetables and hold ourselves accountable for implementation.

In further support of educator effectiveness, the Department of Higher Education has focused the 2010 NCLB Title IIA *Improving Teacher Quality* grant awards on college readiness in math and writing targeting teachers of low-income students. Higher education is also working to develop a quantitative reasoning course and an English composition course that can be accessed statewide through the Commonwealth Dual Enrollment Program and that will meet both high school senior and college freshman distribution requirements in English and mathematics.

The Massachusetts Race to the Top proposal identifies five broad initiatives: provide all students with more personalized instruction; develop and retain an effective, diverse, and culturally competent educator workforce; concentrate great instruction and additional supports in the schools that need it most; increase college and career readiness for all students; and invest in STEM in the context of RTTT initiatives. These organizing initiatives align well with Massachusetts higher education priority recommendations for college readiness, participation and success.

Mr. Secretary, the commitment by you and President Obama to direct precious resources to the education sector during a time of severe economic constraint demonstrates your recognition that a strong education system is essential to our national prosperity and quality of life. The Department of Higher Education has worked closely with the Department of Elementary and Secondary Education to strengthen the Massachusetts Race to the Top proposal for Phase Two submission. I am convinced that the crucial, once-in-a-lifetime investment that Race to the Top funding represents will result in an improved education infrastructure and significant lasting returns in the quality, effectiveness and achievement of institutions, teachers and students throughout the Commonwealth's education continuum.

Sincerely,

Richard M. Freeland
Commissioner

C: Mitchell Chester, Commissioner, Department of Education
Charles F. Desmond, Chairman, Board of Higher Education
Paul Reville, Secretary of Education

MACTE

Massachusetts Association of Colleges for Teacher Education

American International College
Anna Maria College
Assumption College
Atlantic Union College
Bay Path College
Becker College
Berklee College of Music
Boston College
Boston Conservatory
Boston University
Brandeis University
Bridgewater State College
Cambridge College
Clark University
College of the Holy Cross
Curry College
Eastern Nazarene College
Elms College
Emerson College
Emmanuel College
Endicott College
Fitchburg State College
Framingham State College
Gordon College
Harvard University
Hellenic College Holy Cross
Holyoke Community College
Lasell College
Lesley University
Massachusetts College of Art
Massachusetts College of Liberal Arts
Merrimack College
Mount Holyoke College
Mount Ida College
Nichols College
Northeastern University
Northern Essex Community College
Pine Manor College
Regis College
Salem State College
Shady Hill School
Simmons College
Smith College
Springfield College
Springfield Technical Community College
Stonehill College
Suffolk University
Tufts University
University of Massachusetts Amherst
University of Massachusetts Boston
University of Massachusetts Dartmouth
University of Massachusetts Lowell
Wellesley College
Western New England College
Westfield State College
Wheaton College
Wheelock College
Worcester Polytechnic Institute
Worcester State College

Affiliate:

American Association of Colleges for Teacher Education

May 24, 2010

Honorable Arne Duncan
U.S. Department of Education
400 Maryland Ave, SW
Washington, D.C. 20202

Dear Secretary Duncan:

This letter from The Massachusetts Association of Colleges for Teacher Education (MACTE) is written in support of the Massachusetts Department of Elementary and Secondary Education's application for Race To The Top funds. MACTE represents over 60 public and private colleges and universities dedicated to promoting the highest quality of pre-service and in-service teacher education in the Commonwealth of Massachusetts. MACTE collaborates with other associations and with state government, businesses, policymakers, and grassroots organizations in order to advocate for high quality teacher education. As part of our work, MACTE sponsors two annual professional development conferences for teacher preparation faculty, teacher candidates and k-12 teachers and administrators. MACTE supports the effort to include "intervention and support strategies that will help educators to continually improve. " This occurs initially in strong preparation programs and through robust professional development programs that MACTE encourages their members to offer individually and in cooperation with the Massachusetts Department of Elementary and Secondary Education.

As a state affiliate of the American Association of Colleges for Teacher Education (AACTE), MACTE supports all of AACTE Goals, particularly to "Strengthen programs and build their capacity to prepare educators who can *teach every child effectively"* and to "Increase the diversity of education candidates and improve programs' curriculum to ensure that all educators can serve diverse learners." These two national goals supported by our state MACTE chapter are in direct alignment with the RTTT program goals and our reform assurances.

MACTE has member representation on the state Educational Personnel Advisory Council (advisory to our state board of education) as well as the Working Group for Educator Excellence (WGEE), a state policy group advocating for a systemic approach to influencing what teachers and educational leaders know and can do in Massachusetts. The MACTE Board is a proud supporter of the state of Massachusetts application for Race to the Top funding which would build capacity to enhance the effectiveness of P-12 educators for generations. Thank you for this opportunity to share our enthusiasm for this exciting work

Sincerely,
Lorne Ranstrom
MACTE Board

READINESS CENTERS NETWORK

May 28, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

On behalf of the Readiness Centers Network that is comprised of the partners that are managing six regional Readiness Centers in Massachusetts, we are writing to enthusiastically endorse our state's Phase 2 Race to the Top proposal.

Governor Patrick's Education Action Agenda included a recommendation to establish Readiness Centers, multipurpose and collaborative centers focused on improving the quality of teaching both across the education continuum and across Massachusetts. The Executive Office of Education (EOE) established the Readiness Centers in October 2009, and they are being managed and operated by regional consortia of partners that include public and private institutions of higher education, school districts, early education and out-of-school-time providers, educational collaboratives, non-profit organizations, and business and community partners.

We represent over 40 institutions and organizations that are committed to performing two core functions of these centers:

- Providing high-quality professional development and instructional services to educators in early education and out-of-school-time programs, K-12 institutions, and higher education institutions to address both local/regional needs and statewide priorities; and

- Convening stakeholders from early education, elementary and secondary education, higher education, and other sectors to collaboratively address key education priorities, leverage resources, build statewide capacity, and increase integration and coherence across the education continuum.

We are ready to fulfill the roles and responsibilities of the Readiness Centers as described in Massachusetts' Race to the Top proposal. First, we will support and complement the efforts of the Department of Elementary and Secondary Education (ESE) to provide high-quality professional development focused on: 1) implementing new curricular and assessment tools; 2) using data more effectively to assess student progress and improve instruction; and 3) other areas of statewide need including closing achievement gaps among different groups of students and providing effective instruction for English language learners and in STEM courses of study.

Second, we will leverage our robust network of regional partners to convene representatives from early education, elementary and secondary education, higher education, and other sectors to address,

among others, the following priorities: 1) increasing vertical alignment of curricula and assessments across the educational continuum; 2) implementing strategies to increase college and career readiness; 3) improving the quality of teacher preparation programs; and 4) expanding the supply of effective and culturally competent educators, particularly educators of color and those teaching STEM courses, English language learners, and students receiving special education services. In addition, we will utilize our network to disseminate information about promising practices and innovative instructional or professional development models to stakeholders across the state.

The Readiness Centers initiative has generated significant interest and commitment on the part of multiple stakeholders in Massachusetts, as it represents a bold and ambitious approach to improving the core work of education – the interactions between educators and students.

We are eager to further develop our partnerships with the EOE, ESE, the Department of Early Education and Care, the Department of Higher Education, and other stakeholders, and believe that the Race to the Top program will significantly enhance our efforts to ensure that all of our educators will effectively support student engagement, achievement, and success. Thank you in advance for your consideration of Massachusetts' Phase 2 Race to the Top proposal.

Sincerely yours,

Cynthia Farr Brown, Ph.D.
Vice President of Academic Affairs
Massachusetts College of Liberal Arts
Berkshire Readiness Center

Elaine Francis, Ed.D.
Dean of Education
Fitchburg State College
Central Massachusetts Readiness Center

Robert A. Martin, Ph.D.
Vice President for Academic Affairs
Framingham State College
Greater Boston Readiness Center

Vera M. Ossen, Ed.D.
Director of Educator Preparation Programs
University of Massachusetts Lowell
Northeast Regional Readiness Center

Robert A. Hayes, Ph.D.
Vice President of Academic Affairs
Westfield State College
Pioneer Valley Readiness Center

Anna L. Bradfield, Ph.D.
Dean, School of Education/Allied Studies
Bridgewater State College
Southeast Massachusetts Readiness Center

May 27, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Re: The Commonwealth of Massachusetts' Race to the Top Proposal

Dear Secretary Duncan:

We are writing in strong support of Massachusetts' proposal to access the second round of federal Race to the Top (RTTT) funds allocated through the American Recovery and Reinvestment Act of 2009. The initiatives detailed in the proposal will enhance academic success for all students, work to close student achievement gaps, and improve the best in the nation public education system in preparing students for higher education and the workforce.

The state colleges of Massachusetts include six comprehensive state colleges—Bridgewater State College, Fitchburg State College, Framingham State College, Salem State College, Westfield State College, and Worcester State College—and three specialized colleges—Massachusetts College of Art and Design, Massachusetts College of Liberal Arts, and Massachusetts Maritime Academy. All of our colleges integrate liberal arts and sciences programs with professional education, and the three specialized colleges also focus on academic areas identified in the college's name.

Our mission requires that each college place a special emphasis on teaching and lifelong learning and promote a campus life that fosters intellectual, social, and ethical development. Committed to excellence in instruction and to providing responsive, innovative, and educational programs of high quality, we seek to develop each student's critical thinking, quantitative, technological, oral, and written communication skills, and practical appreciation of the arts, sciences, and humanities as they affect good citizenship and an improved quality of life. The state colleges provide a campus environment where the ideas, values, perspectives, and contributions of all students are respected. Each college is a leader and resource for the community and contributes to the region's cultural, environmental, educational, and economic development.

The initiatives found in the second phase of the Race to the Top Proposal will assist the state colleges in carrying out our mission. We believe the proposal advances the Massachusetts tradition of strengthening collaboration in public education at all levels: pre-K through higher education. The State Colleges of Massachusetts have already begun to actively support state efforts to implement these strategies by partnering with the Executive Office of Education and the Department of Elementary and Secondary Education in forming six regional educational "Readiness Centers" to provide, in part, statewide technical assistance and support to educators. These Centers are designed to further increase the coherence and alignment of professional development and instructional services provided to educators. In addition, over the past six months these centers have been active in bringing together K-12 education and early education with higher education to focus on providing curricular and instructional resources that support teacher effectiveness. Importantly, from our perspective, Race to the Top Funds will serve to strengthen this innovative collaboration model as we work together to continue to build and grow our Massachusetts Readiness Centers.

The State Colleges are pleased to be active partners with the Massachusetts Executive Office of Education in implementing relevant Race to the Top initiatives highlighted in the Commonwealth's application. Indeed, our involvement and support is crucial to the state's education success since one out of three elementary and secondary school teachers working in the Commonwealth are graduates of our state colleges. Though rigorous and innovative state college teacher education programs currently prepare teachers for classroom instruction, the proposed application and initiatives will help facilitate efforts to ensure that all teachers receive the cutting edge preparation, training, and support needed to provide each and every student with a world-class 21st century education.

Mr. Secretary, given your and President Obama's commitment to providing each of our nation's students access to an education of the highest quality in the world, and our own state's desire to be a model for the rest of the nation in educational excellence, we are pleased to support the Massachusetts Executive Office of Education's proposal to unlock the innovation that these once-in-a-generation race To The Top funds will leverage. This opportunity will allow the Commonwealth of Massachusetts to provide students with a model world class education and build upon the collaboration already initiated within all sectors of education in Massachusetts.

Respectfully,

President Richard Gurnon
Massachusetts Maritime Academy
Chairperson, Council of State College Presidents

President Mary Grant
Massachusetts College of Liberal Arts

President Dana Mohler-Faria
Bridgewater State College

President Robert Antonucci
Fitchburg State College

President Timothy Flanagan
Framingham State College

President Katherine Sloan
Massachusetts College of Art and Design

President Patricia Maguire Meservey
Salem State College

President Evan Dobelle
Westfield State College

President Janelle Ashley
Worcester State College

State Student Advisory Council to the Board of Elementary and Secondary Education

Department of Elementary and Secondary Education
75 Pleasant Street
Malden, Massachusetts 02148-4906
(781) 338-6320

Central Mass. RSAC
Greater Boston RSAC
Northeast RSAC
Southeast RSAC
Western Mass. RSAC

Chair: Michael A. D'Ortenzio Jr.

Vice-Chair: Angela Pineda

May 20, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202-0001

Dear Secretary Duncan:

On behalf of the students of the Commonwealth, the State Student Advisory Council to the Board of Elementary and Secondary Education (SSAC) would like to formally endorse Massachusetts' Race to the Top grant application. Race to the Top represents an unparalleled opportunity for great educational innovations and successes intended for students and for this reason we are eager to support it. As Chairman of the SSAC, I serve ex officio as a full voting member of the Board and it is my duty to represent the interests of the approximately one million students of the Commonwealth in grades K-12. The SSAC, as well as the five regional councils, meet monthly to discuss matters involving education in the State and throughout their regions, respectively, and to determine what is in the best interest of students as well as to advise me on matters before the Board. We are elected by our high school peers to one-year terms to regional councils. From there, forty-four students are elected to the State Council, with that Council electing its Chairman. As a whole, the State Student Advisory Council may propose matters to go before the General Court as well as the Board. In over thirty-five years of existence, SSAC has written, filed, and lobbied for passage of a number of laws that affect students, including the amendment to Massachusetts' anti-discrimination law that now protects students based on sexual orientation. Other sponsored and enacted legislation has included the right to petition for a course, the creation of student advisory committees to school committees, and a set of codified student rights. SSAC members have also participated in the committees established to search for the state Commissioner of Elementary and Secondary Education as well as committees to choose recipients of numerous awards. We have proven that students can have a positive and serious impact on their own education.

Race to the Top is an opportunity for us to voice these beliefs. We fully believe in Massachusetts' work in the four assurance areas and particularly in the tenant of improving our STEM-based education. SAC also looks forward to working with the Department of Elementary and Secondary Education in their work to increase college and career readiness for all students and work with them to advise and formulate the most pragmatic and auspicious ways to help implement these initiatives, including using our network of representatives from high schools in the Commonwealth. We have reached out to districts to advocate for participation in Race to the Top and will continue to work with those that submitted an MOU to promote innovative and institutionally changing local use of funds.

We do strongly encourage you to award Massachusetts' application the maximum of points and pledge our full and unwavering support to this Race to the Top grant proposal and Massachusetts' education reform priorities.

Sincerely,

Michael A. D'Ortenzio Jr.
Chair, State Student Advisory Council
Member, Massachusetts Board of Elementary and Secondary Education

June 1, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

Black Leaders for Excellence in Education is pleased to submit this letter of support for the Commonwealth of Massachusetts' Round Two Race to the Top application.

We are an advocacy organization that came together to shine a light on the need for meaningful change in the education system in Massachusetts. While we are proud of the national reputation for excellence that schools in Boston and across the Commonwealth have earned in recent years, we share a deep concern about the persistence of an achievement gap for our students of color. While other states have made progress in closing this gap, we have not seen the level of success we would hope for here.

Emerging from that concern, in the fall we joined the Race to the Top Coalition to bring our concerns and our support to the effort to enact significant education reform legislation. We were pleased to have the opportunity to provide our feedback to the Massachusetts Secretary of Education about the urgent needs of students of color. Our concerns were listened to, and are reflected in the legislation that was ultimately passed in the State Senate and House of Representatives, and signed by Governor Patrick in January.

Since then, we have watched with great interest as the state has begun to implement the legislation, first by launching a new school turnaround process in the Commonwealth's lowest performing schools. Boston is in the midst of the new turnaround process in 12 under-performing schools; we are particularly pleased that our Superintendent has new tools at her disposal to change the culture, the working conditions, and ultimately the student outcomes in these schools. We expect to have turnaround plans in place in these schools by the end of June, and look forward to working with others to monitor their ongoing progress beginning in September.

We also have watched with interest as the state has rolled out its plan for expanding high performing charter schools in the lowest performing districts. New regulations governing charter approval, approved in May, will ensure that more students have access to schools that will put them on a path for success.

These real changes are directly attributable to our new reform legislation, and offer more evidence that Massachusetts is a state with a commitment to improving outcomes for all

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students. With Race to the Top funds, we will be positioned to amplify these reforms, and broaden our focus to systems change.

Part of this systemic work will address human capital challenges. We are encouraged by the state's willingness to partner with educator associations on these issues, especially the Massachusetts Teachers' Association. Human capital will go to the heart of high quality teaching and learning in every school in the Commonwealth, and will be critical to the long-term success of our reform agenda.

Higher drop-out rates for our students of color, in Boston and across the Commonwealth, are foreclosing on the future of the next generation at a time when we need every child to succeed. We are convinced that the historic legislation acted and the state's aggressive plan for reform will give all Massachusetts educators the tools they need to end the achievement gap that has limited the hopes and aspirations of generations of students. Race to the Top funds will allow the Commonwealth to use the tools provided by the legislature, and implement the strategies proposed, which will benefit all of Massachusetts' students.

Today, Massachusetts stands ready to reclaim its historic leadership in public education and extend the promise of a new school culture to every child in the Commonwealth.

On behalf of Black Leaders for Excellence in Education, we thank you for your consideration.

Jackie Jenkins-Scott,
President, Wheelock College

Greg Shell
Research Analyst, GMO, LLC

Bennie Wiley
Principal, The Wiley Group

Rev. Dr. Ray A. Hammond, M.D., M.A.
Senior Pastor, Bethel AME Church

Wendell J. Knox
Lead Director, The Efficacy Institute

Michele Courton Brown
Chief Operating Officer, The Efficacy Institute

Gail Snowden
Chief Executive Officer, Freedom House, Inc.

Imari K. Paris Jeffries
Executive Director, Friends of the Children Boston

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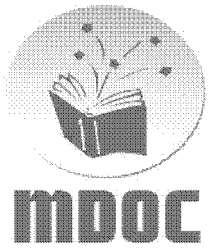

The Honorable Secretary Arne Duncan
U.S. Department of Education
400 Maryland Avenue SW
Washington, D.C. 20202

May 28, 2010

Dear Secretary Duncan,

It is with pleasure that the Multicultural Dropout Outreach Collaborative (MDOC) submits this letter of support for Massachusetts' Phase 2 proposal for Race to the Top federal funding.

MDOC is a network of organizations working to end the high drop out rate in the Boston Public Schools, with a special focus on the development of high impact, culturally competent initiatives and practices to ensure the success of Boston's youth of color.

The MDOC network developed the *One Step Closer* program, a mentoring program for students who have dropped out of high school or are at risk of dropping out. This program bridges at-risk students with trained mentors who support the students to stay on track with school. Mentoring also includes support with life skills, and a sense of belonging and preparation for a career and college or technical training. Stipend internships are also developed for program participants with community-based organizations to develop job skills and self esteem as incentives to stay in school and receive exposure to the world of work.

MDOC works closely with the Boston Public Schools (BPS), and we are also recognized for our contributions to the state Graduation and Dropout Recovery and Prevention Commission. At this time, we are working closely with BPS personnel to redefine and rewrite alternative education programming.

We are encouraged by the proposed initiatives and strategies entailed in this document, particularly the goals to:

- Attract, develop, and retain an effective, academically capable, diverse, and culturally competent educator workforce;
- Provide curricular and instructional resources that support teacher effectiveness and success for all students;
- Concentrate great instruction and support for educators, students, and families in our lowest performing schools and their districts; and
- Increase our focus on college and career readiness for all students.

The Race to the Top funds will allow the Commonwealth to utilize the tools provided and implement the strategies proposed, which will benefit all of Massachusetts' students.

MDOC supports Massachusetts' Phase 2 Race to the Top proposal.

Sincerely,

Gail Snowden
Chair

NAACP
NEW ENGLAND AREA CONFERENCE
Post Office Box 320128 West Roxbury, MA 02132
(617) 325-7580 Facsimile (617) 325-7666

May 28, 2010

The Honorable Arne Duncan
Secretary of Education
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan:

The New England Area Conference of the NAACP is proud to submit a letter of support for Massachusetts' Phase 2 Race to the Top proposal.

The New England Area Conference (NEAC) of the NAACP is the governing and coordinating entity for NAACP Branches, College Chapters and Youth Councils in the states of Rhode Island, Massachusetts, New Hampshire, Maine and Vermont. NAACP Branches within the Commonwealth of Massachusetts represented by NEAC include: Boston; Brockton; Cambridge; Cape Cod; Lynn; Martha's Vineyard; Merrimack Valley; Mystic Valley; New Bedford; South Middlesex County; Springfield; and Worcester.

NEAC is the only entity of the NAACP authorized to speak on state-wide policy issues, and is therefore authorized to endorse this application.

A high priority of the NAACP is its advocacy for equal and quality educational opportunity and to close persistent achievement gaps where they exist. NEAC Branches have been diligently engaged over the last 50 years with school districts and various advisory boards within the Commonwealth to address these issues. If awarded the grant, Massachusetts will have the opportunity to concentrate greater resources, additional and more high-quality instruction and other support in schools that need it most. More specifically, the grant will support state efforts to:

1) Attract, develop, and retain an effective, academically capable, diverse, and culturally competent educator workforce;

   Research indicates that cultural competency is an important element in maximizing the learning experience of students. Massachusetts has made progress in this regard, but the grant will aid Massachusetts in making greater progress.

2) Provide curricular and instructional resources that support teacher effectiveness and success for all students;

   Massachusetts has experienced greatest success when all teachers have the tools needed to provide every student is with the understanding, encouragement, support, knowledge and skills required to meet the Commonwealth's high academic standards.

3) Concentrate great instruction and support for educators, students, and families in our lowest performing schools and their districts; and

   Many of our lowest-performing schools are located in the communities listed above, and we strongly support the school turnaround strategies that are included in the Race to the Top application.

4) Increase our focus on college and career readiness for all students.

   Closing gaps among different groups of students with regard to college and career preparation is most important to the NAACP, as it will help all students prepare for economic, social and civic success.

In sum, The New England Area Conference of the NAACP strongly supports the application of the Commonwealth of Massachusetts for the Race to the Top Fund. NEAC feels that the state has the vision to measurably improve education for all and has an efficient system to implement its vision, with support from the varied communities of the Commonwealth. We are eager to work in collaboration with state education partners to support the initiatives and strategies included in the Race to the Top application and ensure that our students, families, educators, and community members benefit from this unprecedented opportunity.

Sincerely yours,

Juan M. Cofield
President
NAACP, New England Area Conference

John L. Reed
Chair, Education Committee
NAACP, New England Area Conference

OFFICE OF THE GOVERNOR
COMMONWEALTH OF MASSACHUSETTS
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(617) 725-4000

DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

May 27, 2010

The Honorable Arne Duncan
Secretary of Education
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan,

I write in strong support of the Commonwealth of Massachusetts' Race to the Top application in phase two. In the first three and one half years of the Patrick-Murray Administration, numerous improvements have been made in our system of education. We are ready and willing to implement, oversee, and track the policy and funding goals and initiatives outlined in the state's response to the Race to the Top criteria. Through these initiatives we will be certain to impact more students, thus continuing the Commonwealth's tradition of being a leader in all areas of education.

Governor Deval Patrick's Education Action Agenda that was issued in June 2008 reflects both ambitious goals for the state, as well as challenges that we must address to meet the needs of our students and schools. Prior to the release of the action agenda, the state implemented a reorganization of our education structure that was unanimously approved by our partners in the legislature. This legislation created a Secretary of Education to oversee and hold accountable the Department of Higher Education, the Department of Elementary and Secondary Education, and the Department of Early Education and Care.

As the Chairman of the Governor's Science, Technology, Engineering, and Math (STEM) Advisory Council, recently created by executive order in October 2009, I further ask your consideration in approving the STEM section of this application. STEM is the comprehensive component that ties together many of the leading industries which make up the Massachusetts economy. The Council serves as a vehicle for advocates from the public and private sectors, as well as legislators and educators, to engage in meaningful collaborations with our administration, including the Executive Offices of Labor and Workforce Development, Housing and Economic Development, and Education.

The Council is working to dramatically increase student interest in, and preparation for, careers in the areas of science, technology, engineering, and math. Members of the Council include college presidents, educators, and high level non-profit and business leaders. The comprehensive team approach and structure we have in place for this Council will lead to successful initiatives laid out in our plan. One example is the goal to launch a campaign to assist parents, students, employers and community leaders in understanding why the STEM disciplines are so important to individual and workforce successes.

Currently the Council is working at the subcommittee level in six different policy areas: 1) Public Awareness: Creating and Maintaining Student Interest; 2) Teacher Development: Training, Recruitment, and Retention; 3) Infrastructure: Grants, Strategic Partnerships, and Sustainability; 4) Data Collection: STEM Metrics, Indicators and Evaluation; 5) Curriculum Framework and Standards: Alignment and Upgrades; and 6) Diversity: Improving the Achievement Gap and Pursuing Additional STEM Opportunities for Women and Minorities. All subcommittees will issue recommendations for a report to be released as the state's official STEM plan and presented to the Governor in September of this year.

The proposed initiatives and strategies in this Race to the Top application will enhance our work in STEM areas. They will enable the state to: 1) Attract, develop, and retain an effective, academically capable, diverse, and culturally competent educator workforce; 2) Provide curricular and instructional resources that support teacher effectiveness and success for all students; 3) Concentrate great instruction and support for educators, students, and families in our lowest performing schools and their districts; and 4) Increase our focus on college and career readiness for all students.

If we receive Race to the Top awards, we will invest these funds to build the capacity of students, institutions, state agencies and school districts. I am confident that these strategies will allow us to build on our success to date and set the standard nationwide for a public education system that provides every student with the tools, standards, and supports they need to succeed in college, career, and life in the 21st Century.

Thank you Mr. Secretary for your leadership and hard work on this rare and ambitious opportunity to ensure that Massachusetts and the entire county have the ability to make its case for Race to the Top funding. Given the difficult fiscal situation in the state, we owe it to our students, our educators, our parents, and our collective future to secure a significant grant award. I am confident that the attached application will make the case that the Commonwealth of Massachusetts is ready to continue our record of high achievement and success in the field of education.

Yours truly,

Timothy P. Murray
Lieutenant Governor
Chairman, Governor's STEM Advisory Council
Commonwealth of Massachusetts

MassBio
MASSACHUSETTS BIOTECHNOLOGY COUNCIL

MASSBIOED
Massachusetts Biotechnology Education Foundation

One Cambridge Center. Cambridge, MA 02142 | Tel: (617) 674-5100 Fax: (617) 674-5101
www.massbio.org | www.massbioed.org

May 18, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

It is with great pleasure that we write to you in support of Massachusetts' second application for Race to the Top funding. We have reviewed the new application and with the proposed enhancements we are assured of the Commonwealth's commitment to provide all Massachusetts students with a world-class education.

In 2001, the Massachusetts Biotechnology Council (MassBio), one of the country's largest biotechnology trade organizations, took action on the industry's concern for a future workforce by creating the Massachusetts Biotechnology Education Foundation (MassBioEd). MassBioEd is focused on developing and providing engaging biotechnology educational experiences in schools, the workplace, and the community at large.

BioTeach is the Foundation's flagship program designed to provide all 339 Massachusetts public high schools with the training and resources needed to incorporate biotechnology education as part of their core curriculum. BioTeach provides professional training for educators so they can access and use biotechnology curricula and provide their students with career awareness activities. To date, teacher professional development training and classroom laboratory equipment has been provided to 177 public high schools through this program. Nearly $3 million in equipment supplies and consumables has been awarded, and nearly 500 science teachers have received biotechnology laboratory training. To date, BioTeach has reached over 26,000 students.

It is with this extensive programmatic experience that we enthusiastically support the application's overall strategy and, in particular, its focus on the following:

- *A comprehensive educator evaluation system that will include intervention and support strategies to help educators continually improve.*
- *Develop and retain an effective, diverse, and culturally competent educator workforce.* Educators need an improved system to provide professional development for their particular needs, and school systems need metrics to measure educator effectiveness. We believe the Massachusetts application takes a creative and determined approach towards meeting these objectives.
- *Increase college and career readiness for all students.* This is paramount to preparing our future workforce. The application builds on our high academic standards by promoting more rigorous high school curricula and developing pathways to college programs focused on science, technology, engineering, and math.

MassBio and MassBioEd welcome the opportunity to partner with the Commonwealth of Massachusetts on their Race to the Top initiatives. We are committed to leveraging the biotechnology sector's resources to make this an effective partnership and we encourage you to fund Massachusetts' Race to the Top application.

Sincerely,

(b)(6)

Robert Coughlin, President & CEO
Massachusetts Biotechnology Council

(b)(6)

Lance Hartford, Executive Director
Massachusetts Biotechnology Education Foundation

MASSBIO is committed to fostering a positive environment that enables each biotechnology company to achieve its full potential, making Massachusetts a world renowned center for biotechnology.

MASSBIOED is a non-profit organization committed to promoting biotechnology education in Massachusetts through school science programs, workforce training, and lifelong learning.

National Center for Technological Literacy®

Museum of Science, Boston

May 24, 2010

The Honorable Arne Duncan
US Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

We are pleased to write this letter of support on behalf of the state of Massachusetts Race to the Top (RTTT) application. The Museum of Science, Boston™ and the National Center for Technological Literacy® (NCTL®) is a long standing partner of the Massachusetts Department of Elementary and Secondary Education (ESE). The state of Massachusetts has made a concerted effort to establish rigorous standards and assessments to support quality teaching and learning for all students. The goal is to create an innovative and talented workforce prepared to compete in our global economy. The Museum of Science and the NCTL shares this vision, and stands firmly behind the state by providing innovative and engaging science, technology and engineering exhibits, standards-based K-12 curriculum materials, and teacher professional development that foster life-long learning and engagement.

The development of a strong strategic plan scaffolded by rigorous standards and assessments will support all our students having a more personalized educational experience. To this end, we have taken our outreach efforts directly to our school districts. The Museum of Science, Boston established The Gateway Project in 2004 to help school districts implement the *Massachusetts Science and Technology/Engineering Curriculum Framework*. To date we have reached 58 Massachusetts districts that serve 341,560 students (35.6% of the state's K-12 enrollment). In addition, 7,210 teachers serving 397,530 students in the state use our curriculum materials. At the NCTL, we stand prepared to support Massachusetts in achieving its goal of developing a world class education system.

Sincerely,

(b)(6)

Ioannis N. Miaoulis
President and Director

(b)(6)

Yvonne M. Spicer, Ed.D, Vice President
Advocacy & Educational Partnerships

THE GENERAL COURT OF MASSACHUSETTS

STATE HOUSE, BOSTON 02133-1053

May 27, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan,

We write to you as co-chairs of the Robert H. Goddard Council in support of the Massachusetts Executive Office of Education's application to the Race to the Top Fund. The Goddard Council was established in 2006 with the intention of advising the Board of Higher Education and the legislature on workforce development programs and policy in the fields of Science, Technology, Engineering, and Mathematics (STEM). The 27 member council is comprised of representatives from business, industry, state government, K-12 and higher education in the Commonwealth.

Utilizing funds from the STEM Pipeline Fund, the Council has studied and developed a series of programs aimed at recruiting and retaining more skilled and qualified educators. As requirements to pass the Massachusetts Tests for Educator Licensure (MTEL) become more stringent, one issue that has arisen is that there has been a marked decrease in the first-time passage of the elementary teacher's math test. To address this disparity, the Council has developed a comprehensive strategy that includes MTEL prep workshops.

The Massachusetts economy was traditionally based on manufacturing based but as the economy has evolved, Massachusetts, with one of the largest clusters of higher educational institutions in the country, needs to utilize this asset to train students for the jobs of the new economy, whether they be in engineering, green jobs, high-tech, life sciences, or energy. In conjunction with the Lieutenant Governor's STEM Policy Advisory Council and the Business Roundtable's Education Innovation and Workforce Initiative, we hope to prepare students for these new jobs, build on the work we have done, and provide businesses with the workforce they need.

Regional STEM networks have been established with educators from PreK-16 to align programs among partners and across the state with the assistance of the Department of Elementary and Secondary Education. Information sharing such as this will help identify areas where schools are underperforming and allow the Executive Office of Education to assess these schools knowing what programs are offered, how they differ from schools that are higher achieving, and formulate a plan for improving the quality and efficacy of education at those institutions.

In closing, we urge you to strongly consider supporting Massachusetts' Race to the Top Fund application so that we may continue and expand the work of the Goddard Council in tandem with the other educational organizations in the state. If you have any questions regarding the Council, please do not hesitate to contact our offices. Thank you for your consideration in this matter.

Sincerely yours,

SENATOR THOMAS M. MCGEE, Co-chair
Robert H. Goddard Council

REPRESENTATIVE DANIEL E. BOSLEY, Co-chair
Robert H. Goddard Council

BOSTON PUBLIC SCHOOLS

OFFICE OF THE SUPERINTENDENT

May 25, 2010

The Honorable Arne Duncan
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Re: LEA Commitment to MA STEM Early College Pathway Initiative

Dear Secretary Duncan:

We respectfully submit this letter of commitment to participate in Massachusetts' STEM Early College Pathway initiative should USDE award a Race to the Top (RTTT) grant to the Commonwealth.

Massachusetts is proud of the high math and science performance of our students on the TIMSS benchmark and of the high rate with which our high school graduates go on to college. But as everywhere in the country, high-poverty and minority students are far less likely to graduate high school, to matriculate to college and ultimately attain a higher education degree. Further, far too few students across the socioeconomic spectrum develop a passion and a high level of skills in the STEM areas, even in a state that leads the nation in great job opportunities in those fields.

Massachusetts has included in their RTTT application an initiative to create a pioneering cohort of STEM early college high schools and feeder middle schools developed with a higher education partner and local STEM-focused organization to provide significant STEM-oriented experience, traction, success, and credit in college for students from predominantly low-income backgrounds. This initiative will create a pipeline of high-achieving students with an interest and skill set in STEM related studies and careers that is critical to our state's economic vitality.

We applaud Massachusetts' efforts to address the chronic shortage of urban, minority students with the necessary skill and interest in STEM related fields and subject to receiving a RTTT grant, commit to actively working with the Massachusetts Department of Elementary and Secondary Education to implement the STEM Early College Pathway initiative in Springfield.

Sincerely,

Carol R. Johnson
Superintendent

LOWELL PUBLIC SCHOOLS
Henry J. Mroz Central Administration Offices
Edith Nourse Rogers School
43 Highland Street
Lowell, MA 01852

Chris A. Scott, Ph.D.
Superintendent of Schools

Tel: 978-674-4324
Fax: 978-937-7609
email: cscott@lowell.k12.ma.us

May 25, 2010

The Honorable Arne Duncan
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

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We applaud Massachusetts' efforts to address the chronic shortage of urban, minority students with the necessary skill and interest in STEM related fields and subject to receiving a RTTT grant, commit to actively working with the Massachusetts Department of Elementary and Secondary Education to implement the STEM Early College Pathway initiative in Springfield.

Sincerely,

Chris A. Scott, Ph.D.
Superintendent of Schools

Central Office
P.O. Box 1410
195 State Street
Springfield, MA 01102-1410

SPRINGFIELD PUBLIC SCHOOLS - SPRINGFIELD, MASSACHUSETTS

Dr. Alan J. Ingram
Superintendent of Schools
ingrama@sps.springfield.ma.us
Tel. 413.787.7087
Fax. 413.787-7171

May 25, 2010

The Honorable Arne Duncan
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

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We applaud Massachusetts' efforts to address the chronic shortage of urban, minority students with the necessary skill and interest in STEM related fields and subject to receiving a RTTT grant, commit to actively working with the Massachusetts Department of Elementary and Secondary Education to implement the STEM Early College Pathway initiative in Springfield.

With Hope,

Alan J. Ingram, Ed.D.
Superintendent of Schools

Massachusetts Department of Higher Education

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Richard M. Freeland, *Commissioner*
Charles F. Desmond, *Chairman*
Massachusetts Board of Higher Education

May 28, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

On behalf of the STEM Pipeline Fund, I am writing in enthusiastic support of the Race to the Top (RTTP) proposal submitted by the Commonwealth of Massachusetts. The Robert Goddard Council is a statutory body formed to advise the policies and programs of the STEM Pipeline Fund. This fund is administered by the Department of Higher Education. Senator Thomas McGee and Representative Daniel Bosley have submitted a letter as Co-Chairs of the Goddard Council.

The goals of the Pipeline Fund are to increase the number of students who prepare for and enter STEM careers, increase the number of STEM-qualified teachers, and improve STEM educational offerings. The STEM Pipeline Fund provides funds on a competitive basis for regional STEM networks and programs to increase student interest in pursuing STEM studies/careers, and it works to support implementation of state policies to enhance STEM preparation. There is a strong interconnection between these goals and the key initiatives in the Massachusetts RTTP proposal.

One of the chief assets developed through the Pipeline Fund is a statewide structure of regional STEM Networks to coordinate at the regional level the engagement of key STEM stakeholders (the PreK-12 system, higher education (public and private), the employer community, and non-profit STEM advocacy organizations. While the Commonwealth has committed over $8 million over several years to the Pipeline Fund, there remains a great need to increase the scale of these efforts, and this could be achieved through a RTTP award to the Commonwealth.

STEM is infused throughout the Race to the Top proposal and through each of the Massachusetts initiatives. We have already begun discussions among regional network leaders about engagement in this project, and there is very strong special interest across the state in Initiative Number 4: increasing college and career readiness for all students. Given the current and future structure of the Massachusetts economy and the educational requirements to participate in this economy, STEM preparation is a core element of post-secondary education and career success.

While Massachusetts has demonstrated STEM competence on state, national and international assessments, the distribution of STEM prepared students and teachers is very uneven. Despite the best efforts of the Goddard Council, the STEM Pipeline Fund and the leaders of the programs that we fund, we are all too aware of the limitations on our efforts compared to the scope of the problem. The Commonwealth's RTTP program would greatly enhance our Goddard Council and STEM Pipeline Fund goals. Our regional networks and programs provide a structure to build upon to support the rapid, effective implementation of an RTTP award. We are ready to go to work.

Sincerely,

David C. McCauley

David McCauley
Director STEM Pipeline Fund/Senior Administrator for the Robert Goddard Council
Deputy Commissioner for Workforce Development

MBAE
MASSACHUSETTS
BUSINESS ALLIANCE
FOR EDUCATION

400 Atlantic Avenue, Boston, MA 02110 • tel 617-737-3122 fax 617-737-3126 • www.mbae.org

May 24, 2010

Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

The Massachusetts Business Alliance for Education (MBAE) is a policy advocacy group representing employers in Massachusetts. We are committed to a high quality public education system that will prepare all students to engage successfully in a global economy and society. We bring together business and education leaders to promote education policies and practices based on measurable standards of achievement, accountability for performance, and equitable educational opportunities for all students. As the organization that provided the conceptual framework and advocacy for the Massachusetts Education Reform Act of 1993, MBAE, and the employers we represent, have a long history of supporting education reform focused on student achievement. We are proud that such reform efforts have resulted in our students' sustained academic performance at the top of the nation and we unequivocally support the Commonwealth's application for the Race to the Top to accelerate our state's progress.

While MBAE celebrates our accomplishments, we recognize that we have much work ahead to close persistent achievement gaps and to prepare all students to compete in a rapidly changing global workforce. MBAE enjoys a proud reputation for effectively communicating the business perspective to policy and program initiatives in Massachusetts and will capitalize on our established relationships with state leaders and other stakeholders to actively support state efforts to implement and sustain the strategies outlined in the state's application. Our organization's strategic goals are aligned with the four assurances you are seeking from all Race to the Top applicants, and the proposals Massachusetts is putting forward. We believe that Massachusetts Race to the Top proposals are also aligned with those four assurances and warrant an award of Race to the Top funding, particularly applied to the following:

- Graduate all students ready for college, career and citizenship

MBAE has advocated for increasing college and career readiness and believes that the state's Race to the Top commitments to increasing rigorous college and career pathways, with an emphasis on STEM, rightly target issues identified by the Massachusetts business community as critically important. We believe that having a chance to revise the first round application has given us an opportunity to strengthen our proposal in this area to drive the statewide reform necessary to raise graduation rates and ensure that all students acquire the applied skills and content knowledge essential for college and career success. Business leaders have been engaged by MBAE in the development of the MassCore graduation standards and initiatives to develop performance-based assessment of college and career readiness. We remain committed as the business partner in these endeavors to intensify our campaign to make MassCore the minimum graduation requirement for all students as part

of a continuum of school reforms. We also support a comprehensive approach to increasing graduation rates based on ambitious goals and evidence-based solutions, and endorse the Commonwealth's Graduation and Dropout Prevention and Recovery Commission's plan to reduce the dropout rate as part of the state's Race to the Top program.

- Ensure effective teachers and leaders in every school and classroom

Reaching the goals of high standards and achievement can only be accomplished with changes in our school management and human resource systems. Since the state's January application was submitted, MBAE released a study of human capital policies in the Boston Public Schools and identified areas where improvements can be made that are applicable to districts across the state. Our organization has supported a comprehensive approach to improving the system for educator recruitment, development and management. We strongly endorse the state's commitment to require districts to evaluate all teachers annually, with student achievement as a major factor. The Massachusetts business community has significant experience evaluating professionals that can be brought to bear on this challenge. MBAE has initiated a project to share private sector expertise in performance evaluation, and its relation to compensation, with state policymakers. We have convened experts to review these issues and recommend action. With a record of success in framing discussion that leads to solutions of complex educational questions, MBAE and the employers we represent are committed to collaborative efforts to develop multiple measures of effectiveness anchored in student performance.

- Turn around Massachusetts' lowest performing schools

MBAE has defended high standards and equitable opportunities for all children against both legal and political challenges and will continue to do so. At the district and school level, MBAE considers accountability for performance essential to raising student achievement and making the case for state investment in education. Our efforts have resulted in the preservation of a proven system for evaluating and reporting on district management and operational systems essential to quality teaching and learning. This is now linked to a new structure for providing the assistance needed to support school improvement. The Accountability and Assistance Advisory Council charged with design of this system is chaired by an MBAE Board member and MBAE also fills the business representative seat. We are confident that with this system, coupled with statutory changes that provide greater autonomy and management rights to school leaders, which we have championed, will enable Massachusetts to finally bring our lowest performing schools up to the level of quality that our students need and deserve.

Most Massachusetts companies have experienced rapid and extensive changes in their industries and professions as a result of technological advances and the globalization of the marketplace. Educational institutions have been slower to adapt. MBAE is keenly aware of the unique opportunity that Race to the Top, in coordination with other economic stimulus grant programs, provides for systemic changes rather than incremental advances. Our commitment to working with state leaders, and to holding them accountable for results, is demonstrated by the recent "Leaders and Laggards" report on educational innovation in the states. Massachusetts was the only state in the nation meeting all four conditions for a strong state reform environment because of MBAE's membership in the Policy Innovators in Education network. MBAE and our allies in the business community believe that our state's second application is significantly stronger than the very compelling application that led us to be designated a finalist in the first round. We pledge to monitor and report on progress

toward the goals and promises set forth in our Race to the Top application and urge you to support the selection of Massachusetts for a Race to the Top award.

Sincerely,

(b)(6)

Robert W. Richardson, Chairman
East Coast Education Program Manager, Intel
(Business Representative on Science, Technology and Engineering Curriculum Frameworks Review)

For the Members of the MBAE Board of Directors

Donald F. Baldini, Esq., Assistant Vice President and Sr. Legislative Counsel
Liberty Mutual Insurance Company

Andrea Bruce, Director of Marketing and Brand
Suffolk Construction Co., Inc.

JD Chesloff, Deputy Director
Massachusetts Business Roundtable
(Member, Board of Early Education and Care Department)

Lawrence Coolidge
Loring, Wolcott & Coolidge

Henry C. Dinger, Esq., Partner
Goodwin Procter LLP

Patricia S. Eagan, Massachusetts Regulatory Affairs
Verizon (Business Representative on English Language Arts Curriculum Frameworks Review)

Joseph E. Esposito, C.P.A.
Chair of the Massachusetts Accountability and Assistance Advisory Council
Member, NAEP Business Policy Task Force

Cathleen Finn, New England Program Manager, Corporate Citizenship and Corporate Affairs
IBM Corporation
(Business Representative for Massachusetts TELLs Study)

Jack Foley, Vice President, Government Relations
Clark University

Beth C. Gamse, Ed.D., Principal Associate
Abt Associates Inc.

Robert Gittens, Vice President for Public Affairs
Northeastern University

Victoria Grisanti, Manager, Community Involvement
EMC Corporation
(Business Representative on Mathematics Curriculum Framework Review Committee and Graduation Rate Task Force)

Paul F. Heffernan, Vice President of Human Resources
Tufts Medical Center

Paul Karoff, Chief Communications Officer
American Academy of Art & Sciences

Alan G. MacDonald, Executive Director
Massachusetts Business Roundtable

Andre Mayer, Senior Vice President
Associated Industries of Massachusetts

Neil J. McKittrick, Esq., Partner
Ogletree Deakins

James McManus, Principal
Slowey/McManus Communications

Peter Nessen, Principal
CRIC Capital

Paul Serotkin, Vice Chairman, Executive Vice President, Operations and Finance
Glevum Associates

William Walczak, CEO
Codman Square Health Center

Michael J. Widmer, President
Massachusetts Taxpayers Foundation

Jean C. Wood, Ph.D., Former Sr. Vice President and Chief Operating Officer
Abt Associates Inc.

Contact:

Linda M. Noonan, Executive Director
Linda_Noonan@mbae.org
617-737-3122
(Business Representative Accountability and Assistance Advisory Council)

Massachusetts Competitive Partnership, Inc.
535 Boylston Street
Top Floor
Boston, MA 02116

May 28, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan:

On behalf of the Massachusetts Competitive Partnership (MACP), I am writing to convey our enthusiastic support for Massachusetts' application to Phase II of the Race to the Top competition. MACP is comprised of chief executive officers of the Commonwealth's largest employers and represents a wide range of industries from retail to manufacturing, construction, and financial services. Our mission is to create jobs in the state and develop and leverage Massachusetts' competitiveness as a world-class home to national and international businesses.

MACP believes that preparing students to compete in the increasingly globalized economy of the 21st century will be key to Massachusetts' success as a regional, national, and international leader. Consequently, Massachusetts' proposals initiatives to turnaround the state's lowest achieving schools resonate strongly with our group's goals of developing a competent and skilled workforce.

MACP is especially impressed with the proposed strategy of assembling specialized turnaround cohorts of experienced principals and teachers with proven success in the classroom. The proposal also outlines detailed incentives, training, and support the cohorts will receive in order to maximize their effectiveness and impact in underperforming schools. MACP is also pleased that the Massachusetts's proposal adopts a holistic, rather than narrow approach to eliminate the achievement gap by improving parent outreach and engagement.

MACP and its directors are committed to the future of Massachusetts and developing a competitive, career-ready work force, which aligns with the goals outlined in the Massachusetts proposal for Race to the Top funding.

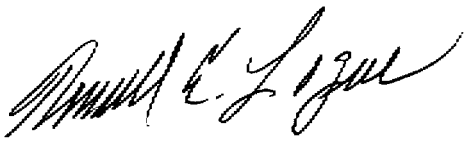
We are pleased to support the Massachusetts proposal for Race to the Top funding and urge you to support the selection of Massachusetts for a Race to the Top award.

Sincerely,

(b)(6)

Daniel O'Connell
President

Jack M. Connors, Jr., Former Chairman of Hill Holliday



Ronald E. Logue, Chairman of State Street Corporation

John D. DesPrez, III, Former Chairman & CEO of John Hancock Financial Services

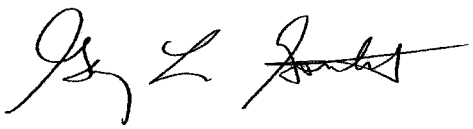
Thomas J. May, Chairman, President & CEO of NSTAR

John F. Fish, Founder, President & CEO of Suffolk Construction

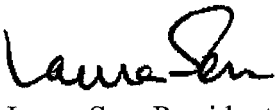
Robert L. Reynolds, President & CEO of Putnam Investments

Charles K. Gifford, Chairman Emeritus of Bank of America

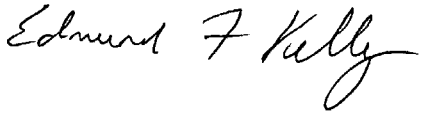
Ronald L. Sargent, Chairman & CEO of Staples



Dr. Gary Gottlieb, President & CEO of Partners HealthCare



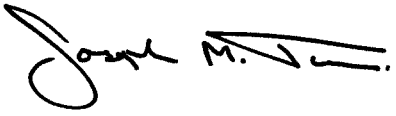
Laura Sen, President & CEO of BJ's Wholesale Club



Edmund F. Kelley, Chairman of Liberty Mutual Insurance Company

William H. Swanson, Chairman & CEO of Raytheon

Robert K. Kraft, Founder, Chairman & CEO of The Kraft Group



Joseph M. Tucci, Chairman & CEO of EMC

Boston Plan for
EXCELLENCE
IN THE PUBLIC SCHOOLS

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Mr. Duncan,

I am writing to express strong support for the enclosed Race to the Top application from Massachusetts. The Boston Plan for Excellence is Boston Public Schools' (BPS) primary partner in education reform, and we have worked together successfully for over 15 years, focusing on instructional improvement. We have helped to create BPS's impressive student performance gains, and data use has become increasingly central to the work over time.

The attached proposal would greatly enhance our work. We are dealing with a misalignment in teacher evaluation, teacher professional learning, and teacher leadership, and a disconnect from the data about what teachers need to move their students forward. This proposal will create new evaluation tools, the opportunity to create more practice-based, data-informed professional development opportunities, and credentialed teacher leadership roles to build school capacity, develop and retain good teachers, and support new teachers. Second, funding for teacher compensation is currently aligned with graduate courses disconnected from the daily practice, which skews incentives away from what our students need most. This proposal would ensure that teachers are eventually rewarded for the value they add to the district. Third, Boston Teacher Residency alumni in their 4th to 6th year of teaching are prime candidates for a school turnaround corps. This proposal would ensure the infrastructure and support for these teachers to succeed in turning around the lowest-performing schools.

In short, the implementation of the Massachusetts Race to the Top proposal would result in state and district coherence around teacher and principal support, supervision, and accountability. This coherence would propel our work forward as we use data to improve student, school, and district-level achievement in Boston and share our work with stakeholders across the state.

We urge you to support it.

Sincerely,

(b)(6)

Ellen Guiney
Executive Director

6 Beacon Street, #615 Boston, Massachusetts 02108 Phone (617) 227-8055 Fax (617) 227-8446 <www.bpe.org>

Mass Insight EDUCATION

May 26, 2010

Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan,

On behalf of Mass Insight Education & Research Institute, we are pleased to support the Commonwealth of Massachusetts' proposal for the Race to the Top program. We believe that Massachusetts is poised to lead transformational reform in its schools and districts. The unprecedented level of funds available through a Race to the Top award would enable the Commonwealth to accelerate the scope, scale, and pace of reform to the great benefit of our one million public school students.

Massachusetts builds on an extraordinary platform of success on standards, assessments, and data systems built in the 1990s, which made us a national education leader, as measured by performance on the NAEP. We are ready to move these early gains into a significant new phase of improvement.

Because Race to the Top is intended to build on success and to take successful initiatives to scale, an investment in Massachusetts will yield measurable results, for our students, educators, schools, and districts. The Massachusetts proposal focuses on capacity-building initiatives in districts and schools.

As an organization, Mass Insight has been focused on the critical challenge of turning around low-performing schools both here in Massachusetts as well as across the country. We were gratified that many of the key themes of our 2007 report—*The Turnaround Challenge*—have been adopted in the guidelines of President Obama's federal stimulus package, and we are eager to assist in turnaround efforts in Massachusetts, and across the nation.

We believe that in the assurance area of school turnaround, Massachusetts has demonstrated an impressive and exceptional commitment to the principles necessary to enacting dramatic and effective school turnaround of its most chronically failing schools. We are confident that if awarded the competitive grant, Massachusetts will be ready and willing to implement the critical actions necessary to implement scalable and sustainable school turnaround.

Additionally, STEM is a priority for Race to the Top, and has been a priority in Massachusetts as well. Massachusetts has made early commitments to STEM through its STEM Pipeline Fund, and

has a major national initiative underway. Connection to another major national STEM initiative would be feasible through Race to the Top funding.

We look forward to our continued partnership with the Massachusetts Department of Elementary and Secondary Education, and stand ready to assist our schools and districts to work towards the state's ambitious vision for student achievement.

Sincerely,

(b)(6)

William H. Guenther, President
Mass Insight Education & Research Institute, Inc.

Mass 2020

May 24, 2010

Honorable Arne Duncan, Secretary of Education
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan,

On behalf of our whole organization and the broad network of collaborators with whom we work across the state, I am pleased to offer this letter of support for Massachusetts' Race to the Top (RTTT) application. Since 2005, Massachusetts 2020 has enjoyed a highly productive and collaborative partnership with the Massachusetts Department of Elementary and Secondary Education (DESE). Together, we are leading the country's most ambitious initiative to rethink and redesign what a public school can achieve by adding significantly more learning time to the school day to eliminate the achievement gap and provide a well-rounded education for all children.

Expanded learning time has been one of our state's educational innovation priorities for five years since Massachusetts became the first state to create a policy supporting selected schools to expand learning time to strengthen core academics, provide for a well-rounded education and give teachers more time to prepare, collaborate and improve. Currently, 22 schools serving over 12,000 students operate with an expanded school day.

Refined and improved based on the lessons learned from this successful pilot program, increased learning time has become a central strategy in school turnaround plans across the state and is identified in Massachusetts' RTTT proposal. Empowered by the new authorities and flexibilities provided by the state's recent passage of the landmark education reform bill *An Act Relative to the Achievement Gap*, combined with additional resources from a successful RTTT application, districts and schools across the Commonwealth will have the tools and funds necessary to close achievement gaps and turnaround our lowest-performing schools. A central component of Massachusetts' proposal is to build the capacity of partners to support schools in this challenging work, primarily those with expertise in one of the state's "essential conditions for school effectiveness," including increased learning time. Based on our history of working with over 100 schools in Massachusetts and beyond to redesign and expand their school day, we are well poised and eager to take on the task of supporting districts and schools in turnaround efforts, leveraging time as a central reform strategy.

In addition to turning around our state's underperforming schools, we are also excited about the opportunity to collaborate with the state on a new initiative to create a pipeline of high-achieving students (from primarily low-income backgrounds) with an interest and skill set in STEM related studies and careers. Massachusetts' RTTT application plans for the establishment of three Early College STEM High Schools in close partnership with a local state college or university, modeled after the exemplar Metro Early College High School in Columbus, Ohio. As a result of our productive partnership with the DESE and extensive experience implementing and sustaining state-wide initiatives of this scale, Massachusetts 2020 has been identified as a key collaborator in this work. This innovative program builds upon our success in raising the achievement of low-income, minority students, while focusing in on a state priority that is critical to our state's economic vitality.

Massachusetts has long been a pioneer in education, home to the first public school in the country, one of the nation's most rigorous set of core standards and assessments, and the first state-wide policy to expand the learning day for public school students. RTTT funds would provide Massachusetts the necessary resources to carry the state into a new era of innovation, and we are committed to further support and partner with the state, districts, schools and their communities to carry-out the proposed strategies to provide a high-quality education for all students in the Commonwealth.

Sincerely,

(b)(6)

Chris Gabrieli
Chairman

TEACHERS 21

Reshaping the profession of teaching

May 28, 2010

Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20200

Dear Secretary Duncan,

Massachusetts has made significant progress in improving student learning since Education Reform began here in 1993. Our students perform better than students in states across the nation, as well as most other western nations, on several indicators of student learning. Yet, we still have work to do if we are to reach the goals of quality education for all students in the Commonwealth. Research shows that improving the quality of teaching and school leadership is the most effective way to make sure all students have the knowledge and skills they need to succeed. The original Massachusetts Ed Reform did not explicitly address this issue, and we need to address it now. Fortunately, the strength of Massachusetts' schools puts us in a position to make the most of the unprecedented resources of Race to the Top – Phase 2 funds to improve teaching and leading across the state.

The Federal Race to the Top request for proposals makes Great Teachers and Leaders a cornerstone of states' work to improve schools and assure that students are prepared to excel in the 21st century. Thus, *Teachers*[21], an education nonprofit organization dedicated to reshaping the profession of teaching through professional learning, policy, public discourse, and research and development, wholeheartedly supports the Massachusetts Department of Elementary and Secondary Education in its efforts win the considerable resources afforded Race to the Top funding. This support would significantly contribute to furthering our shared goal of systematically improving teaching and leading for all students in the Commonwealth. The approach of the Massachusetts Department of Elementary and Secondary Education's revised Race to the Top application is in accordance with the vision of *Teachers*[21], and we look forward to working collaboratively to further this important work.

Teachers[21]spearheads the work of the Working Group for Educator Excellence (WGEE), a statewide coalition of 24 education, business, parent, and community groups dedicated to strengthening the educator workforce. These groups, in collaboration with the MA Department of Elementary and Secondary Education, are working to fundamentally improve the quality of teaching and leadership in the Commonwealth. Currently, we have a number of partnership projects underway that highlight our shared commitment to recruiting, retaining, and supporting the very best educators for all students in Massachusetts.

An example of these partnership projects is the Knowledge and Skills of Professional Teaching (KSPT) project, which aims to identify and create a specific inventory of concrete knowledge and skills that go beyond the abstract standards schools currently rely on for guidance. With this partnership, education stakeholders in Massachusetts have the opportunity to come together to agree upon a common professional knowledge and skill base for teaching and organize a central repository of this professional knowledge. In addition, this project will provide a well-researched map of professional knowledge to guide educator quality policy in the Commonwealth.

The goal of these partnership projects is to bring about the kind of educational change necessary to prepare students for the challenges of the 21st century. This requires an unprecedented break from the piecemeal educational reforms of the past. The DESE has been a critical partner in these reform initiatives, demonstrating a commitment to coordinated and comprehensive reform. We are confident that with this approach and vision, Massachusetts, as a recipient of the second-round of Race to the Top funding, will lead the nation as a model of educational change. We look forward to collaborating with our national colleagues on advancing the critically important Race to the Top agenda.

Sincerely,

(b)(6)

Susan Freedman
President, *Teachers*[21]

(b)(6)

Jonathan Saphier
Founder, *Teachers*[21]

Boston Education Funders

c/o GMA Foundations, 77 Summer Street, 8th Floor, Boston, MA 02110

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Elizabeth Pauley
Co-Chairperson
The Boston Foundation
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Margaret Carr
Treasurer
GMA Foundations
617.391.3090

Kathleen Traphagen
Coordinator
413.687.1710

May 24, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

On behalf of Boston Education Funders (BEF), we are pleased to submit this letter of support for the Commonwealth of Massachusetts' Race to the Top application. We believe that recent enhancements have strengthened the application and that legislation signed into law by our governor in January demonstrates the commitment the people of the Commonwealth are making to help all of our students reach their fullest potential.

BEF is an affinity group of over seventy grantmakers who support early childhood, K-12 and postsecondary education in greater Boston and beyond. Launched in 1996 with a leadership grant from the Hayden Foundation along with donations from other founding members, BEF plays an important role in helping to engage and inform donors about ongoing efforts to reform public education. During the one year period of July 1, 2006 – June 30, 2007 (the most recent period for which available data exists), BEF members' grants in support of public education in Boston totaled nearly $11.8 million."

BEF introduces members to new programming, best practices and research. Our monthly conversations provide learning opportunities for funders to leverage funding investments and impact greater Boston's important education issues. In the past year, BEF has hosted a series of discussions with Boston Public Schools Superintendent Carol Johnson and her leadership team on the challenges and the strengths of the school system, providing valuable insights on how funders and BPS may work together to increase the strategic impact of private investments. Other recent BEF sessions included a discussion of Race to the Top strategy with the Deputy Commissioner of the Department of Elementary and Secondary Education, a briefing on the BPS 5-Year Acceleration Agenda, education reform legislation and related policy developments with leaders of BPS and Boston City Hall, and a conversation with Boston Teachers Union President Richard Stutman.

BEF serves a knowledge building and networking function, and many BEF members provide schools and community-based programs with significant resources aligned with the strategies of the Race to the Top proposal: 1) providing all of our students with a more personalized educational experience; 2) developing and retaining an effective, diverse, and culturally competent educator workforce; 3) allocating targeted instructional resources and more comprehensive support services to students and educators in our lowest-performing schools; and 4) increasing college and career readiness for all students.

BEF will continue to convene education grantmakers, providing a forum for our members to discuss school reform strategies in-depth with local and statewide education practitioners, leaders and policymakers. Our goal is to ensure that education-focused philanthropy effectively catalyzes and supports efforts to improve achievement for all students in the Commonwealth. We urge you to consider the Commonwealth of Massachusetts' Race to the Top proposal favorably.

Sincerely,

Boston Education Funders

Among Boston Education Funders' many institutional and individual supporters of Massachusetts' Race to the Top application are the following members.

Carol F. Anderson
Barr Foundation
The Boston Foundation
Boston Plan for Excellence
Cabot Family Charitable Trust
Catholic Schools Foundation
Community Foundation of Southeastern Massachusetts
Community Matters
Irene E. and F. George A. Davis Foundation
The Education Resources Institute, Inc.
Eos Foundation
Newell Flather, GMA Foundations
The Hyams Foundation
Longfield Family Foundation
The Lynch Foundation
The Philanthropic Initiative
Simon Brothers Family Foundation
Strategic Grant Partners
Michael Tooke, Boston Leaders for Education
Trefler Foundation
United Way of Massachusetts Bay and Merrimack Valley

Boston Education Funders

c/o GMA Foundations, 77 Summer Street, 8th Floor, Boston, MA 02110

May 24, 2010

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U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

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Sincerely,

Boston Education Funders

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The Lynch Foundation
The Philanthropic Initiative
Simon Brothers Family Foundation
Strategic Grant Partners
Michael Tooke, Boston Leaders for Education
Trefler Foundation
United Way of Massachusetts Bay and Merrimack Valley

May 24, 2010

The Honorable Arne Duncan
Secretary of Education
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

I am writing today on behalf of the Nellie Mae Education Foundation to endorse the Massachusetts Department of Education's application for the second round of Race to the Top funding. We enthusiastically support its focus on providing all learners with a more student-centered educational experience; developing an effective, diverse and culturally competent workforce; allocating targeted instructional resources and more comprehensive support services to students and educators in the state's lowest-performing schools; and increasing college and career readiness for all students.

The Foundation is New England's largest public charity dedicated to improving academic achievement for the region's underserved communities. Our mission is to stimulate transformative change of public education systems across the region. We believe that developing a greater variety of higher quality education opportunities will enable all learners--especially and essentially those underserved--to obtain the skills, knowledge and supports necessary to become civically engaged, economically self-sufficient life-long learners.

Massachusetts' focus on a more student-centered experience is aligned with both our mission and our new work – which focuses primarily on the promotion and integration of developmentally appropriate, rigorous, student-centered approaches to learning. These approaches take into account the many ways students learn and are focused on a broad set of essential and relevant skills. It is the Foundation's goal to help grow these approaches into core facets of the education system.

The Foundation has partnered with the Massachusetts Department of Elementary and Secondary Education (DESE) and the Executive Office of Education (EOE) to support policy change in the state that is aligned with our mission. We have provided $75,000 in direct grant support to the Bridgespan Group for its lead role in RTTT proposal development, offered input to state administration officials, and helped fund recent efforts to adopt key legislation to qualify Massachusetts for RTTT funds. We are supporting DESE in its efforts to expand the state's required assessment to include curriculum-embedded tasks. Finally, we were a key early supporter of the Extended Learning Time Initiative and other efforts to expand learning opportunities for students during the school year and the summer months.

Thank you for the opportunity to contribute to this process. We look forward to continued collaboration with Massachusetts, the New England education community, and your department in order to improve education for all learners.

Regards,
(b)(6)

Nicholas C. Donohue
President and CEO, Nellie Mae Education Foundation

SGP

STRATEGIC GRANT PARTNERS

May 21, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan,

We are honored to write this letter of support for Massachusetts' Race to the Top (RTT) application.

Founded in 2002, Strategic Grant Partners (SGP) represents fifteen family foundations that have dedicated a portion of their giving to support a coalition steeped in deep due diligence, strategic thinking and goal orientation to help fund systemic change to social problems. Since that time, SGP has granted $26,000,000 (almost exclusively within Massachusetts) in the areas of education, family self sufficiency, youth development and child welfare.

SGP's mission is to partner with outstanding leaders with game changing ideas that improve the lives of struggling individuals and families. Our goals are to:

1. Incubate promising ideas in Massachusetts with the potential for effectiveness;
2. Invest in Massachusetts nonprofits with evidence of effectiveness;
3. Help Massachusetts organizations with demonstrated effectiveness to disseminate their learnings and/or scale up their models for national impact;
4. Invest in national organizations with proven effectiveness expanding into Massachusetts;
5. Invest in work that alters public systems in ways that are directly tied to positive changes for children and families.

With those goals in mind, SGP enthusiastically joined forces with the Gates Foundation, the Nellie Mae Foundation and the Barr Foundation to support the state in its strategic planning efforts and Race to the Top application. We firmly believe that the state plays a critical role in ensuring an effective education for all students in the Commonwealth. While Massachusetts has made significant strides in school reform, there is still work to be done from a policy, capacity, systems and standards front. The Race to the Top application lays out a concrete plan for how the state plans to close existing gaps and bolster successful work.

We firmly believe that the Secretary and Commissioner of Education in Massachusetts are well poised to lead the state into an era of unprecedented reform. Being awarded the Race to the Top funds will accelerate this reform effort and help the state become a national and international exemplar of what a public education system can achieve.

240 Newbury Street / Second Floor
Boston, MA 02116
T 617.421.0970 F 617.482.5624

SGP

We agree with the four priority initiatives highlighted in the state's Race to the Top application. While each is extremely important on its own, they complement one another and together they are more powerful. Two initiatives specifically align almost directly with our current and future work:

1. "Develop and retain an effective, diverse, and culturally competent educator workforce".

   To date, SGP has given over $7 million to improving teacher preparation in the Commonwealth through grants that established the Boston Teacher Residency, the Lowell Teachers Academy and Urban Teachers Residency United. We are interested in working with the state to bring some of these programs to scale, as outlined in the RTT application, through expanding the teacher residency model beyond Boston, scaling the deep induction work happening in Lowell, and helping build capacity within districts to effectively recruit, select, train and evaluate teachers.

2. "Concentrate great instruction, additional support for students and families, and tools and resources for educators in the districts and schools that need it most".

   - Several areas within this initiative are extremely relevant to the work we are currently doing and plan to do in the future. The first, "Provide student supports (social, emotional, health and early literacy) and coordinate provision at municipal level" aligns well with Boston Connects, an initiative founded and incubated in Boston College. A grantee of ours since 2007, Boston Connects has achieved statistically significant achievement gains for students in some of the most challenging schools in Boston through a "broker" approach to services, ensuring that each and every child has the supports and enrichment services they need in order to achieve.

   - The bold approach to incubating and managing turnaround operators through a standalone 501c3 and the concept of a turnaround teaching corps is a concept which we could envision supporting in the future. In the absence of such an organization, but realizing the need for turnaround operators, we recently made a grant of $800,000 for UP Schools, a nascent, but promising, school turnaround management organization to launch in Massachusetts.

SGP is supportive of this application for the Race to the Top funds. We believe that Massachusetts' plan, when fully implemented, will dramatically improve outcomes for all children in Massachusetts and act as a model and catalyst for change elsewhere.

Sincerely,

(b)(6)

Joanna Jacobson
Managing Partner

HARVARD
GRADUATE SCHOOL OF EDUCATION

May 27, 2010

Arne Duncan, Secretary
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan:

I am writing in strong support of the revised Massachusetts Race to the Top application. I write not only as someone with a history of involvement in policymaking in Massachusetts (education policy advisor to Governor Dukakis, 1986-90; chair of the states accountability council, 2004-06), but as someone with a national perspective as well. From 1997-2002, I served as the founding president of Achieve. In that role I had an opportunity to look at Massachusetts through a comparative lense. At Achieve our core work was, at the invitation of states, to analyze the quality and rigor of their standards and assessments and the alignment between the two. Of the 14 states that requested such a review from Achieve during my tenure, Massachusetts was the clear winner. Given this strong foundation, along with the state's deep and sustained commitment to accompany its increasing performance demands on the system with a substantial infusion of new funds targeted at its highest need districts, it is no wonder that in the last few years Massachusetts has out-performed all other states on NAEP and nearly all other countries on TIMSS.

I was honored to be asked by Secretary Reville and Commissioner Chester to serve on the Advisory Committee for the initial RTTT application. In this role I had two opportunities, both early and late in the process, to review and comment substantively on the submission. I've also now had an opportunity to review the revised application.

I would simply make four observations about this application. First, Massachusetts begins from a strong base. This is a state that set an extremely ambitious, comprehensive reform agenda for itself in 1993, funded it adequately, and has generally stayed on course with strong bi-partisan support for 17 years. As I suggested above, its standards/assessment/accountability framework is robust, and in Secretary Paul Reville and Commissioner Mitchell Chester it has one of the strongest top leadership teams in the country.

Second, despite these very real accomplishments, performance is highly uneven across the state, and this application directly addresses two major lingering problems. During my term chairing the state accountability council, I was struck by the significant number of smaller districts, mostly in working class communities, that simply lacked capacity. They were unable to align their schools' curriculum to standards, to develop formative assessments, or to help their teachers analyze and use assessment results for instructional improvement. The investment the state is now proposing to make in curriculum and other instructional materials, diagnostic assessments, and aligned professional development is sorely needed and will significantly reduce the "Opportunity to Learn" gap that remain in too many small, beleaguered Massachusetts districts.

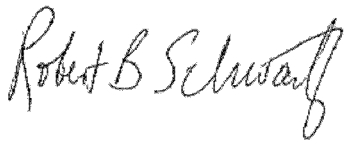
Third, significant racial and ethnic achievement gaps persist. Here I think Massachusetts should be applauded for reflecting on what has not worked and proposing something new. Like many states, Massachusetts has tended, with limited success, to go around the district and intervene directly in consistently failing schools. The strategy the state proposes now is more systemic. It will simultaneously build district capacity, develop specially trained educators for its lowest performing schools, and provide targeted social services and other supports to students and their families. It will also draw from the Commonwealth's rich talent pool of individuals and organizations to develop a cadre of turnaround partners for schools that are unlikely to make progress on their own.

Finally, I like the nuanced way in which the state is addressing the challenge of improving teacher effectiveness. While not backing off from the need to incorporate measures of student growth into the teacher evaluation system, this commitment is embedded in a broader strategy, in which increased accountability for results is accompanied by increased investment in teacher support. In the early years of reform in Massachusetts, some state leaders, especially the former state board chair, indulged in needless teacher-bashing, creating a rift between policymakers and practitioners that was slow to heal. The current state leadership is much more sensitive to the need to engage teachers and principals as partners in reform. This does not mean that the administration has backed away from confronting entrenched union leadership when the union has opposed key reform initiatives, as evidenced by its successful attempt to loosen the cap on charters and strengthen the hand of superintendents to intervene in persistently low-performing schools. But the commitment to provide tools and training, open career pathways for outstanding teachers, and invest in professional development and support signals a recognition of the importance of teacher buy-in that enhances the likelihood of successful implementation of this ambitious plan. The fact that the Commonwealth's largest teacher organization has endorsed this application reflects the fact that the current state leadership team has built trust with key leaders in the field.

I realize that you and your reviewers will be confronted with many excellent applications that promise bold innovations. At the end of the day, however, the most important question is, "Who has the capacity to deliver on their promises?" In my view the best predictors of the answer to this question are past performance and current leadership. On these dimensions, I doubt there is a better bet than Massachusetts.

Very best regards, and congratulations on a terrific design for this competition.

Sincerely,



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Appendix A14: Historic Data on Massachusetts
Student performance, high school graduation, college enrollment, and college course completion, plus exclusion rates and NAEP accommodations policy

NAEP

Grade 4 Mathematics				
Subgroup	**2003**	**2005**	**2007**	**2009**
All students	242	247	252	252
Male	244	248	254	253
Female	239	247	251	251
Asian/Pacific Island	248	258	259	264
Black	222	228	232	236
Hispanic	222	225	231	232
White	247	252	257	258
ELL	217	226	230	221
Free & reduced lunch eligible	226	231	237	237
Students with disabilities	224	230	238	237

Grade 4 Reading			
Subgroup	**2003**	**2005**	**2007**
All students	228	231	236
Male	225	230	233
Female	231	233	238
Asian/Pacific Island	229	234	241
Black	207	211	211
Hispanic	202	203	209
White	234	237	241
ELL	193	198	205
Free & reduced lunch eligible	210	211	214
Students with disabilities	200	208	213

Grade 8 Mathematics				
Subgroup	**2003**	**2005**	**2007**	**2009**
All students	287	292	298	299
Male	289	291	300	300
Female	284	292	296	298
Asian/Pacific Island	304	314	315	314
Black	260	263	264	272
Hispanic	255	265	270	271
White	292	297	305	305
ELL	242	242	251	238
Free & reduced lunch eligible	261	273	275	278
Students with disabilities	254	264	271	271

Grade 8 Reading			
Subgroup	**2003**	**2005**	**2007**
All students	273	274	273
Male	268	269	269
Female	278	278	278
Asian/Pacific Island	281	282	281
Black	252	253	253
Hispanic	246	246	251
White	278	279	278
ELL	222	222	232
Free & reduced lunch eligible	251	256	256
Students with disabilities	239	246	246

MCAS English Language Arts, All grades (3-8, 10)

	2003				2004				2005				2006				2007				2008				2009			
	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F
All Students	9%	52%	30%	8%	10%	54%	29%	7%	11%	51%	31%	7%	13%	51%	29%	7%	13%	54%	26%	7%	14%	52%	27%	7%	16%	52%	25%	6%
African-American	2%	34%	47%	17%	2%	38%	44%	16%	3%	35%	47%	15%	4%	38%	43%	15%	4%	41%	41%	14%	4%	41%	40%	15%	6%	43%	38%	13%
Asian	13%	50%	29%	8%	14%	51%	28%	8%	15%	49%	29%	7%	19%	49%	26%	6%	21%	51%	23%	5%	23%	49%	23%	6%	26%	49%	21%	5%
Hispanic	2%	29%	46%	23%	2%	31%	45%	22%	2%	29%	48%	21%	3%	32%	44%	21%	3%	36%	42%	19%	4%	36%	42%	19%	5%	39%	40%	17%
Native American	5%	45%	39%	11%	5%	48%	37%	9%	5%	47%	41%	7%	7%	48%	36%	9%	7%	50%	35%	9%	8%	46%	38%	8%	9%	49%	33%	9%
White	11%	58%	26%	5%	11%	59%	25%	4%	12%	57%	27%	4%	15%	56%	25%	4%	15%	59%	22%	4%	17%	56%	23%	4%	19%	56%	21%	4%
LEP/FLEP	2%	23%	44%	32%	2%	26%	45%	27%	2%	24%	47%	27%	3%	24%	44%	29%	2%	27%	44%	27%	3%	26%	44%	28%	3%	29%	43%	24%
Low Income	2%	34%	46%	18%	2%	37%	45%	17%	3%	35%	47%	16%	4%	37%	43%	16%	4%	40%	41%	15%	4%	39%	41%	16%	5%	42%	39%	14%
Special Education	1%	28%	47%	24%	1%	29%	47%	23%	1%	29%	48%	22%	2%	31%	46%	22%	1%	32%	45%	22%	2%	32%	44%	23%	2%	34%	43%	21%

MCAS Mathematics, All grades (3-8, 10)

	2003				2004				2005				2006				2007				2008				2009			
	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F
All Students	16%	27%	34%	23%	18%	28%	34%	20%	20%	28%	33%	20%	17%	31%	32%	20%	21%	33%	29%	17%	24%	33%	28%	16%	23%	34%	28%	15%
African-American	4%	14%	36%	47%	5%	16%	39%	41%	5%	17%	38%	41%	5%	19%	37%	40%	7%	23%	36%	34%	8%	24%	36%	32%	8%	25%	37%	30%
Asian	30%	27%	26%	16%	33%	28%	27%	13%	34%	28%	25%	12%	31%	33%	25%	12%	38%	32%	21%	9%	42%	31%	19%	8%	42%	32%	19%	8%
Hispanic	3%	13%	34%	50%	4%	14%	36%	45%	5%	16%	36%	44%	4%	17%	34%	44%	7%	22%	35%	37%	8%	23%	34%	35%	8%	24%	35%	32%
Native American	8%	24%	36%	32%	10%	24%	40%	27%	11%	25%	37%	27%	9%	29%	37%	25%	12%	29%	35%	24%	15%	29%	33%	23%	13%	30%	34%	22%
White	18%	31%	34%	17%	21%	31%	34%	14%	23%	31%	32%	14%	19%	35%	32%	14%	25%	36%	28%	12%	27%	35%	26%	11%	27%	37%	27%	10%
LEP/FLEP	6%	13%	30%	51%	7%	14%	33%	46%	6%	14%	34%	46%	6%	18%	32%	44%	8%	21%	32%	40%	9%	22%	32%	38%	9%	23%	33%	36%
Low Income	5%	16%	36%	43%	5%	17%	39%	39%	6%	18%	38%	38%	6%	20%	36%	38%	8%	24%	36%	32%	10%	25%	35%	31%	9%	26%	36%	28%
Special Education	2%	14%	31%	53%	2%	15%	35%	48%	3%	16%	34%	47%	3%	19%	32%	46%	4%	21%	33%	42%	4%	22%	32%	41%	4%	23%	34%	39%

Notes: "Adv." = Advanced, "Prof." = Proficient, "N.I." = Needs Improvement, "W/F" = Warning/Failing

MCAS Mathematics Composite Performance Index, All grades (3-8, 10)

	2003	2004	2005	2006	2007	2008	2009
All Students	69.4	71.4	72.4	72.5	76.2	77.7	78.5
African-American	49.2	52.8	53.4	54.9	59.5	61.2	62.6
Asian	77.5	80.3	81.0	81.9	85.6	86.8	87.3
Hispanic	47.0	49.9	51.2	52.4	57.7	60.1	61.4
Native American	61.9	63.6	65.5	67.3	68.1	69.8	70.1
White	74.5	76.3	77.3	77.3	80.9	82.2	83.0
LEP/FLEP	47.8	50.9	50.7	52.7	56.3	58.1	59.2
Low Income	51.6	54.3	55.6	56.4	61.0	63.1	64.5
Special Education	45.7	48.2	49.6	51.2	54.0	55.3	56.9

MCAS English Language Arts Composite Performance Index, All grades (3-8, 10)

	2003	2004	2005	2006	2007	2008	2009
All Students	83.2	84.2	83.7	84.4	85.8	85.2	86.5
African-American	69.5	71.9	71.1	72.5	74.6	74.1	76.2
Asian	83.3	84.4	84.8	86.2	88.0	88.0	89.3
Hispanic	64.4	66.5	66.1	67.3	70.2	70.1	72.6
Native American	78.1	80.3	80.3	80.8	81.1	79.8	81.7
White	87.6	88.2	87.9	88.5	89.7	89.1	90.2
LEP/FLEP	58.3	62.4	60.9	60.7	62.7	62.1	64.8
Low Income	69.2	71.1	70.6	71.6	73.7	73.2	75.5
Special Education	63.4	64.9	65.0	65.7	66.7	65.9	67.9

Notes: The Composite Performance Index (CPI) is a 100-point index that combines the scores of students; scores correspond to one of six performance rating categories: Very High (90 - 100); High (80 - 89.9); Moderate (70 - 79.9); Low (60 - 69.9); Very Low (40 - 59.9); and Critically Low (0 - 39.9).

Achivement gaps

Grade 4 Mathematics	2003	2005	2007	2009
Gender	4.6	1.6	2.8	2.4
Black/White	25.6	24.4	25.2	21.5
Hispanic/White	25.4	26.8	26.0	25.7
ELL/Non-ELL	25.9	23.0	23.9	33.1
Free & reduced lunch eligible/not	22.5	22.6	21.9	23.0
Students with disabilities/without	21.3	20.6	17.0	18.0

Grade 4 Reading	2003	2005	2007
Gender	5.4	2.8	4.9
Black/White	27.0	26.1	30.7
Hispanic/White	32.1	34.5	32.0
ELL/Non-ELL	36.2	34.9	31.9
Free & reduced lunch eligible/not	26.5	28.4	29.1
Students with disabilities/without	32.6	27.1	26.8

Grade 8 Mathematics	2003	2005	2007	2009
Gender	5.6	(1.5)	4.4	2.4
Black/White	32.8	34.4	40.1	33.1
Hispanic/White	37.2	32.3	34.7	33.9
ELL/Non-ELL	45.1	50.7	48.2	62.8
Free & reduced lunch eligible/not	33.7	26.0	31.4	29.3
Students with disabilities/without	38.1	31.7	29.9	33.0

Grade 8 Reading	2003	2005	2007
Gender	10.3	9.7	9.7
Black/White	26.1	25.9	24.9
Hispanic/White	31.6	32.5	27.4
ELL/Non-ELL	52.1	52.5	42.0
Free & reduced lunch eligible/not	29.4	24.1	23.5
Students with disabilities/without	39.4	31.7	31.8

MCAS Mathematics Composite Performance Index, All grades (3-8, 10)	2003	2004	2005	2006	2007	2008	2009
Black/White	25.3	23.5	23.9	22.4	21.4	21.0	20.4
Hispanic/White	27.4	26.5	26.1	24.9	23.2	22.1	21.6
Native American/White	12.6	12.7	11.8	10.1	12.8	12.4	12.9
LEP/Non-LEP	23.0	22.2	23.2	21.3	21.4	21.1	20.8
Low Income/Non-Low Income	24.4	23.6	23.4	22.8	21.7	20.9	20.5
SPED/Non-SPED	28.4	27.8	27.4	25.8	27.0	27.3	26.4

MCAS ELA Composite Performance Index, All grades (3-8, 10)	2003	2004	2005	2006	2007	2008	2009
Black/White	18	16	17	16	15	15	14
Hispanic/White	23	22	22	21	20	19	18
Native American/White	10	8	8	8	9	9	9
LEP/Non-LEP	27	24	25	25	25	25	23
Low Income/Non-Low Income	19	18	18	18	17	17	16
SPED/Non-SPED	24	23	23	23	23	24	23

4-year high school graduation rate			
	2006	2007	2008
All Students	79.9%	80.9%	81.2%
Asian	83.9%	83.7%	86.7%
Black	64.4%	65.2%	68.4%
Hispanic	56.9%	58.5%	58.3%
Native American	69.8%	68.4%	66.7%
Pacific Islander	50.5%	63.6%	70.3%
White	85.1%	86.4%	86.6%
Limited English Proficiency	54.5%	53.3%	55.8%
Low-Income	62.3%	65.2%	64.8%
Special Education	61.1%	62.8%	64.1%

Note: Only have data going back to 2006 (2003-2005 is not available)

College enrollment						
	HS Class of 2003	HS Class of 2004	HS Class of 2005	HS Class of 2006	HS Class of 2007	HS Class of 2008
All students	67.5%	67.9%	70.1%	71.7%	73.0%	71.1%
Asian	67.3%	68.9%	70.6%	74.4%	77.4%	76.4%
Black	57.4%	58.5%	61.8%	63.9%	66.3%	63.5%
Hispanic	47.1%	48.3%	50.9%	54.0%	55.6%	53.8%
Native American	55.5%	47.3%	62.4%	51.0%	57.4%	58.4%
White	70.2%	70.6%	72.7%	74.4%	75.6%	73.9%
Limited English Proficient in High School	45.6%	41.9%	40.8%	39.6%	45.8%	46.5%
Low Income in High School	49.7%	52.0%	54.9%	55.9%	58.1%	55.7%
Special Education in High School	45.7%	47.3%	48.8%	49.7%	51.9%	48.9%

College credit earning				
	HS grad year 2004	HS grad year 2005	HS grad year 2006	HS grad year 2007
All students	51.6%	50.4%	51.7%	51.1%
Male	47.7%	46.3%	48.4%	46.8%
Female	55.0%	53.8%	54.6%	54.8%
Racial/Ethnic Minority	33.6%	33.0%	35.1%	34.1%
Free/reduced eligible	35.4%	33.6%	36.5%	36.5%
LEP (ever)	37.5%	38.4%	35.2%	36.1%
SPED (in H.S.)	35.3%	36.7%	36.0%	36.4%

Note: Only have data going back to 2004 (2003 is not available); Data from Massachusetts Department of Higher Education and subgroup data is limited. As data systems are improved, we plan to revise goals. Two specific notes on the data: (1) Cohort is limited to students graduating from high school and enrolling in a state or community college in the same year and who enrolled as first-time, degree-seeking students (which represents 14,247 students in the 2008 cohort). (2) A typical full-time student enrolls in 15 credits per semester, so the equivalent of an academic year of credits is 30 credits. The credits used for this analysis exclude developmental/remedial credits which are earned in pre-college level courses and do not count towards degree or certificate completion.

NAEP Exclusion Rates for Students With Disablities (SD) and English Language Learners (ELL)
Percent of Sampled Students with Disabilities or ELL Excluded From Assessment

Mathematics	2003	2005	2007	2009
Grade 4 SD	2%	3%	5%	5%
Grade 4 ELL	1%	1%	1%	1%
Grade 8 SD	2%	6%	9%	5%
Grade 8 ELL	1%	1%	1%	1%

Reading	2003	2005	2007	2009
Grade 4 SD	3%	7%	5%	Not Released
Grade 4 ELL	2%	2%	2%	Not Released
Grade 8 SD	3%	6%	6%	Not Released
Grade 8 ELL	2%	1%	2%	Not Released

Science	2003	2005	2007	2009
Grade 4 SD	N/A	3%	N/A	Not Released
Grade 4 ELL	N/A	1%	N/A	Not Released
Grade 8 SD	N/A	3%	N/A	Not Released
Grade 8 ELL	N/A	1%	N/A	Not Released

Massachusetts NAEP accommodations policy

Note: For every student with a disability or English language learner chosen to participate in NAEP, the accommodations policy below determines if the student can take the test with accommodations. If an accommodation in the student's IEP is not allowed on NAEP, the child is excused from taking the test. We follow the same policies for NAEP accommodations as we do for accommodations on our ESEA tests (MCAS).

How will a student selected for 2009 NAEP participate in testing?
As part of the NAEP pre-assessment process, schools will work with their assigned NAEP field team representative to determine how each student selected for 2009 NAEP will participate in testing. Schools will make these decisions based on the NAEP subject (reading, mathematics, or writing) each student has been selected for and a review of how each student participates in MCAS.

1. In the NAEP subject, the student takes the standard MCAS test without accommodations.
The student will participate in NAEP without accommodations.

2. In the NAEP subject, the student takes the standard MCAS test with accommodations.
If NAEP provides the same accommodations that the student receives during MCAS testing, then the student will participate in NAEP with those accommodations.

If NAEP does NOT provide the same accommodations that the student receives during MCAS testing, the school must then determine whether the student can still meaningfully participate in NAEP without his/her required accommodations. Schools should consider whether other accommodations could reasonably be substituted. If not, the school will exclude the student from NAEP.

3. In the NAEP subject, the student participates in the MCAS alternate assessment.
NAEP does not offer an alternate assessment. Therefore, schools must determine whether a student who participates in the MCAS alternate assessment can meaningfully participate in the standard NAEP test with accommodations. If not, the school will exclude the student from NAEP.

Schools will complete the Students with Disabilities (SD) Questionnaire for each student that has an IEP or 504 plan. The questionnaire includes a SD Decision Tree to assist schools in determining how students will participate in NAEP.

On the following pages you will find tables that include descriptions of the accommodations most frequently provided by NAEP. Information on the accommodations, how to administer them, and whether the accommodation is allowable in Massachusetts is provided.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
1. Frequent Breaks	Breaks during test (Admin. Code: 80-BRK)	This accommodation requires that the student be allowed to take breaks as requested or at predetermined intervals during the assessment. This also could mean that the student is allowed to take the assessment in more than one sitting during a single day.	• This accommodation requires a separate accommodation session. • There are no specific NAEP requirements regarding the length of time for a break, how often the breaks are taken, or whether the student has contact with other students during the breaks.
2. Time of Day	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form.
3. Small Group	Small group (Admin. Code: 76-SMG)	A small group session includes no more than five students. A student can be assigned to a small group session because he/she requires one, or because one or more of the accommodations he/she typically requires must be administered in a separate session to minimize distractions to other students in the regular session.	• This is by definition a separate session. • While MCAS allows for up to 10 students in a small group setting, NAEP only allows for up to 5 students.
4. Separate setting	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
5. Individual	One-on-one (Admin. Code: 77-ONE)	This accommodation requires that a student is assessed individually in an area free of distractions.	• This is a session with one student and one AA or school staff member administering the session. • If a student regularly works with a facilitator provided by the school, that person should be available for the assessment.
6. Specified Area	Preferential seating, light, furniture (Admin. Code: 79-OTH)	This accommodation requires that a student sit in a designated area for the assessment; such as away from other students to limit distractions; a location where there is access to special equipment; or close to the front of the room so that a student can see or hear more easily. It may also include special light and furniture used by the school.	• This accommodation can be provided in the regular session.
	Study carrel (Admin. Code: 79-OTH)	This is a portable screen provided by the school used to limit distractions for a student.	• This accommodation can be provided in the regular session, although occasionally the location of the study carrel is in a separate location.
7. Familiar Test Administrator	School staff administers (Admin. Code: 82-SSA)	This accommodation requires that a school staff member familiar to the student administer the session. This accommodation requires a separate accommodation session.	• If a school staff member administers or assists in the session, he/she must read and sign the Accommodation Teacher Letter before the session begins.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
8. Noise buffers	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form.
9. Magnification or Overlays	Magnification equipment (Admin. Code: 81-MAG)	This is a lens or system provided by the school that enhances visual function. Magnification devices include eyeglass-mounted magnifiers, free-standing or hand-held magnifiers, enlarged computer monitors, or computers with screen enlargement programs.	• This accommodation can be provided in the regular classroom.
	Uses a template to respond (Admin. Code: 79-OTH)	This is an overlay (usually colored) provided by the school that is used to focus a student's attention on one part of a page by obscuring other parts of the page.	• This accommodation can be provided in the regular session.
10. Test Directions	*Note: Reading the script, instructions or directions aloud, when requested, so students understand where and how to record their answers is NOT considered an accommodation on NAEP. These instructions can be repeated or reworded in any way so students understand what to do.*		
	Directions only signed (Admin. Code: 79-OTH)	This accommodation requires that a qualified sign language interpreter at the school sign the instructions included in the session script. The interpreter may not sign any additional directions in the assessment booklet.	• This accommodation can be provided in the regular session or in the back of the room (wherever it is typically administered). • The interpreter will sit near the students so they are able to see the directions being signed.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
11. Large-Print	Large print version of test (Admin. Code: 73-LG)	NAEP provides large-print booklets to students who are visually impaired. These are assessment booklets that have been enlarged to 129 percent.	• This accommodation can be provided in the regular session.
12. Braille	Braille version of test (Admin. Code: 79-OTH)	NAEP provides a Braille version of the assessment booklet for visually impaired students. If a scribe is used in reading and mathematics, have the student work with the person with whom he/she typically works.	• This accommodation requires a separate accommodation session. • Students may require a Braille typewriter or a scribe to respond to the questions. A scribe is not allowed for the writing assessment.
13. Place Marker	Uses a template to respond (Admin. Code: 79-OTH)	This is a cutout or object (ruler or post-it notes) provided by the school that is used to focus a student's attention on one part of a page by obscuring other parts of the page.	• On MCAS, a straightedge or other device is used to move students to the next question or place their answers in the correct bubble.
14. Track Test Items	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• On MCAS, this is a test administrator who helps a student track from one item to the next or helps keep a student's attention on the test.
15. Amplification	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• This type of accommodation is allowed by NAEP as along as the school can provide the required equipment and/or personnel.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
16. Test Administrator Reads Test Aloud (except ELA Language & Literature Test or Reading Test)	Read aloud – occasional (Admin. Code: 79-OTH) ***Note: Not allowed on the NAEP Reading test***	For this accommodation, students may request to have words, phrases, or sentences read aloud to them.	• The NAEP AA should quietly instruct the student before the start of the session to raise his/her hand if he/she needs to have a word, phrase, or sentence read aloud.
	Read aloud – most or all (Admin. Code: 75-REA) ***Note: Not allowed on the NAEP Reading test***	For this accommodation, students may request to have most or the entire assessment booklet read to them.	• This accommodation requires a separate accommodation session. • When more than one student requires this accommodation, the students can be grouped together (i.e., small group of up to 5 students) based on the subject they are originally assigned (writing or mathematics).

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
17. Test Administrator Signs Test (except ELA Language & Literature Test or Reading Test)	Test items signed (Admin. Code: 79-OTH) ***Note: Not allowed on the NAEP Reading test***	This accommodation requires that a qualified sign language interpreter at the school sign some or all of the test questions and answer choices for the student.	• This accommodation requires a separate accommodation session. • The NAEP AA should instruct the student before the start of the session to raise his/her hand if he/she needs to have a word, phrase, or sentence signed.
	Responds in sign language (Admin. Code: 79-OTH) ***Note: Not allowed on the NAEP Writing test***	This accommodation requires that students sign their responses to a qualified sign language interpreter provided by the school.	• This accommodation requires a separate accommodation session. • When more than one student requires this accommodation, the students can be grouped together (i.e., small group of up to five students) based on the subject they are originally assigned (reading or mathematics).
18. Electronic Text Reader (except ELA Language & Literature Test or Reading Test)	Other (Admin. Code: 79-OTH) ***Note: Not allowed on the NAEP Reading and Writing tests***	This category includes accommodations regularly used by one or more students for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form. • See www.kurzweiledu.com to note all of the Kurzweil 3000 features that are not permitted on NAEP, such as read aloud, writing tools, dictionary, and thesaurus.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
19. Scribe Test (except ELA Composition)	Responds orally to scribe (Admin. Code: 78-SCR) ***Note: Not allowed on the NAEP Writing test***	This accommodation requires that the student respond orally to a scribe provided by the school or respond by pointing to his/her answers. The scribe then records the student's responses in the assessment booklet.	• This accommodation requires a separate accommodation session. • The AA will administer the session by reading the grade-appropriate accommodation session script. • The scribe should show the student the written response after the student completes it, but NOT read the response to the student. The student will get one chance to make revisions, and then will need to move on to the next question. • If possible, have the student work with the scribe with whom he/she typically works.
20. Organizer, Checklist, Reference Sheet, or Abacus	***Note: Not allowed on NAEP***	NAEP does provide students with a Writing Brochure (grades 8 and 12), which is a comprehensive handout that contains ideas for planning and reviewing one's writing.	N/A
21. Student Reads Test Aloud	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• The school is responsible for providing the equipment (e.g., tape recorder) necessary for this accommodation. • Answers must be recorded in booklet.
22. Monitor Placement of Responses	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
23. Word Processor	Responds using computer or typewriter (Admin. Code: 78-SCR)	This accommodation requires that the student record his/her answers using a computer or typewriter provided by the school.	• This accommodation can be provided in the regular classroom if the computer or typewriter is quiet enough. • The AA will write the booklet ID number on all pages created by the computer and insert these pages into the student's booklet. • The AA is responsible for checking the computer prior to the start of the assessment and for monitoring the student during the assessment to be sure that the spelling/grammar check function and Internet access is disabled.
24. Answers Recorded in Test Booklet or using something other than the answer sheet (sheet of paper, Braille typewriter)	Responds using a Braille typewriter (Admin. Code: 79-OTH)	This accommodation requires that a visually impaired student record his/her answers using a Braille typewriter, a slate and stylus, or an electronic Brailler note taker provided by the school.	• This accommodation can be provided in the regular session, unless the Braille typewriters are very loud, which may require a separate session. • The AA will write the booklet ID number on all pages created by the Braille typewriter and insert these pages into the student's booklet.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
25. Other Standard Accommodations	Bilingual dictionary without definitions (Admin. Code: 72-BID) ***Note: Not allowed on the NAEP Reading test***	This is a non-electronic bilingual dictionary provided by the school in any language that contains English translation of words but does not contain definitions.	• This accommodation is usually provided in the regular session, although students who need this accommodation will need to have extended time to look up words in the dictionary. • The Assessment Administrator (AA) is responsible for checking the dictionary prior to the start of the assessment to be sure it does not contain definitions.
	Other (Admin. Code: 79-OTH)	This category includes accommodations provided by the school that are not listed in the NAEP accommodations and are regularly used by one or more students sampled for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form.
NON STANDARD ACCOMMODATIONS			
26. Test Administrator Reads Aloud ELA Language & Literature Test or Reading Test	***Note: This accommodation is not allowed on the NAEP Reading test.***		

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
27. Test Administrator Signs ELA Language & Literature Test or Reading Test	***Note: This accommodation is not allowed on the NAEP Reading test.***		
28. Electronic Text Reader for the ELA Language & Literature Test or Reading Test	***Note: This accommodation is not allowed on the NAEP Reading test.***		
29. Scribe ELA Composition	***Note: This accommodation is not allowed on the NAEP Writing test.***		
30. Calculation Devices	***Note: Calculators are not permitted on noncalculator sections of the NAEP mathematics test.***		
31. Spell- or Grammar-Checking Function on Word Processor or Word Prediction Software for ELA Composition	***Note: This accommodation is not allowed on the NAEP Writing test.***		
32. Other Nonstandard Accommodation			

ACCOMMODATIONS PROVIDED BY NAEP THAT ARE NOT ALLOWABLE IN MASSACHUSETTS

- Bilingual Mathematics and Science booklets: MCAS only provides a bilingual test booklet for Grade 10 Math.
- Directions read aloud in native language: In Massachusetts, this accommodation requires the student to use the bilingual English/Spanish mathematics booklet.
- Test items read aloud in native language: In Massachusetts, this accommodation requires the student to use the bilingual English/Spanish mathematics booklet.

Appendix B1: Common Core State Standards MOA

Draft/For Discussion Only/April 28, 2009

The Council of Chief State School Officers and
The National Governors Association Center for Best Practices

Common Core Standards
Memorandum of Agreement

Purpose. This document commits states to a state-led process that will draw on evidence and lead to development and adoption of a common core of state standards (common core) in English language arts and mathematics for grades K-12. These standards will be aligned with college and work expectations, include rigorous content and skills, and be internationally benchmarked. The intent is that these standards will be aligned to state assessment and classroom practice. The second phase of this initiative will be the development of common assessments aligned to the core standards developed through this process.

Background. Our state education leaders are committed to ensuring all students graduate from high school ready for college, work, and success in the global economy and society. State standards provide a key foundation to drive this reform. Today, however, state standards differ significantly in terms of the incremental content and skills expected of students.

Over the last several years, many individual states have made great strides in developing high-quality standards and assessments. These efforts provide a strong foundation for further action. For example, a majority of states (35) have joined the American Diploma Project (ADP) and have worked individually to align their state standards with college and work expectations. Of the 15 states that have completed this work, studies show significant similarities in core standards across the states. States also have made progress through initiatives to upgrade standards and assessments, for example, the New England Common Assessment Program.

Benefits to States. The time is right for a state-led, nation-wide effort to establish a common core of standards that raises the bar for all students. This initiative presents a significant opportunity to accelerate and drive education reform toward the goal of ensuring that all children graduate from high school ready for college, work, and competing in the global economy and society. With the adoption of this common core, participating states will be able to:

- Articulate to parents, teachers, and the general public expectations for students;
- Align textbooks, digital media, and curricula to the internationally benchmarked standards;
- Ensure professional development to educators is based on identified need and best practices;
- Develop and implement an assessment system to measure student performance against the common core; and
- Evaluate policy changes needed to help students and educators meet the common core standards and "end-of-high-school" expectations.

An important tenet of this work will be to increase the rigor and relevance of state standards across all participating states; therefore, no state will see a decrease in the level of student expectations that exist in their current state standards.

Process and Structure

- **Common Core State-Based Leadership.** The Council of Chief State School Officers (CCSSO) and the National Governors Association Center for Best Practices (NGA Center) shall assume responsibility for coordinating the process that will lead to state adoption of a common core of standards (see attached timeline). These organizations represent governors and state commissioners of education who are charged with defining K-12 expectations at the state level.

As such, these organizations will facilitate a state-led process to develop common core standards in English language arts and mathematics that are:

- Fewer, clearer, and higher, to best drive effective policy and practice;
- Aligned with college and work expectations, so that all students are prepared for success upon graduating from high school;
- Inclusive of rigorous content and application of knowledge through high-order skills, so that all students are prepared for the 21st century;
- Internationally benchmarked, so that all students are prepared for succeeding in our global economy and society; and
- Research and evidence-based.

- **National Validation Committee.** CCSSO and the NGA Center will create an expert validation group that will serve a several purposes, including validating end-of-course expectations, providing leadership for the development of K-12 standards, and certifying state adoption of the common core standards. The group will be comprised of national and international experts on standards. Participating states will have the opportunity to nominate individuals to the group. The national validation committee shall provide an independent review of the common core standards. The national validation committee will review the common core as it is developed and offer comments, suggestions, and validation of the process and products developed by the standards development group. The group will use evidence as the driving factor in validating the common core standards.

- **Develop End-of-High-School Expectations.** CCSSO and the NGA Center will convene Achieve, ACT and the College Board in an open, inclusive, and efficient process to develop a set of end-of-high-school expectations in English language arts and mathematics based on evidence. We will ask all participating states to review and provide input on these expectations. This work will be completed by July 2009.

- **Develop K-12 Standards in English Language Arts and Math.** CCSSO and the NGA Center will convene Achieve, ACT, and the College Board in an open, inclusive, and efficient process to develop K-12 standards that are grounded in empirical research and draw on best practices in standards development. We will ask participating states to provide input into the drafting of the common core and work as partners in the common core standards development process. This work will be completed by December 2009.

- **Adoption.** The goal of this effort is to develop a true common core of state standards that are internationally benchmarked. Each state adopting the common core standards either directly or by fully aligning its state standards may do so in accordance with current state timelines for standards adoption not to exceed three (3) years.

  This effort is voluntary for states, and it is fully intended that states adopting the common core standards may choose to include additional state standards beyond the common core standards. States that choose to align their standards to the common core standards agree to ensure that the common core represents at least 85 percent of the state's standards in English language arts and mathematics.

  Further, the goal is to establish an ongoing development process that can support continuous improvement of this first version of the common core standards based on research and evidence-

based learning and can support the development of assessments that are aligned to the common core standards across the states, for accountability and other appropriate purposes.

- **National Policy Forum.** CCSSO and the NGA Center will convene a National Policy Forum (Forum) comprised of signatory national organizations (e.g., the Alliance for Excellent Education, Business Roundtable, National School Boards Association, Council of Great City Schools, Hunt Institute, National Association of State Boards of Education, National Education Association, and others) to share ideas, gather input, and inform the common core standards initiative. The forum is intended as a place for refining our shared understanding of the scope and elements of a common core; sharing and coordinating the various forms of implementation of a common core; providing a means to develop common messaging between and among participating organizations; and building public will and support.

- **Federal Role.** The parties support a state-led effort and not a federal effort to develop a common core of state standards; there is, however, an appropriate federal role in supporting this state-led effort. In particular, the federal government can provide key financial support for this effort in developing a common core of state standards and in moving toward common assessments, such as through the Race to the Top Fund authorized in the American Recovery and Reinvestment Act of 2009. Further, the federal government can incentivize this effort through a range of tiered incentives, such as providing states with greater flexibility in the use of existing federal funds, supporting a revised state accountability structure, and offering financial support for states to effectively implement the standards. Additionally, the federal government can provide additional long-term financial support for the development of common assessments, teacher and principal professional development, other related common core standards supports, and a research agenda that can help continually improve the common core standards over time. Finally, the federal government can revise and align existing federal education laws with the lessons learned from states' international benchmarking efforts and from federal research.

Agreement. The undersigned state leaders agree to the process and structure as described above and attest accordingly by our signature(s) below.

Signatures
Governor:
Chief State School Officer:

Appendix B2: The List of Common Core Participants

PRINT CLOSE

News Release

09/01/2009

Fifty-One States And Territories Join Common Core State Standards Initiative

NGA Center, CCSSO Convene State-led Process to Develop Common English-language arts and Mathematics Standards

Contact: Jodi Omear, 202-624-5346
Office of Communications

WASHINGTON—The National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) today released the names of the states and territories that have joined the Common Core State Standards Initiative: **Alabama; Arizona; Arkansas; California; Colorado; Connecticut; Delaware; District of Columbia; Florida; Georgia; Hawaii; Idaho; Illinois; Indiana; Iowa; Kansas; Kentucky; Louisiana; Maine; Maryland; Massachusetts; Michigan; Minnesota; Mississippi; Missouri; Montana; Nebraska; Nevada; New Hampshire; New Jersey; New Mexico; New York; North Carolina; North Dakota; Ohio; Oklahoma; Oregon; Pennsylvania; Puerto Rico; Rhode Island; South Carolina; South Dakota; Tennessee; Utah; Vermont; Virgin Islands; Virginia; Washington; West Virginia; Wisconsin; Wyoming.**

COMMON CORE STATE STANDARDS FOR

English Language Arts
&
Literacy in History/Social Studies, Science, and Technical Subjects

Table of Contents

Introduction

The Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects ("the Standards") are the culmination of an extended, broad-based effort to fulfill the charge issued by the states to create the next generation of K–12 standards in order to help ensure that all students are college and career ready in literacy no later than the end of high school.

The present work, led by the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA), builds on the foundation laid by states in their decades-long work on crafting high-quality education standards. The Standards also draw on the most important international models as well as research and input from numerous sources, including state departments of education, scholars, assessment developers, professional organizations, educators from kindergarten through college, and parents, students, and other members of the public. In their design and content, refined through successive drafts and numerous rounds of feedback, the Standards represent a synthesis of the best elements of standards-related work to date and an important advance over that previous work.

As specified by CCSSO and NGA, the Standards are (1) research and evidence based, (2) aligned with college and work expectations, (3) rigorous, and (4) internationally benchmarked. A particular standard was included in the document only when the best available evidence indicated that its mastery was essential for college and career readiness in a twenty-first-century, globally competitive society. The Standards are intended to be a living work: as new and better evidence emerges, the Standards will be revised accordingly.

The Standards are an extension of a prior initiative led by CCSSO and NGA to develop College and Career Readiness (CCR) standards in reading, writing, speaking, listening, and language as well as in mathematics. The CCR Reading, Writing, and Speaking and Listening Standards, released in draft form in September 2009, serve, in revised form, as the backbone for the present document. Grade-specific K–12 standards in reading, writing, speaking, listening, and language translate the broad (and, for the earliest grades, seemingly distant) aims of the CCR standards into age- and attainment-appropriate terms.

The Standards set requirements for English language arts (ELA) but also for literacy in history/social studies, science, and technical subjects. Just as students must learn to read, write, speak, listen, and use language effectively in a variety of content areas, so too must the Standards specify the literacy skills and understandings required for college and career readiness in multiple disciplines. Literacy standards for grade 6 and above are predicated on teachers of ELA, history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. It is important to note that the 6–12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them. States may incorporate the standards into their standards for these subjects or adopt them as content area literacy standards.

As a natural outgrowth of meeting the charge to define college and career readiness, the Standards also lay out a vision of what it means to be a literate person in the twenty-first century. Indeed, the skills and understandings students are expected to demonstrate have wide applicability outside the classroom or workplace. Students who meet the Standards readily undertake the close, attentive reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and digitally. They actively seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens worldviews. They reflexively demonstrate the cogent reasoning and use of evidence that is essential to both private deliberation and responsible citizenship in a democratic republic. In short, students who meet the Standards develop the skills in reading, writing, speaking, and listening that are the foundation for any creative and purposeful expression in language.

May 2010

Key Design Considerations

CCR and grade-specific standards

The CCR standards anchor the document and define general, cross-disciplinary literacy expectations that must be met for students to be prepared to enter college and workforce training programs ready to succeed. The K–12 grade-specific standards define end-of-year expectations and a cumulative progression designed to enable students to meet college- and career-readiness expectations no later than the end of high school. The CCR and high school grade-specific standards work in tandem to define the college- and career-readiness line—the former providing broad standards, the latter providing additional specificity. Hence, both should be considered when developing college- and career-readiness assessments.

Students advancing through the grades are expected to meet each year's grade-specific standards, retain or further develop skills and understandings mastered in preceding grades, and work steadily toward meeting the more general expectations described by the CCR standards.

Grade levels for K–8; grade bands for 9–10 and 11–12

The Standards use individual grade levels in kindergarten through grade 8 to provide useful specificity; the Standards use two-year bands in grades 9–12 to allow schools, districts, and states flexibility in high school course design.

A focus on results rather than means

By emphasizing required achievements, the Standards leave room for teachers, curriculum developers, and states to determine how those goals should be reached and what additional topics should be addressed. Thus, the Standards do not mandate such things as a particular writing process or the full range of metacognitive strategies that students may need to monitor and direct their thinking and learning. Teachers are thus free to provide students with whatever tools and knowledge their professional judgment and experience identify as most helpful for meeting the goals set out in the Standards.

An integrated model of literacy

Although the Standards are divided into Reading, Writing, Speaking and Listening, and Language strands for conceptual clarity, the processes of communication are closely connected, as reflected throughout this document. For example, Writing standard 9 requires that students be able to write about what they read. Likewise, Speaking and Listening standard 4 sets the expectation that students will share findings from their research.

Research and media skills blended into the Standards as a whole

To be ready for college, workforce training, and life in a technological society, students need the ability to gather, comprehend, evaluate, synthesize, and report on information and ideas, to conduct original research in order to answer questions or solve problems, and to analyze and create a high volume and extensive range of print and nonprint texts in media forms old and new. The need to conduct research and to produce and consume media is embedded into every aspect of today's curriculum. In like fashion, research and media skills and understandings are embedded throughout the Standards rather than treated in a separate section.

Shared responsibility for students' literacy development

The Standards insist that instruction in reading, writing, speaking, listening, and language be a shared responsibility within the school. The K–5 standards include expectations for reading, writing, speaking, listening, and language applicable to a range of subjects, including but not limited to ELA. The grades 6–12 standards are divided into two sections, one for ELA and the other for history/social studies, science, and technical subjects. This division reflects the unique, time-honored place of ELA teachers in developing students' literacy skills while at the same time recognizing that teachers in other areas must have a role in this development as well.

Part of the motivation behind the interdisciplinary approach to literacy promulgated by the Standards is extensive research establishing the need for college- and career-ready students to be proficient in reading complex informational text independently in a variety of content areas. Most of the required reading in college and workforce training programs is informational in structure and challenging in content; postsecondary education programs typically provide students with both a higher volume of such reading than is generally required in K–12 schools and comparatively little scaffolding.

The Standards are not alone in calling for a special emphasis on informational text. The 2009 reading framework of the National Assessment of Educational Progress (NAEP) requires a high and increasing proportion of informational text on its assessment as students advance through the grades.

Distribution of Literary and Informational Passages by Grade in the 2009 NAEP Reading Framework

Grade	Literary	Informational
4	50%	50%
8	45%	55%
12	30%	70%

The Standards aim to align instruction with this framework so that many more students than at present can meet the requirements of college and career readiness. In K–5, the Standards follow NAEP's lead in balancing the reading of literature with the reading of informational texts, including texts in history/social studies, science, and technical subjects. In accord with NAEP's growing emphasis on informational texts in the higher grades, the Standards demand that a significant amount of reading of informational texts take place in and outside of the ELA classroom. Fulfilling the standards for 6–12 ELA requires much greater attention to a specific category of informational text—literary nonfiction—than has been traditional. Because the ELA classroom must focus on literature (stories, drama, and poetry) as well as literary nonfiction, a great deal of informational reading in grades 6–12 must take place in other classes if the NAEP assessment framework is to be matched instructionally.[1] To measure students' growth toward college and career readiness, assessments aligned with the Standards should adhere to the distribution of texts across grades cited in the NAEP framework.

NAEP likewise outlines a distribution across the grades of the core purposes and types of student writing. Similar to the Standards, the 2011 NAEP framework cultivates the development of three mutually reinforcing writing capacities: writing to persuade, to explain, and to convey real or imagined experience. Evidence concerning the demands of college and career readiness gathered during development of the Standards concurs with NAEP's shifting emphases: standards for grades 9–12 describe writing in all three forms, but, consistent with NAEP, the overwhelming focus of writing throughout high school should be on writing to argue and to inform or explain.[2]

Distribution of Communicative Purposes by Grade in the 2011 NAEP Writing Framework

Grade	To Persuade	To Explain	To Convey Experience
4	30%	35%	35%
8	35%	35%	30%
12	40%	40%	20%

It follows that writing assessments aligned with the Standards should adhere to the distribution of writing purposes across grades outlined by NAEP.

What is not *covered by the Standards*

The Standards should be recognized for what they are *not* as well as what they are. The most important intentional design limitations are as follows:

1) The Standards define what all students are expected to know and be able to do, not how teachers should teach. The Standards must be complemented by a well-developed, content-rich curriculum consistent with the expectations laid out in this document.

2) While the Standards do attempt to focus on what is most essential, they do not describe all that can or should be taught. A great deal is left to the discretion of teachers and curiculum developers. The aim of the Standards is to articulate the fundamentals, not to set out an exhaustive list nor a set of restrictions that limits what can be taught beyond what is specified herein.

3) The Standards do not define the nature of advanced work for students who meet the Standards prior to the end of high school. For those students, advanced work in such areas as literature, composition, language, and journalism should be available. This

[1] The percentages on the table reflect the sum of student reading, not just reading in ELA settings. Teachers of senior English classes, for example, are not required to devote 70 percent of reading to informational texts. Rather, 70 percent of student reading across the grade should be informational.

[2] As with reading, the percentages in the table reflect the sum of student writing, not just writing in ELA settings.

work should provide the next logical step up from the college and career readiness baseline established here.

4) The Standards set grade-specific standards but do not define the intervention methods or materials necessary to support students who are well below or well above grade-level expectations. It is also beyond the scope of the Standards to define the full range of supports appropriate for English language learners and for students with special needs. At the same time, all students must have the opportunity to learn and meet the same high standards if they are to access the knowledge and skills necessary in their post-school lives. The Standards should be read as allowing for the widest possible range of students to participate fully from the outset, along with appropriate accommodations to ensure maximum participaton of students with special education needs. For example, for students with disabilities *reading* should allow for use of Braille, screen reader technology, or other assistive devices, while *writing* should include the use of a scribe, computer, or speech-to-text technology. In a similar vein, speaking and *listening* should be interpreted broadly to include sign language. No set of grade-specific standards can fully reflect the great variety in abilities, needs, learning rates, and achievement levels of students in any given classroom. However, the Standards do provide clear signposts along the way to the goal of college and career readiness for all students.

5) While the ELA and content area literacy components described herein are critical to college and career readiness, they do not define the whole of such readiness. Students require a wide-ranging, rigorous academic preparation and, particularly in the early grades, attention to such matters as social, emotional, and physical development and approaches to learning. Similarly, the Standards define literacy expectations in history/social studies, science, and technical subjects, but literacy standards in other areas, such as mathematics and health education, modeled on those herein are strongly encouraged to allow for a comprehensive, schoolwide literacy program.

The Student Who is College and Career Ready in Reading, Writing, Speaking, Listening, and Language

The descriptions that follow are not standards themselves but instead offer a portrait of students who meet the standards set out in this document. As students advance through the grades and master the standards in reading, writing, speaking, listening, and language, they are able to exhibit with increasing fullness and regularity these capacities of the literate individual.

- **They demonstrate independence.**

Students can, without significant scaffolding or support, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and clearly convey intricate or multifaceted information. Likewise, students are independently able to discern a speaker's key points and request clarification if something is not understood. They ask relevant questions, build on others' ideas, articulate their own ideas, and ask for confirmation that they have been understood. Without prompting, they observe language conventions, determine word meanings, attend to the connotations of words, and acquire new vocabulary.

- **They build strong content knowledge.**

Students establish a base of knowledge across a wide range of subject matter by engaging with works of quality and substance. They become proficient in new areas through research and study. They read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. They refine and share their knowledge through writing and speaking.

- **They respond to the varying demands of audience, task, purpose, and discipline.**

Students consider their communication in relation to audience, task, purpose, and discipline. They appreciate nuances, such as how the composition of an audience should affect tone when speaking and how the connotations of words affect meaning. They also know that different disciplines call for different types of evidence (e.g., documentary evidence in history, experimental evidence in the sciences).

- **They comprehend as well as critique.**

Students are engaged and open-minded—but discerning—readers and listeners. They work diligently to understand precisely what an author or speaker is saying, but they also question an author's or speaker's assumptions and assess the veracity of claims.

- **They value evidence.**

Students cite specific evidence when offering an oral or written interpretation of a text. They use relevant evidence when supporting their own points in writing and speaking, making their reasoning clear to the reader or listener, and they constructively evaluate others' use of evidence.

- **They use technology and digital media strategically and capably.**

Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and mediums and can select and use those best suited to their communication goals.

- **They come to understand other perspectives and cultures.**

Students appreciate that the twenty-first-century classroom and workplace are settings in which people from often widely divergent cultures and who represent diverse experiences and perspectives must learn and work together. Students actively seek to understand other perspectives and cultures through reading and listening, and they are able to communicate effectively with people of varied backgrounds. They evaluate other points of view critically and constructively. Through reading great classic and contemporary works of literature representative of a variety of periods, cultures, and worldviews, students can vicariously inhabit worlds and have experiences much different than their own.

How to Read This Document

Overall Document Organization and Main Features

The Standards comprise three main sections: a comprehensive K–5 section and two content area–specific sections for grades 6–12, one for ELA and one for history/social studies, science, and technical subjects. Three appendices (lettered A, B, and C) accompany the main document.

Each section is divided into *strands*. K–5 and 6–12 ELA have Reading, Writing, Speaking and Listening, and Language strands; the 6–12 history/social studies, science, and technical subjects section focuses on Reading and Writing. Each strand is headed by a strand-specific set of *College and Career Readiness Anchor Standards* that is identical across all grades and content areas.

Standards for each grade within K–8 and for grades 9–10 and 11–12 follow the CCR standards in each strand. Each *grade-specific standard* (as these standards are collectively referred to) corresponds to the same-numbered CCR standard. Put another way, each CCR standard has an accompanying grade-specific standard translating the broader CCR statement into grade-appropriate end-of-year expectations.

Individual CCR standards can be identified by their strand, CCR status, and number--R.CCR.6, for example. Individual grade-specific standards can be identified by their strand, grade, and number or number and letter so that RI.4.3, for example, stands for Reading Informational Text, grade 4, standard 3. Likewise, W.5.1a stands for Writing, grade 5, standard 1a. Strand designations can be found in brackets alongside the full strand title.

Who is responsible for which portion of the Standards

A single K–5 section lists CCR and grade-specific standards for reading, writing, speaking, listening, and language across the curriculum, reflecting the fact that most or all of the instruction students in these grades receive comes from one teacher. Grades 6–12 are covered in two content area–specific sections, the first for the English language arts teacher and the second for teachers of history/social studies, science, and technical subjects. Each section uses the same CCR standards but also includes grade-specific standards tuned to the literacy requirements of the particular discipline(s).

Key Features of the Standards

Reading: Text complexity and the growth of comprehension

The Reading standards place equal emphasis on the sophistication of what students read and the skill with which they read. Standard 10 defines a grade-by-grade "staircase" of increasing text complexity that rises from beginning reading to the college- and career-readiness level. Whatever they are reading, students must also show a steadily growing ability to discern more from and make fuller use of text, including making an increasing number of connections among ideas and between texts, considering a wider range of textual evidence, and becoming more sensitive to inconsistencies, ambiguities, and poor reasoning in texts.

Writing: Text types, responding to reading, and research

The Standards acknowledge the fact that whereas some writing skills, such as the ability to plan, revise, edit, and publish, are applicable to many types of writing, other skills are more properly defined in terms of specific writing types: arguments, informative/explanatory texts, and narratives. Standard 9 stresses the importance of the writing-reading connection by requiring students to draw and write about evidence from literary and informational texts. Because of the centrality of writing to most forms of inquiry, research standards are prominently included in this strand, though skills important to research are infused throughout the document.

Speaking and Listening: Flexible communication and collaboration

Including but not limited to skills necessary for formal presentations, the Speaking and Listening standards require students to develop a range of broadly useful oral communication and interpersonal skills. Students must learn to work together, express and listen to ideas, integrate information from oral, visual, and multimodal sources, evaluate what they hear, use digital media and visual displays strategically to help achieve communicative purposes, and adapt speech to context and task.

Language: Conventions and vocabulary

The standards on conventions and effective language use include the essential "rules" of formal written and spoken English, but they also approach language as a matter of craft and informed choice among alternatives. The vocabulary standards focus on understanding words, their relationships, and their nuances and on acquiring new words and phrases, particularly general academic and domain-specific vocabulary.

Appendices A, B, and C

Appendix A contains supplementary material on reading, writing, speaking and listening, and language as well as a glossary of key terms. Appendix B consists of text exemplars illustrating the complexity, quality, and range of reading appropriate for various grade levels. Appendix C includes annotated samples demonstrating at least adequate performance in student writing at various grade levels.

Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects

K–5

College and Career Readiness Anchor Standards for Reading

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They relate to their College and Career Readiness (CCR) counterparts by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and explain how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented graphically, visually, orally, and multimodally as well as in words within and across print and digital sources.*
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

*Please see "Research to Build and Present Knowledge" in Writing and "Comprehension and Collaboration" in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

Note on range and content of student reading

To build a foundation for college and career readiness, students must read widely and deeply from among a broad range of high-quality, increasingly challenging literary and informational texts. Through extensive reading of stories, dramas, poems, and myths from diverse cultures and different time periods, students gain literary and cultural knowledge as well as familiarity with various text structures and elements. By reading texts in history/social studies, science, and other disciplines, students build a foundation of knowledge in these fields that will also give them the background to be better readers in all content areas. Students can only gain this foundation when the curriculum is intentionally and coherently structured to develop rich content knowledge within and across grades. Students also acquire the habits of reading independently and closely, which are essential to their future success.

Reading Standards for Literature K–5 [RL]

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.

Kindergartners:	Grade 1 students:	Grade 2 students:
Key Ideas and Details		
1. With prompting and support, ask and answer questions about key details in a text.	**1.** Ask and answer questions about key details in a text.	**1.** Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key details in a text.
2. With prompting and support, retell familiar stories, including key details.	**2.** Retell stories, including key details, and demonstrate understanding of their central message or lesson.	**2.** Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.
3. With prompting and support, identify characters, settings, and major events in a story.	**3.** Describe characters, settings, and major events in a story, using key details.	**3.** Describe how characters in a story respond to major events and challenges.
Craft and Structure		
4. Ask and answer questions about unknown words in a text.	**4.** Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.	**4.** Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song.
5. Recognize common types of texts (e.g., storybooks, poems).	**5.** Explain major differences between books that tell stories and books that give information, drawing on a wide reading of a range of text types.	**5.** Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.
6. With prompting and support, name the author and illustrator of a story and define the role of each in telling the story.	**6.** Identify who is telling the story at various points in a text.	**6.** Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud.
Integration of Knowledge and Ideas		
7. With prompting and support, describe the connection between pictures or other illustrations and the overall story in which they appear.	**7.** Refer to pictures, illustrations, and details in a story to describe characters, setting, or events.	**7.** Use information from illustrations, other visual elements (e.g., maps), and the words in a print or digital text to demonstrate understanding of the characters, setting, or plot.
8. (Not applicable to literature)	**8.** (Not applicable to literature)	**8.** (Not applicable to literature)
9. With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories.	**9.** Compare and contrast the adventures and experiences of characters in stories.	**9.** Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.
Range of Reading and Level of Text Complexity		
10. Actively engage in group reading activities with purpose and understanding.	**10.** With prompting and support, read appropriately complex prose and poetry for grade 1.	**10.** By the end of the year, read literature, including stories, poetry, and drama, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Reading Standards for Literature K–5 [RL]

Grade 3 students:	Grade 4 students:	Grade 5 students:
Key Ideas and Details		
1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.	**1.** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	**1.** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
2. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.	**2.** Determine a theme of a story, drama, or poem from details in the text; summarize the text.	**2.** Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.
3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.	**3.** Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).	**3.** Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).
Craft and Structure		
4. Determine the meaning of key words and phrases as they are used in a text, distinguishing literal from nonliteral language.	**4.** Determine the meaning of key words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., *Herculean*), drawing on a wide reading of classic myths from a variety of cultures and periods.	**4.** Determine the meaning of key words and phrases as they are used in a text, including figurative language such as metaphors and similes.
5. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as *chapter*, *scene*, and *stanza*; describe how each successive part builds on earlier sections.	**5.** Explain major differences between poems, drama, and prose, and refer to the core structural elements of poems (e.g., stanza, verse, rhythm, meter) and drama (e.g., casts of characters, setting descriptions, dialogue, acts, scenes, stage directions) when writing or speaking about a text.	**5.** Explain how a series of chapters, scenes, or stanzas fits together to provide the overall structure of a particular story, drama, or poem.
6. Distinguish their own point of view from that of the narrator or those of the characters.	**6.** Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.	**6.** Describe how a narrator's or speaker's point of view influences how events are described.
Integration of Knowledge and Ideas		
7. Explain how specific images and illustrations contribute to or clarify a story (e.g., create mood, emphasize particular aspects of characters or settings).	**7.** Integrate information gained from illustrations and other visual elements in a text with the words to demonstrate understanding of how the characters, setting, and plot interact and develop.	**7.** Analyze how visual and multimedia elements in conjunction with words contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction).
8. (Not applicable to literature)	**8.** (Not applicable to literature)	**8.** (Not applicable to literature)
9. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).	**9.** Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.	**9.** Compare and contrast stories in the same genre (e.g., mysteries and adventure stories) on their approaches to similar themes and topics.

Grade 3 students:	Grade 4 students:	Grade 5 students:
Range of Reading and Level of Text Complexity		
10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, in the grades 2–3 text complexity band independently and proficiently.	**10.** By the end of the year, read and comprehend literature, including stories, dramas, and poetry, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.	**10.** By the end of the year, read and comprehend literature, including stories, dramas, and poetry, in the grades 4–5 text complexity band independently and proficiently.

Reading Standards for Informational Text K–5 [RI]

Kindergartners:	Grade 1 students:	Grade 2 students:
Key Ideas and Details		
1. With prompting and support, ask and answer questions about key details in a text.	**1.** Ask and answer questions about key details in a text.	**1.** Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key details in a text.
2. With prompting and support, identify the main topic and retell key details of a text.	**2.** Identify the main topic and retell key details of a text.	**2.** Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
3. With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.	**3.** Describe the connection between two individuals, events, ideas, or pieces of information in a text.	**3.** Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
Craft and Structure		
4. With prompting and support, ask and answer questions about unknown words in a text.	**4.** Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.	**4.** etermine the meaning of words and phrases in a text relevant to a *grade 2 topic or subject area*.
5. Identify the front cover, back cover, and title page of a book.	**5.** Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.	**5.** now and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text quickly and efficiently.
6. Name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text.	**6.** Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.	**6.** dentify the main purpose of a text, including what the author wants to answer, explain, or describe.
Integration of Knowledge and Ideas		
7. With prompting and support, describe the connection between pictures or other illustrations and the overall text in which they appear.	**7.** Use pictures, illustrations, and details in a text to describe its key ideas.	**7.** Explain how specific images and other illustrations contribute to and clarify a text (e.g., show how something works).
8. With prompting and support, identify the reasons an author gives to support points in a text.	**8.** Identify the reasons an author gives to support points in a text.	**8.** Describe how reasons support specific points the author makes in a text.
9. With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).	**9.** Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).	**9.** Compare and contrast the most important points presented by two texts on the same topic.
Range of Reading and Level of Text Complexity		
10. Actively engage in group reading activities with purpose and understanding.	**10.** With prompting and support, read appropriately complex informational texts for grade 1.	**10.** By the end of year, read and comprehend informational texts, including historical, scientific and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range

Reading Standards for Informational Text K–5 [RI]

Grade 3 students:	Grade 4 students:	Grade 5 students:
Key Ideas and Details		
1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.	**1.** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	**1.** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
2. Determine the main idea of a text; recount the key details and explain how they support the main idea.	**2.** Determine the main idea of a text and explain how it is supported by key details; summarize the text.	**2.** Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.	**3.** Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.	**3.** Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
Craft and Structure		
4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 3 topic or subject area*.	**4.** Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*.	**4.** Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 5 topic or subject area*.
5. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic quickly and efficiently.	**5.** Describe the overall structure of events, ideas, concepts, or information (e.g., chronology, comparison, cause/effect) in a text or part of a text.	**6.** Compare and contrast the organizational structure of events, ideas, concepts, or information (e.g., chronology, comparison, cause/effect, problem/solution) in two or more texts.
6. Distinguish their own point of view from that of the author of a text.	**6.** Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.	**7.** Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.
Integration of Knowledge and Ideas		
7. Use information gained from illustrations, other visual elements (e.g., maps, photographs), and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).	**7.** Interpret factual information presented graphically or visually (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to understanding the text in which they appear.	**7.** Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
8. Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).	**8.** Explain how an author uses reasons and evidence to support particular points in a text.	**8.** Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence supports which point(s).
9. Compare and contrast the most important points and key details presented in two texts on the same topic.	**9.** Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.	**9.** Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

Grade 3 students:	Grade 4 students:	Grade 5 students:
Range of Reading and Level of Text Complexity		
10. By the end of the year, read and comprehend informational texts, including historical, scientific, and technical texts, in the grades 2–3 text complexity band independently and proficiently.	**10.** By the end of year, read and comprehend informational texts, including historical, scientific, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as necessary at the high end of the range.	**10.** By the end of the year, read and comprehend informational text, including historical, scientific, and technical texts, in the grades 4–5 text complexity band level independently and proficiently.

Reading Standards: Foundational Skills (K–5) [F]

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. These Foundational Skills are not an end in and of themselves; rather, they are necessary and important components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: Good readers will need much less practice with these concepts than struggling readers. The point is to teach students what they need to learn and not what they already know—to discern when particular children or activities warrant more or less attention.

** In Kindergarten children are expected to demonstrate increasing awareness and competence in the areas that follow.*

Kindergartners:	Grade 1 students:
Print Concepts	
1. Demonstrate understanding of the organization and basic features of print. a. Follow words from left to right, top to bottom, and page-by-page. b. Recognize that spoken words are represented in written language by specific sequences of letters. c. Understand that words are separated by spaces in print. d. Recognize and name all upper- and lowercase letters of the alphabet.	**1.** Demonstrate understanding of the organization and basic features of print. a. Recognize the distinguishing features of a sentence (e.g., first word, capitalization, ending punctuation).
Phonological Awareness	
2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes). a. Recognize and produce rhyming words. b. Count, pronounce, blend, and segment syllables in spoken words. c. Blend and segment onsets and rimes of single-syllable spoken words. d. Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (CVC) words.[1] (This does not include CVCs ending with /l/, /r/, or /x/.) e. Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.	**2.** Demonstrate understanding of spoken words, syllables, and sounds (phonemes). a. Distinguish long from short vowel sounds in spoken single-syllable words . b. Orally produce single-syllable words by blending sounds (phonemes), including consonant blends. c. Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words. d. Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes).

[1]Words, syllables, or phonemes written in /slashes/ refer to their pronunciation or phonology. Thus, /CVC/ is a word with three phonemes regardless of the number of letters in the spelling of the word.

Reading Standards: Foundational Skills (K–5) [F]

**** In Kindergarten children are expected to demonstrate increasing awareness and competence in the areas that follow.***

Kindergartners:*	Grade 1 students:	Grade 2 students:
Phonics and Word Recognition		
3. Know and apply grade-level phonics and word analysis skills in decoding words. a. Demonstrate basic knowledge of letter-sound correspondences by producing the primary or most frequent sound for each consonant. b. Associate the long and short sounds with the common spellings (graphemes) for the five major vowels. c. Read common high-frequency words by sight. (e.g., *the, of, to, you, she, my, is, are, do, does*). d. Distinguish between similarly spelled words by identifying the sounds of the letters that differ.	**3.** Know and apply grade-level phonics and word analysis skills in decoding words. a. Know the spelling-sound correspondences for common consonant digraphs.(two letters that represent one sound). b. Decode regularly spelled one-syllable words. c. Know final *-e* and common vowel team conventions for representing long vowel sounds. d. Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. e. Decode two-syllable words following basic patterns by breaking the words into syllables. f. Read words with inflectional endings. g. Recognize and read grade-appropriate irregularly spelled words.	**3.** Know and apply grade-level phonics and word analysis skills in decoding words. a. Distinguish long and short vowels when reading regularly spelled one-syllable words. b. Know spelling-sound correspondences for additional common vowel teams. c. Decode regularly spelled two-syllable words with long vowels. d. Decode words with common prefixes and suffixes. e. Identify words with inconsistent but common spelling-sound correspondences. f. Recognize and read grade-appropriate irregularly spelled words.
4. Read emergent-reader texts with purpose and understanding.	**4.** Read with sufficient accuracy and fluency to support comprehension. a. Read on-level text with purpose and understanding. b. Read on-level text orally with accuracy, appropriate rate, and expression. c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	**4.** Read with sufficient accuracy and fluency to support comprehension. a. Read on-level text with purpose and understanding. b. Read on-level text orally with accuracy, appropriate rate, and expression. c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Grade 3 students:	Grade 4 students:	Grade 5 students:
Phonics and Word Recognition		
3. Know and apply grade-level phonics and word analysis skills in decoding words. a. Identify and know the meaning of the most common prefixes and derivational suffixes. b. Decode words with common Latin suffixes. c. Decode multisyllable words. d. Read grade-appropriate irregularly spelled words.	**3.** Know and apply grade-level phonics and word analysis skills in decoding words. a. Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multi-syllabic words in context and out of context.	**3.** Know and apply grade-level phonics and word analysis skills in decoding words. a. Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multi-syllabic words in context and out of context.
Fluency		
4. Read with sufficient accuracy and fluency to support comprehension. a. Read on-level text with purpose and understanding. b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression. c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	**4.** Read with sufficient accuracy and fluency to support comprehension. a. Read on-level text with purpose and understanding. b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression. c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	**4.** Read with sufficient accuracy and fluency to support comprehension. a. Read on-level text with purpose and understanding. b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression. c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

College and Career Readiness Anchor Standards for Writing

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They relate to their College and Career Readiness (CCR) counterparts by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes[1]

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.[2]
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

[1]These broad types of writing include many subgenres. See Appendix A for definitions of key writing types.
[2]See standards 1–3 in Language, pages xxxx, for specific editing expectations.

Note on range and content of student writing

To build a foundation for college and career readiness, students need to learn to use writing as a way of offering and supporting opinions, demonstrating understanding of the subjects they are studying, and conveying real and imagined experiences and events. They learn to appreciate that a key purpose of writing is to communicate clearly to an external, sometimes unfamiliar audience, and they begin to adapt the form and content of their writing to accomplish a particular task and purpose.. They develop the capacity to build knowledge on a subject through research projects and to respond analytically to literary and informational sources. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and extended time frames throughout the year.

Writing Standards K–5 [W]

The following standards for K–5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples in Appendix C.

Kindergartners:	Grade 1 students:	Grade 2 students:
Text Types and Purposes		
1. Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., *My favorite book is . . .*).	**1.** Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.	**1.** Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., *because*, *and*, *also*) to connect opinion and reasons, and provide a concluding statement or section.
2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.	**2.** Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.	**2.** Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.
3. Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.	**3.** Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.	**3.** Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.
Production and Distribution of Writing		
4. (Begins in grade 3)	**4.** (Begins in grade 3)	**4.** (Begins in grade 3)
5. With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed.	**5.** With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.	**5.** With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.
6. With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.	**6.** With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.	**6.** With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.
Research to Build and Present Knowledge		
7. Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).	**7.** Participate in shared research and writing projects (e.g., explore a number of "how-to" books on a given topic and use them to write a sequence of instructions).	**7.** Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).
8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.	**8.** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.	**8.** Recall information from experiences or gather information from provided sources to answer a question.
9. (Begins in grade 4)	**9.** (Begins in grade 4)	**9.** (Begins in grade 4)
Range of Writing		
10. (Begins in grade 3)	**10.** (Begins in grade 3)	**10.** (Begins in grade 3)

Grade 3 students:	Grade 4 students:	Grade 5 students:
Text Types and Purposes		
1. Write opinion pieces on familiar topics or texts, supporting a point of view with reasons. a. Introduce the topic or book they are writing about, state an opinion, and create an organizational structure that lists reasons. b. Provide reasons that support the opinion. c. Use linking words and phrases (e.g., *because*, *therefore*, *since*, *for example*) to connect opinion and reasons. d. Provide a concluding statement or section.	**1.** Write opinion pieces on topics or texts, supporting a point of view with reasons and information. a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose. b. Provide reasons that are supported by facts and details. c. Link opinion and reasons using words and phrases (e.g., *for instance*, *in order to*, *in addition*). d. Provide a concluding statement or section related to the opinion presented.	**1.** Write opinion pieces on topics or texts, supporting a point of view with reasons and information. a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer's purpose. b. Provide logically ordered reasons that are supported by facts and details. c. Link opinion and reasons using words, phrases, and clauses (e.g., *consequently*, *specifically*). d. Provide a concluding statement or section related to the opinion presented.
2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly. a. Introduce a topic and group related information together; include illustrations when useful to aiding comprehension. b. Develop the topic with facts, definitions, and details. c. Use linking words and phrases (e.g., *also*, *another*, *and*, *more*, *but*) to connect ideas within categories of information. d. Provide a concluding statement or section.	**2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. a. Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension. b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. c. Link ideas within categories of information using words and phrases (e.g., *another*, *for example*, *also*, *because*). d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Provide a concluding statement or section related to the information or explanation presented.	**2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. a. Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension. b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. c. Link ideas within and across categories of information using words, phrases, and clauses (e.g., *in contrast*, *especially*). d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Provide a concluding statement or section related to the information or explanation presented.
3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences. a. Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally. b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations. c. Use temporal words and phrases to signal event order. d. Provide a sense of closure.	**3.** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences. a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally. b. Use dialogue and description to develop experiences and events or show the responses of characters to situations. c. Use a variety of transitional words and phrases to manage the sequence of events. d. Use concrete words and phrases and sensory details to convey experiences and events precisely. e. Provide a conclusion that follows from the narrated experiences or events.	**3.** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences. a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally. b. Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations. c. Use a variety of transitional words, phrases, and clauses to manage the sequence of events. d. Use concrete words and phrases and sensory details to convey experiences and events precisely. e. Provide a conclusion that follows from the narrated experiences or events.

Grade 3 students:	Grade 4 students:	Grade 5 students:
Production and Distribution of Writing		
4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	**4.** Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	**4.** Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.	**5.** With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.	**5.** With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.	**6.** With some guidance and support from adults, use technology, including the Internet, to produce and publish writing (using the keyboard) as well as to interact and collaborate with others.	**6.** With some guidance and support from adults, use technology, including the Internet, to produce and publish a minimum of two pages of writing (using the keyboard) as well as to interact and collaborate with others.
Research to Build Knowledge		
7. Conduct short research projects that build knowledge about a topic.	**7.** Conduct short research projects that build knowledge through investigation of different aspects of a topic.	**7.** Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.
8. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.	**8.** Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.	**8.** Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.
9. (Begins in grade 4)	**9.** Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grade 4 Reading standards* to literature (e.g., "Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text"). b. Apply *grade 4 Reading standards* to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text").	**9.** Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grade 5 Reading standards* to literature (e.g., "Compare and contrast two or more characters, settings, or events in a story or a drama, drawing on specific details in the text"). b. Apply *grade 5 Reading standards* to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence supports which point[s]").
Range of Writing		
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

College and Career Readiness Anchor Standards for Speaking and Listening

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They relate to their College and Career Readiness (CCR) counterparts by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate content from multiple graphical, visual, oral, or multimodal sources.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Note on range and content of student speaking and listening

To build a foundation for college and career readiness, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small groups, and with a partner. Being productive members of these conversations requires that students contribute accurate, relevant information; respond to and develop what others have said; make comparisons and contrasts; and analyze and synthesize a multitude of ideas in various domains.

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. Digital texts confront students with the potential for continually updated content and dynamically changing combinations of words, graphics, images, hyperlinks, and embedded video and audio.

Speaking and Listening Standards K–5 [SL]

The following standards for K–5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.

Kindergartners:	Grade 1 students:	Grade 2 students:
Comprehension and Collaboration		
1. Participate in collaborative conversations about *kindergarten topics and texts* with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion). b. Continue a conversation through multiple exchanges.	**1.** Participate in collaborative conversations about *grade 1 topics and texts* with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. c. Ask questions to clear up any confusion about the topics and texts under discussion.	**1.** Participate in collaborative conversations about *grade 2 topics and texts* with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). b. Build on others' talk in conversations by linking their comments to the remarks of others. c. Ask for clarification and further explanation as needed about the topics and texts under discussion.
2. Confirm understanding of written texts read aloud or information presented orally or through media by asking and answering questions about key details.	**2.** Demonstrate understanding of written texts read aloud or information presented orally or through media by asking and answering questions about key details and restating key elements.	**2.** Recount or describe key ideas or details from written texts read aloud or information presented orally or through media.
3. Ask and answer questions in order to seek help, get information, or clarify something that is not understood.	**3.** Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.	**3.** Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
Presentation of Knowledge and Ideas		
4. Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.	**4.** Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.	**4.** Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.
5. Add drawings or other visual displays to descriptions as desired to provide additional detail.	**5.** Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.	**5.** Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.
6. Speak audibly and express thoughts, feelings, and ideas clearly.	**6.** Produce complete sentences when appropriate to task and situation. (See standards 1–3 in Language, pages xx, for specific expectations.)	**6.** Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See standards 1–3 in Language, pages xx, for specific expectations.)

Grade 3 students:	Grade 4 students:	Grade 5 students:
Comprehension and Collaboration		
1. Engage effectively in a range of collaborative discussions (one-on-one and in groups) on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly. a. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). b. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others. c. Explain their own ideas and understanding in light of the discussion.	**1.** Engage effectively in range of collaborative discussions (one-on-one and in groups) on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussions. b. Follow agreed-upon rules for discussions and carry out assigned roles. c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others. d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.	**1.** Engage effectively in a range of collaborative discussions (one-on-one and in groups) on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. b. Follow agreed-upon rules for discussions and carry out assigned roles. c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others. d. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.
2. Identify the main ideas and supporting details of written texts read aloud or information presented graphically, orally, visually, or multimodally.	**2.** Paraphrase portions of written texts read aloud or information presented graphically, orally, visually, or multimodally.	**2.** Summarize written texts read aloud or information presented graphically, orally, visually, or multimodally.
3. Ask and answer questions about information from a speaker's, offering appropriate elaboration and detail.	**3.** Identify the reasons and evidence a speaker provides to support particular points.	**3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
Presentation of Knowledge and Ideas		
4. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.	**4.** Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.	**4.** Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.
5. Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.	**5.** Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.	**5.** Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.
6. Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See standards 1–3 in Language, pages xx, for specific expectations.)	**6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See standards 1–3 in Language, pages xx, for specific expectations.)	**6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation. (See standards 1–3 in Language, pages xx, for specific expectations.)

College and Career Readiness Anchor Standards for Language

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They relate to their College and Career Readiness (CCR) counterparts by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Conventions

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of capitalization, punctuation, and spelling when writing.

Effective Language Use

3. Use language to enhance meaning, convey style, and achieve particular effects when writing or speaking.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of word relationships and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific vocabulary sufficient for reading, writing, speaking, and listening at the college and career readiness level.

Note on range and content of student language use

To build a foundation for college and career readiness in language, students must gain control over many conventions of grammar, usage, and mechanics as well as learn ways to use language to enhance meaning. They must also be able to determine or clarify the meaning of grade-appropriate words encountered through listening, reading, and media use, come to appreciate that words have nonliteral meanings, shadings of meaning, and relationships to other words, and expand their vocabulary in the course of studying content. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions, effective language use, and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.

Language Standards K–5 [L]

The following standards for grades K–5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. Beginning in grade 3, skills and understandings that are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking are marked with an asterisk (*). See the chart on page xx for a complete list and Appendix A for an example of how these skills develop in sophistication.

Kindergartners:	Grade 1 students:	Grade 2 students:
Conventions		
1. Observe conventions of grammar and usage when writing or speaking. a. Print many upper- and lowercase letters. b. Use frequently occurring nouns and verbs. c. Form regular plural nouns orally by adding /s/ or /es/ (e.g., *dog*, *dogs*; *wish*, *wishes*). d. Understand and use question words (interrogatives) (e.g., *who*, *what*, *where*, *when*, *why*, *how*). e. Use the most frequently occurring prepositions (e.g., *to*, *from*, *in*, *out*, *on*, *off*, *for*, *of*, *by*, *with*). f. Produce and expand complete sentences in shared language activities.	**1.** Observe conventions of grammar and usage when writing or speaking. a. Print all upper- and lowercase letters. b. Use common, proper, and possessive nouns. c. Use singular and plural nouns with matching verbs in basic sentences (e.g., *He hops*; *We hop*). d. Use personal, possessive, and indefinite pronouns (e.g., *I*, *me*, *my*; *they*, *them*, *their*, *anyone*, *everything*). e. Use verbs to convey a sense of past, present, and future (e.g., *Yesterday I walked home*; *Today I walk home*; *Tomorrow I will walk home*). f. Use frequently occurring adjectives. g. Use frequently occurring conjunctions (e.g., *and*, *but*, *or*, *so*, *because*). g. Use determiners (e.g., articles, demonstratives). h. Use frequently occurring prepositions (e.g., *during*, *beyond*, *toward*). i. Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to questions and prompts.	**1.** Observe conventions of grammar and usage when writing or speaking. a. Use collective nouns (e.g., *group*). b. Form and use frequently occurring irregular plural nouns (e.g., *feet*, *children*, *teeth*, *mice*, *fish*). c. Use reflexive pronouns (e.g., *myself*, *ourselves*). d. Form and use the past tense of frequently occurring irregular verbs (e.g., *sat*, *hid*, *told*). e. Use adjectives and adverbs, and choose between them depending on what is to be modified. f. Produce, expand, and rearrange complete simple and compound sentences (e.g., *The boy watched the movie*; *The little boy watched the movie*; *The action movie was watched by the little boy*).
2. Observe conventions of capitalization, punctuation, and spelling when writing. a. Capitalize the first word in a sentence and the pronoun *I*. b. Recognize and name end punctuation. c. Write a letter or letters for most consonant and short-vowel sounds (phonemes). d. Spell simple words phonetically, drawing on knowledge of sound-letter relationships.	**2.** Observe conventions of capitalization, punctuation, and spelling when writing. a. Capitalize dates and names of people. b. Use end punctuation for sentences. c. Use commas in dates and to separate single words in a series. d. Use conventional spelling for words with common spelling patterns and for frequently occurring irregular words. e. Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions.	**2.** Observe conventions of capitalization, punctuation, and spelling when writing. a. Capitalize holidays, product names, and geographic names. b. Use commas in greetings and closings of letters. c. Use an apostrophe to form contractions and frequently occurring possessives. d. Generalize learned spelling patterns when writing words (e.g., *cage* → *badge*; *boy* → *boil*). e. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.
Effective Language Use		
3. (Begins in grade 3)	**3.** (Begins in grade 3)	**3.** (Begins in grade 3)

Kindergartners:	Grade 1 students:	Grade 2 students:
Vocabulary Acquisition and Use		
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *kindergarten reading and content*. a. Identify new meanings for familiar words and apply them accurately (e.g., knowing *duck* as a bird and learning the verb *to duck*). b. Use the most frequently occurring inflections and affixes (e.g., *-ed*, *-s*, *re-*, *un-*, *pre-*, *-ful*, *-less*) as a clue to the meaning of an unknown word.	**4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 1 reading and content*, choosing flexibly from an array of strategies. a. Use sentence-level context as a clue to the meaning of a word or phrase. b. Use frequently occurring affixes as a clue to the meaning of a word. c. Identify frequently occurring root words (e.g., *look*) and their inflectional forms (e.g., *looks*, *looked*, *looking*).	**4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 2 reading and content*, choosing flexibly from an array of strategies. a. Use sentence-level context as a clue to the meaning of a word or phrase. b. Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., *happy/unhappy*, *tell/retell*). c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *addition*, *additional*). d. Use knowledge of the meaning of individual words to predict the meaning of compound words (e.g., *birdhouse*, *lighthouse*, *housefly*; *bookshelf*, *notebook*, *bookmark*). e. Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.
5. With guidance and support from adults, explore word relationships and nuances in word meanings. a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent. b. Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms). c. Identify real-life connections between words and their use (e.g., note places at school that are *colorful*). d. Distinguish shades of meaning among verbs describing the same general action (e.g., *walk*, *march*, *strut*, *prance*) by acting out the meanings.	**5.** With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings. a. Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent. b. Define words by category and by one or more key attributes (e.g., a *duck* is a bird that swims; a *tiger* is a large cat with stripes). c. Identify real-life connections between words and their use (e.g., note places at home that are *cozy*). d. Distinguish shades of meaning among verbs differing in manner (e.g., *look*, *peek*, *glance*, *stare*, *glare*, *scowl*) and adjectives differing in intensity (e.g., *large*, *gigantic*) by defining or choosing them or by acting out the meanings.	**5.** Demonstrate understanding of word relationships and nuances in word meanings. a. Identify real-life connections between words and their use (e.g., describe foods that *are spicy* or *juicy*). b. Distinguish shades of meaning among closely related verbs (e.g., *toss*, *throw*, *hurl*) and closely related adjectives (e.g., *thin*, *slender*, *skinny, scrawny*).
6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts.	**6.** Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., *I named my hamster Nibblet because she nibbles too much because she likes that*).	**6.** Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., *When other kids are happy that makes me happy*).

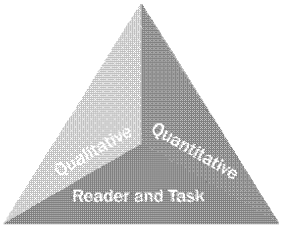
Grade 3 students:	Grade 4 students:	Grade 5 students:
Conventions		
1. Observe conventions of grammar and usage when writing or speaking. a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences. b. Form and use regular and irregular plural nouns. c. Use abstract nouns (e.g., *childhood*). d. Form and use regular and irregular verbs. e. Form and use the simple (e.g., *I walked*; *I walk*; *I will walk*) verb tenses. f. Ensure subject-verb and pronoun-antecedent agreement.* g. Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified. h. Use coordinating and subordinating conjunctions. i. Produce simple, compound, and complex sentences.	**1.** Observe conventions of grammar and usage when writing or speaking. a. Use relative pronouns (*who*, *whose*, *whom*, *which*, *that*) and relative adverbs (*where*, *when*, *why*). b. Form and use the progressive (e.g., *I was walking*; *I am walking*; *I will be walking*) verb aspects. c. Use modal auxiliaries (e.g., *can*, *may*, *must*) to convey various conditions. d. Order adjectives within sentences according to conventional patterns (e.g., *a small red bag* rather than *a red small bag*). e. Form and use prepositional phrases. f. Produce complete sentences, recognizing and correcting rhetorically poor fragments and run-ons.* g. Correctly use frequently confused words (e.g., *to*, *too*, *two*; *there*, *their*).*	**1.** Observe conventions of grammar and usage when writing or speaking. a. Explain the function of conjunctions, prepositions, and interjections in general and their function in particular sentences. b. Form and use the perfect (e.g., *I had walked*; *I have walked*; *I will have walked*) verb aspects. c. Use verb tense and aspect to convey various times, sequences, states, and conditions. d. Recognize and correct inappropriate shifts in verb tense and aspect.* e. Use correlative conjunctions.
2. Observe conventions of capitalization, punctuation, and spelling when writing. a. Capitalize important words in titles. b. Use commas in addresses. c. Use commas and quotation marks in dialogue. d. Form and use possessives. e. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., *sitting*, *smiled*, *cries*, *happiness*). f. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words. g. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.	**2.** Observe conventions of capitalization, punctuation, and spelling when writing. a. Use correct capitalization. b. Use commas and quotation marks to mark direct speech and quotations from a text. c. Use a comma before a coordinating conjunction in a compound sentence. d. Spell grade-appropriate words correctly, consulting references as needed.	**2.** Observe conventions of capitalization, punctuation, and spelling when writing. a. Use punctuation to separate items in a series.* b. Use a comma to separate an introductory element from the rest of the sentence. c. Use a comma to set off the words *yes* and *no* (e.g., *Yes, thank you*), to set off a tag question from the rest of the sentence (e.g., *It's true, isn't it?*), and to indicate direct address (e.g., *Is that you, Steve?*). d. Use underlining, quotation marks, or italics to indicate titles of works. e. Spell grade-appropriate words correctly, consulting references as needed.
Effective Language Use		
3. Use language to achieve particular effects when writing or speaking. a. Choose words and phrases for effect.*	**3.** Use language to enhance meaning and achieve particular effects when writing or speaking. a. Choose words and phrases to convey ideas precisely.* b. Use punctuation for effect.*	**3.** Use language to enhance meaning, convey style, and achieve particular effects when writing or speaking. a. Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.

Grade 3 students	Grade 4 students:	Grade 5 students:
Vocabulary Acquisition and Use		
4. Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on *grade 3 reading and content*, choosing flexibly from a range of strategies. a. Use sentence-level context as a clue to the meaning of a word or phrase. b. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., *agreeable/disagreeable*, *comfortable/uncomfortable*, *care/careless*, *heat/preheat*). c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *company*, *companion*). d. Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.	**4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 4 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *telegraph*, *photograph*, *autograph*). c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.	**4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 5 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *photograph*, *photosynthesis*). c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.
5. Demonstrate understanding of word relationships and nuances in word meanings. a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., *take steps*). b. Identify real-life connections between words and their use (e.g., describe people who are *friendly* or *helpful*). c. Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., *knew*, *believed*, *suspected*, *heard*, *wondered*).	**5.** Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Explain the meaning of simple similes and metaphors (e.g., *as pretty as a picture*) in context. b. Recognize and explain the meaning of common idioms, adages, and proverbs. c. Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms).	**5.** Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figurative language, including similes and metaphors, in context. b. Recognize and explain the meaning of common idioms, adages, and proverbs. c. Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.
6. Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific vocabulary, including words and phrases that signal spatial and temporal relationships (e.g., *After dinner that night we went looking for them*).	**6.** Acquire and use accurately grade-appropriate general academic and domain-specific vocabulary, including words and phrases that signal precise actions, emotions, or states of being (e.g., *quizzed*, *whined*, *stammered*) and words and phrases basic to a particular topic (e.g., *wildlife*, *conservation*, and *endangered* when discussing animal preservation).	**6.** Acquire and use accurately grade-appropriate general academic and domain-specific vocabulary, including words and phrases that signal contrast, addition, and other logical relationships (e.g., *however*, *although*, *nevertheless*, *similarly*, *moreover*, *in addition*).

Skill	3	4	5	6	7	8	9–10	11–12
Ensure subject-verb and pronoun-antecedent agreement.	■	■	■	■	■	■	■	■
Choose words and phrases for effect.	■	■	■	■	■	■	■	■
Produce complete sentences, recognizing and correcting rhetorically poor fragments and run-ons.		■	■	■	■	■	■	■
Correctly use frequently confused words (e.g., *to/too/two*; *there/their*).		■	■	■	■	■	■	■
Choose words and phrases to convey ideas precisely.		■	■	■				
Use punctuation for effect.		■	■	■	■	■	■	■
Recognize and correct inappropriate shifts in verb tense and aspect.			■	■	■	■	■	■
Use punctuation to separate items in a series.			■	■	■	■		
Recognize and correct inappropriate shifts in pronoun number and person.				■	■	■	■	■
Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).				■	■	■	■	■
Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.				■	■	■	■	■
Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.				■	■	■	■	■
Vary sentence patterns for meaning, reader/listener interest, and style.				■	■	■	■	
Maintain consistency in style and tone.				■	■	■	■	■
Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.					■	■	■	■
Choose language that expresses ideas precisely and concisely, eliminating wordiness and redundancy.						■	■	■
Recognize and correct inappropriate shifts in verb voice and mood.						■	■	■
Use parallel structure.							■	■

Standard 10: Range, Quality, and Complexity of Student Reading K–5

Measuring Text Complexity: Three Factors



Qualitative evaluation of the text: Levels of meaning, structure, language conventionality and clarity, and knowledge demands

Quantitative evaluation of the text: Readability measures and other scores of text complexity

Matching reader to text and task: Reader knowledge, motivation, and interests as well as the complexity generated by the tasks assigned and the questions posed

Note: More detailed information on text complexity and how it is measured is contained in Appendix A.

Range of Text Types for K–5

Students in K–5 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

Literature			Informational Text
Stories	**Dramas**	**Poetry**	**Literary Nonfiction and Historical, Scientific, and Technical Texts**
Includes children's adventure stories, folktales, legends, fables, fantasy, realistic fiction, and myth	Includes staged dialogue and brief familiar scenes	Includes nursery rhymes and the subgenres of the narrative poem, limerick, and free verse poem	Includes biographies and autobiographies; books about history, social studies, science, and the arts; technical texts, including directions, forms, and information displayed in graphs, charts, or maps; and digital sources on a range of topics

Texts Illustrating the Complexity, Quality, and Range of Student Reading K–5

* Read-aloud
** Read-along

	Literature: Stories, Drama, Poetry	Informational Texts: Literary Nonfiction and Historical, Scientific, and Technical Texts
K[1]	▪ *Over in the Meadow* by John Langstaff (traditional) (c1800)* ▪ *A Boy, a Dog, and a Frog* by Mercer Mayer (1967) ▪ *Pancakes for Breakfast* by Tomie DePaola (1978) ▪ *A Story A Story* by Gail E. Haley (1970)* ▪ *Kitten's First Full Moon* by Kevin Henkes (2004)*	▪ *My Five Senses* by Aliki (1962)* ▪ *Truck* by Donald Crews (1980) ▪ *I Read Signs* by Tana Hoban (1987) ▪ *What Do You Do With a Tail Like This?* by Steve Jenkins and Robin Page (2003)* ▪ *Amazing Whales!* by Sarah L. Thomson (2005)*
1[1]	▪ "Mix a Pancake" by Christina G. Rossetti (1893)** ▪ *Mr. Popper's Penguins* by Richard Atwater (1938)* ▪ *Little Bear* by Else Holmelund Minarik, illustrated by Maurice Sendak (1957)** ▪ *Frog and Toad Together* by Arnold Lobel (1971)** ▪ *Hi! Fly Guy* by Tedd Arnold (2006)	▪ *A Tree Is a Plant* by Clyde Robert Bulla, illustrated by Stacey Schuett (1960)** ▪ *My Five Senses* by Aliki (1962)** ▪ *Follow the Water from Brook to Ocean* by Arthur Dorros (1991)** ▪ *From Seed to Pumpkin* by Wendy Pfeffer, illustrated by James Graham Hale (2004)* ▪ *How People Learned to Fly* by Fran Hodgkins and True Kelley (2007)*
2–3	▪ "Who Has Seen the Wind?" by Christina G. Rossetti (1893) ▪ *Charlotte's Web* by E. B. White (1952)* ▪ *Sarah, Plain and Tall* by Patricia MacLachlan (1985) ▪ *Tops and Bottoms* by Janet Stevens (1995) ▪ *Poppleton in Winter* by Cynthia Rylant, illustrated by Mark Teague (2001)	▪ *A Medieval Feast* by Aliki (1983) ▪ *From Seed to Plant* by Gail Gibbons (1991) ▪ *The Story of Ruby Bridges* by Robert Coles (1995)* ▪ *A Drop of Water: A Book of Science and Wonder* by Walter Wick (1997) ▪ *Moonshot: The Flight of Apollo 11* by Brian Floca (2009)
4–5	• *Alice's Adventures in Wonderland* by Lewis Carroll (1865) • "Casey at the Bat" by Ernest Lawrence Thayer (1888) • *The Black Stallion* by Walter Farley (1941) • "Zlateh the Goat" by Isaac Bashevis Singer (1984) ▪ *Bud, Not Buddy* by Christopher Paul Curtis (1999) ▪ *The Birchbark House* by Louise Erdrich (1999) ▪ *Where the Mountain Meets the Moon* by Grace Lin (2009)	▪ *Discovering Mars* by Melvin Berger (1992) ▪ *Hurricanes: Earth's Mightiest Storms* by Patricia Lauber (1996) ▪ *A History of US* by Joy Hakim (2005) ▪ *Horses* by Seymour Simon (2006) ▪ *Quest for the Tree Kangaroo: An Expedition to the Cloud Forest of New Guinea* by Sy Montgomery (2006)

Note: Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a wide range of topics and genres. (See Appendix B for excerpts of these and other texts illustrative of K–5 text complexity, quality, and range.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes that generate knowledge and allow students to study those topics or themes in depth. On the next page is an example of progressions of texts building knowledge across grade levels.

[1]Children at the kindergarten and grade 1 levels should be expected to read texts independently that have been specifically written to correlate to their reading level and their word knowledge. Many of the titles listed above are meant to supplement carefully structured independent reading with books to read along with a teacher or that are read aloud to students to build knowledge and cultivate a joy in reading.

Staying on Topic Within a Grade and Across Grades: How to Build Knowledge Systematically in English Language Arts K–5

Building knowledge systematically in English language arts is like giving children various pieces of a puzzle in each grade that, over time, will form one big picture. At a curricular or instructional level, texts—within and across grade levels—need to be selected around topics or themes that systematically develop the knowledge base of students. Within a grade level, there should be an adequate number of titles on a single topic that would allow children to study that topic for a sustained period. The knowledge children have learned about particular topics in early grade levels should then be expanded and developed in subsequent grade levels to ensure an increasingly deeper understanding of these topics. Children in the upper elementary grades will generally be expected to read these texts independently and reflect on them in writing. However, children in the early grades (particularly K–2) should participate in rich, structured conversations with an adult in response to the written texts that are read aloud, *orally* comparing and contrasting as well as analyzing and synthesizing, in the manner called for by the *Standards*.

Preparation for reading complex informational texts should begin at the very earliest elementary school grades. What follows is one example that uses domain-specific nonfiction titles across grade levels to illustrate how curriculum designers and classroom teachers can infuse the English language arts block with rich, age-appropriate content knowledge and vocabulary in history/social studies, science, and the arts. Having students listen to informational read-alouds in the early grades helps lay the necessary foundation for students' reading and understanding of increasingly complex texts on their own in subsequent grades.

Exemplar Texts on a Topic Across Grades	K	1	2–3	4–5
The Human Body Students can begin learning about the human body starting in kindergarten and then review and extend their learning during each subsequent grade.	The five senses and associated body parts ▪ *My Five Senses* by Aliki (1989) ▪ *Hearing* by Maria Rius (1985) ▪ *Sight* by Maria Rius (1985) ▪ *Smell* by Maria Rius (1985) ▪ *Taste* by Maria Rius (1985) ▪ *Touch* by Maria Rius (1985) Taking care of your body: Overview (hygiene, diet, exercise, rest) ▪ *My Amazing Body: A First Look at Health & Fitness* by Pat Thomas (2001) ▪ *Get Up and Go!* by Nancy Carlson (2008) ▪ *Go Wash Up* by Doering Tourville (2008) ▪ *Sleep* by Paul Showers (1997) ▪ *Fuel the Body* by Doering Tourville (2008)	Introduction to the systems of the human body and associated body parts ▪ *Under Your Skin: Your Amazing Body* by Mick Manning (2007) ▪ *Me and My Amazing Body* by Joan Sweeney (1999) ▪ *The Human Body* by Gallimard Jeunesse (2007) ▪ *The Busy Body Book* by Lizzy Rockwell (2008) ▪ *First Encyclopedia of the Human Body* by Fiona Chandler (2004) Taking care of your body: Germs, diseases, and preventing illness ▪ *Germs Make Me Sick* by Marilyn Berger (1995) ▪ *Tiny Life on Your Body* by Christine Taylor-Butler (2005) ▪ *Germ Stories* by Arthur Kornberg (2007) ▪ *All About Scabs* by GenichiroYagu (1998)	Digestive and excretory systems ▪ *What Happens to a Hamburger* by Paul Showers (1985) ▪ *The Digestive System* by Christine Taylor-Butler (2008) ▪ *The Digestive System* by Rebecca L. Johnson (2006) ▪ *The Digestive System* by Kristin Petrie (2007) Taking care of your body: healthy eating and nutrition ▪ *Good Enough to Eat* by Lizzy Rockwell (1999) ▪ *Showdown at the Food Pyramid* by Rex Barron (2004) Muscular, skeletal, and nervous systems ▪ *The Mighty Muscular and Skeletal Systems* Crabtree Publishing (2009) ▪ *Muscles* by Seymour Simon (1998) ▪ *Bones* by Seymour Simon (1998) ▪ *The Astounding Nervous System* Crabtree Publishing (2009) ▪ *The Nervous System* by Joelle Riley (2004)	Circulatory system ▪ *The Heart* by Seymour Simon (2006) ▪ *The Heart and Circulation* by Carol Ballard (2005) ▪ *The Circulatory System* by Kristin Petrie (2007) ▪ *The Amazing Circulatory System* by John Burstein (2009) Respiratory system ▪ *The Lungs* by Seymour Simon (2007) ▪ *The Respiratory System* by Susan Glass (2004) ▪ *The Respiratory System* by Kristin Petrie (2007) ▪ *The Remarkable Respiratory System* by John Burstein (2009) Endocrine system ▪ *The Endocrine System* by Rebecca Olien (2006) ▪ *The Exciting Endocrine System* by John Burstein (2009)

Standards for English Language Arts

6–12

College and Career Readiness Anchor Standards for Reading

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They relate to their College and Career Readiness (CCR) counterparts by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented graphically, visually, orally, and multimodally as well as in words within and across print and digital sources. *
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

*Please see "Research to Build Knowledge" in Writing and "Comprehension and Collaboration" in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

Note on range and content of student reading

To become college and career ready, students must grapple with works of exceptional craft and thought whose range extends across genres, cultures, and centuries. Such works offer profound insights into the human condition and serve as models for students' own thinking and writing. Along with high-quality contemporary works, these texts should be chosen from among seminal U.S. documents, the classics of American literature, and the timeless dramas of Shakespeare. Through wide and deep reading of literature and literary nonfiction of steadily increasing sophistication, students gain a reservoir of literary and cultural knowledge, references, and images; the ability to evaluate intricate arguments; and the capacity to surmount the challenges posed by complex texts.

Reading Standards for Literature 6–12 [RL]

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Key Ideas and Details		
1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a theme or central idea of a text and analyze its development over the course of the text; summarize the text.	**2.** Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; summarize the text.	**2.** Determine a theme or central idea of a text and analyze its development over the course of the text, including how it is conveyed through particular details; provide an accurate summary of the text distinct from personal opinions or judgments.
3. Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.	**3.** Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).	**3.** Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.
Craft and Structure		
4. Determine the meaning of words and phrases as they are used in a text, including figures of speech and the connotations (associations) of particular words and phrases; analyze the impact of a specific word choice on meaning and tone.	**4.** Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama.	4. Determine the meaning of words and phrases as they are used in a text, including analogies or allusions to other texts; analyze the impact of specific word choices on meaning and tone.
5. Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.	**5.** Analyze how a drama's or poem's form or structure (e.g. sonnet, soliloquy) contributes to its meaning.	**5.** Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.
6. Explain how an author establishes and develops the point of view of the narrator or speaker in a text.	**6.** Analyze how an author establishes and contrasts the points of view of different characters or narrators in a text.	**6.** Explain how differences in the point of view of characters and the audience or reader (e.g., created through the use of dramatic irony) creates such effects as suspense or humor.
Integration of Knowledge and Ideas		
7. Compare and contrast the experience of reading a story, poem, or dram to listening to or viewing an audio, video, or live version of the text, including contrasting what they "see" and "hear" when reading the text to what they perceive when they listen or watch.	**7.** Compare and contrast a story, poem, or drama to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, camera focus and angles).	**7.** Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.
8. (Not applicable to literature)	**8.** (Not applicable to literature)	**8.** (Not applicable to literature)

Grade 6 students:	Grade 7 students:	Grade 8 students:
Integration of Knowledge and Ideas		
9. Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.	**9.** Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.	**9.** Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.
Range of Reading and Level of Text Complexity		
10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	**10.** By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as necessary at the high end of the range.	**10.** By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band independently and proficiently.

Grades 9–10 students:	Grades 11–12 students:
Key Ideas and Details	
1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
2. Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.	**2.** Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.
3. Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.	**3.** Evaluate various explanations for characters' actions or for events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.
Craft and Structure	
4. Determine the meaning of words and phrases as they are used in the text and analyze the cumulative impact of several word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).	**4.** Determine the meaning of words and phrases as they are used in the text and analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)
5. Analyze how an author's choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashbacks) create such effects as mystery, tension, or surprise.	**5.** Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice at what point to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.
6. Analyze a case in which grasping point of view requires distinguishing what is directly stated from what is implied (e.g., through the use of satire, sarcasm, irony, or understatement).	**6.** Analyze differences and similarities in points of view or cultural experience as reflected in various works from different countries, drawing on a wide reading of world literature.
Integration of Knowledge and Ideas	
7. Analyze the representation of a subject or a key scene in two different artistic mediums, including what is emphasized or absent in each treatment (e.g., Auden's "Musée de Beaux Arts" and Breughel's *Landscape with the Fall of Icarus*).	**7.** Analyze multiple interpretations of a story or drama (e.g., recorded or live production of a play or novel), evaluating how each version interprets the source text. (Include at least one play by Shakespeare as well as one play by an American dramatist.)
8. (Not applicable to literature)	**8.** (Not applicable to literature)
9. Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, drawing on how two or more texts from the same period treat similar themes or topics.	**9.** Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare draws on Ovid or the Bible or how a later author draws on a play by Shakespeare) in order to evaluate how the texts treat similar themes or topics.
Range of Reading and Level of Text Complexity	
10. By the end of grade 9, read and comprehend literature, including stories, dramas, and poems, in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literature, including stories, dramas, and poems, in the grades 9–10 text complexity band independently and proficiently.	**10.** By the end of grade 11, read and comprehend literature, including stories, dramas, and poems, in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, in the grades 11–CCR text complexity band independently and proficiently.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Key Ideas and Details		
1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a central idea of a text and analyze its development over the course of the text; summarize the text.	**2.** Determine two or more central ideas in a text and analyze their development over the course of the text and their relationship to one another; summarize the text.	**2.** Determine a central idea of a text and analyze its development over the course of the text, including how it is conveyed through particular details; provide an accurate summary of the text distinct from personal opinions or judgments.
3. Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).	**3.** Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).	**3.** Analyze how a text makes connections among and distinctions between key individuals, ideas, or events (e.g., through comparisons, analogies, or categories).
Craft and Structure		
4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.	**4.** Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.	**4.** Determine the meaning of words and phrases as they are used in a text, including analogies or allusions to other texts; analyze the impact of specific word choices on meaning and tone.
5. Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.	**5.** Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.	**5.** Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.
6. Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.	**6.** Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her point of view from that of others.	**6.** Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.
Integration of Knowledge and Ideas		
7. Integrate information presented in different formats (e.g., print or digital text, video, multimedia) to develop a coherent understanding of a topic or issue.	**7.** Compare and contrast the experience of reading a text to listening to or viewing a video or multimedia presentation of the text, analyzing the text's portrayal in each medium (e.g., how the delivery of a speech affects the impact of its words).	**7.** Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.
8. Delineate and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.	**8.** Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is sufficient to support the claims.	**8.** Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient and identifying when irrelevant evidence is introduced.
9. Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).	**9.** Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.	**9.** Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Range of Reading and Level of Text Complexity		
10. By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	**10.** By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	**10.** By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band independently and proficiently.

Grades 9–10 students:	Grades 11–12 students:
Key Ideas and Details	
1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
2. Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.	**2.** Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.
3. Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.	**3.** Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.
Craft and Structure	
4. Determine the meaning of words and phrases as they are used in a text and analyze the cumulative impact of several word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).	**4.** Determine the meaning of words and phrases as they are used in a text and analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).
5. Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).	**5.** Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.
6. Analyze documents of historical and literary significance, including seminal U.S. documents (e.g., the Declaration of Independence, the Preamble to the Constitution, the Bill of Rights), for their premises and purposes.	**6.** Analyze how various authors express different points of view on similar events or issues, assessing the authors' assumptions, use of evidence, and reasoning, including analyzing seminal U.S. documents (e.g., *The Federalist*, landmark U.S. Supreme Court majority opinions and dissents).
Integration of Knowledge and Ideas	
7. Evaluate the accounts of a subject in different mediums (e.g., a person's life story told in print or digital text, film, or multimedia), analyzing each version for which details are emphasized and how the account unfolds.	**7.** Integrate and evaluate multiple sources of information presented in different formats (e.g., print or digital text, video, multimedia) in order to address a question or solve a problem, resolving conflicting information when possible.
8. Delineate and evaluate the argument and claims in a text, assessing the relevance and sufficiency of the evidence and the validity of the reasoning and identifying false statements and fallacious reasoning.	**8.** Delineate and evaluate the argument and claims in a text, assessing the relevance and sufficiency of the evidence and the validity of the reasoning, identifying and evaluating stated and unstated premises and assumptions.
9. Analyze a case in which authors disagree with or otherwise respond to one another's ideas or accounts of events, evaluating the strength of each author's evidence, reasoning, and interpretation.	**9.** Synthesize information, explanations, and arguments from a range of sources to provide a coherent account of events or ideas, resolving conflicting information when possible.
Range of Reading and Level of Text Complexity	
10. By the end of grade 9, read and comprehend literary nonfiction in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literary nonfiction in the grades 9–10 text complexity band independently and proficiently.	**10.** By the end of grade 11, read and comprehend literary nonfiction in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literary nonfiction in the grades 11–CCR text complexity band independently and proficiently.

College and Career Readiness Anchor Standards for Writing

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They relate to their College and Career Readiness (CCR) counterparts by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes[1]

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.[2]
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

[1]These broad types of writing include many subgenres. See Appendix A for definitions of key writing types.
[2]See standards 1–3 in Language, pages xxxxxxx, for specific editing expectations.

Note on range and content of student writing

For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college- and career-ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to know how to combine elements of different kinds of writing—for example, to use narrative strategies within argument and explanation within narrative—to produce complex and nuanced writing. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline as well as the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it.

Writing Standards 6–12 [W]

The following standards for grades 6–12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples in Appendix C.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Text Types and Purposes		
1. Write arguments to support claims with clear reasons and relevant evidence. a. Introduce claim(s) and organize the reasons and evidence clearly. b. Support claim(s) with clear reasons and relevant evidence, demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from the argument presented.	**1.** Write arguments to support claims with clear reasons and relevant evidence. a. Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically. b. Support claim(s) with logical reasoning and relevant evidence, demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from and supports the argument presented.	**1.** Write arguments to support claims with clear reasons and relevant evidence. a. Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically. b. Support claim(s) with logical reasoning and relevant evidence, using credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from and supports the argument presented.
2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. a. Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate transitions to clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from the information or explanation presented.	**2.** Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from and supports the information or explanation presented.	**2.** Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from and supports the information or explanation presented.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Text Types and Purposes (continued)		
3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences. a. Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. d. Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events. e. Provide a conclusion that follows from the narrated experiences or events.	**3.** Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences. a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events. e. Provide a conclusion that follows from and reflects on the narrated experiences or events.	**3.** Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences. a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events. d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events. e. Provide a conclusion that follows from and reflects on the narrated experiences or events.
Production and Distribution of Writing		
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	**4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	**4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.	**5.** With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.	**5.** With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.
6. Use technology, including the Internet, to produce and publish a minimum of three pages of writing as well as to interact and collaborate with others.	**6.** Use technology, including the Internet, to produce and publish a minimum of four pages of writing as well as to interact and collaborate with others.	**6.** Use technology, including the Internet, to produce and publish a minimum of five pages of writing as well as to interact and collaborate with others.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Research to Build and Present Knowledge		
7. Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.	**7.** Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.	**7.** Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
8. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.	**8.** Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	**8.** Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grade 6 Reading standards* to literature (e.g., "Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics."). b. Apply *grade 6 Reading standards* to literary nonfiction (e.g., "Delineate and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not").	**9.** Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grade 7 Reading standards* to literature (e.g., "Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history]). b. Apply *grade 7 Reading standards* to literary nonfiction (e.g., "Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is sufficient to support the claims").	**9.** Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grade 8 Reading standards* to literature (e.g., "Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new"). b. Apply *grade 8 Reading standards* to literary nonfiction (e.g., "Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient and identifying when irrelevant evidence is introduced").
Range of Writing		
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Grades 9–10 students:	Grades 11–12 students:
Text Types and Purposes	
1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level and concerns. c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented.	**1.** Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented.
2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content. a. Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. d. Use precise language and domain-specific vocabulary to manage the complexity of the topic. e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	**2.** Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content. a. Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic. e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).

Grades 9–10 students:	Grades 11–12 students:
Text Types and Purposes (continued)	
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences. a. Engage and orient the reader by setting out a problem, situation, or observation, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events. b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters. c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole. d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters. e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.	**3.** Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences. a. Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events. b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters. c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution). d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters. e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.
Production and Distribution of Writing	
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	**4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	**5.** Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.	**6.** Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
Research to Build and Present Knowledge	
7. Conduct short as well as more sustained research projects to answer a question (including a self-generate question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	**7.** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	**8.** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

Grades 9–10 students:	Grades 11–12 students:
Research to Build and Present Knowledge (continued)	
9. Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grades 9–10 Reading standards* to literature (e.g., "Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, drawing on how two or more texts from the same period treat similar themes or topics"). b. Apply *grades 9–10 Reading standards* to literary nonfiction (e.g., "Delineate and evaluate the argument and claims in a text, assessing the relevance and sufficiency of the evidence and the validity of the reasoning and identifying false statements and fallacious reasoning").	**9.** Draw evidence form literary or informational texts to support analysis, reflection, and research. a. Apply *grades 11–12 Reading standards* to literature (e.g., "Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare draws on Ovid or the Bible or how a later author draws on a play by Shakespeare) in order to evaluate how the texts treat similar themes or topics"). b. Apply *grades 11–12 Reading standards* to literary nonfiction (e.g., "Delineate and evaluate the argument and claims in a text, assessing the relevance and sufficiency of the evidence and the validity of the reasoning, identifying and evaluating stated and unstated premises and assumptions").
Range of Writing	
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

College and Career Readiness Anchor Standards for Speaking and Listening

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They relate to their College and Career Readiness (CCR) counterparts by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate content from multiple graphical, visual, oral, or multimodal sources.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Note on range and content of student speaking and listening

To become college and career ready, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small groups, and with a partner—built around important content in various domains. They must be able to contribute appropriately to these conversations, to make comparisons and contrasts, and to analyze and synthesize a multitude of ideas in accordance with the standards of evidence appropriate to a particular discipline. Whatever their intended major or profession, high school graduates will depend heavily on their ability to listen attentively to others so that they are able to build on others' meritorious ideas while expressing their own clearly and persuasively.

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. The Internet has accelerated the speed at which connections between speaking, listening, reading, and writing can be made, requiring that students be ready to use these modalities nearly simultaneously. Technology itself is changing quickly, creating a new urgency for students to be adaptable in response to change.

Speaking and Listening Standards 6–12 [SL]

The following standards for grades 6–12 offer a focus for instruction in each year to help ensure that students gain adequate mastery of a range of skills and applications. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Comprehension and Collaboration		
1. Engage effectively in a range of collaborative discussions (one-on-one and in groups) on *grade 6 topics, texts, and issues*, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. With guidance and support from adults, work with peers to set rules for collegial discussions, clear goals and deadlines, and individual roles as needed. c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion. d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.	**1.** Engage effectively in a range of collaborative discussions (one-on-one and in groups) on *grade 7 topics, texts, and issues*, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Work with peers to set rules for collegial discussions, clear goals and deadlines, and individual roles as needed. c. Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed. d. Acknowledge new information expressed by others and, when warranted, modify their own views and understanding.	**1.** Engage effectively in a range of collaborative discussions (one-on-one and in groups) on *grade 8 topics, texts, and issues*, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Work with peers to set rules for collegial discussions, clear goals and deadlines, and individual roles as needed. c. Pose questions that connect the ideas of several speakers and elicit elaboration, and respond to others' questions and comments with relevant evidence, observations, and ideas. d. Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views and understanding in light of the evidence presented.
2. Interpret information presented in graphical, oral, visual or multimodal formats and explain how it contributes to a topic, text, or issue under study.	**2.** Analyze the main ideas and supporting details presented in graphical, oral, visual, or multimodal formats and explain how the ideas clarify a topic, text, or issue under study.	**2.** Determine the purpose of information in graphical, oral, visual, or multimodal formats and evaluate the motives (e.g., social, commercial, political) behind its presentation.
3. Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.	**3.** Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance of the evidence.	**3.** Delineate a speaker's argument and specific claims, evaluating the validity of the reasoning and sufficiency of the evidence.
Presentation of Knowledge and Ideas		
4. Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.	**4.** Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.	**4.** Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.
5. Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.	**5.** Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.	**5.** Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.
6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See standards 1–3 in Language, pages xxx, for specific expectations.)	**6.** Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See standards 1–3 in Language, pages xxx, for specific expectations.)	**6.** Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See standards 1–3 in Language, pages xxx, for specific expectations.)

Grades 9–10 students:	Grades 11–12 students:
Comprehension and Collaboration	
1. Initiate and participate effectively in a range of collaborative discussions (one-on-one and in groups) on *grades 9–10 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively. a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. b. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed. c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions. d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.	**1.** Initiate and participate effectively in a range of collaborative discussions (one-on-one and in groups) on *grades 11–12 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively. a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed. c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives. d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.
2. Synthesize information from multiple graphical, visual, or multimodal sources with other information presented orally, noting any discrepancies among the data.	**2.** Integrate information from multiple graphical, oral, visual, or multimodal sources in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and resolving conflicting information when possible.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.	**3.** Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.
Presentation of Knowledge and Ideas	
4. Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.	**4.** Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range or formal and informal tasks.
5. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.	**5.** Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See standards 1–3 in Language, pages xx, for specific expectations.)	**6.** Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See standards 1–3 in Language, pages xx, for specific expectations.)

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They relate to their College and Career Readiness (CCR) counterparts by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Conventions

1. Demonstrate command of the conventions of standard English grammar and usage.
2. Demonstrate command of the conventions of capitalization, punctuation, and spelling.

Effective Language Use

3. Use language to enhance meaning, convey style, and achieve particular effects when writing and speaking.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of word relationships and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific vocabulary sufficient for reading, writing, speaking, and listening at the college and career readiness level.

Note on range and content of student language use

To be college and career ready in language, students must have firm control over the conventions of grammar, usage, and mechanics. At the same time, they must come to appreciate that language is as at least as much a matter of craft as of rules and be able to use words, syntax, and punctuation to achieve particular rhetorical effects. They must also have extensive vocabularies, built through reading and study, enabling them to comprehend complex texts and engage in purposeful writing about and conversations around content. They need to become skilled in determining or clarifying the meaning of words and phrases they encounter, choosing flexibly from an array of strategies to aid them. They must learn to see an individual word as part of a network of other words—words, for example, that have similar denotations but different connotations. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions, effective language use, and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.

Language Standards 6–12 [L]

The following standards for grades 6–12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. Beginning in grade 3, skills and understandings that are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking are marked with an asterisk (*). See the chart on page xx for a complete listing and Appendix A for an example of how these skills develop in sophistication.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Conventions		
1. Observe conventions of grammar and usage when writing or speaking. a. Ensure that pronouns are in the proper case (subjective, objective, possessive). b. Use intensive pronouns (e.g., *myself*, *ourselves*). c. Recognize and correct inappropriate shifts in pronoun number and person.* d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).* e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.*	**1.** Observe conventions of grammar and usage when writing or speaking. a. Explain the function of phrases and clauses in general and their function in specific sentences. b. Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas. c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.*	**1.** Observe conventions of grammar and usage when writing or speaking. a. Explain the function of verbals (gerunds, participles, infinitives) in general and their function in particular sentences. b. Form and use verbs in the active and passive voice. c. Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood. d. Recognize and correct inappropriate shifts in verb voice and mood.*
2. Observe conventions of capitalization, punctuation, and spelling when writing. a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.* b. Spell correctly.	**2.** Observe conventions of capitalization, punctuation, and spelling when writing. a. Use a comma to separate coordinate adjectives (e.g., *It was a fascinating, enjoyable movie* but not *He wore an old[,] green shirt*). b. Spell correctly.	**2.** Observe conventions of capitalization, punctuation, and spelling when writing. a. Use punctuation (comma, ellipsis, dash) to indicate a pause or break. b. Use an ellipsis to indicate an omission. c. Spell correctly.
Effective Language Use		
3. Use language to enhance meaning, convey style, and achieve particular effects when writing or speaking. a. Vary sentence patterns for meaning, reader/listener interest, and style.* b. Maintain consistency in style and tone.*	**3.** Use language to enhance meaning, convey style, and achieve particular effects when writing or speaking. a. Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.*	**3.** Use language to enhance meaning, convey style, and achieve particular effects when writing or speaking. a. Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).

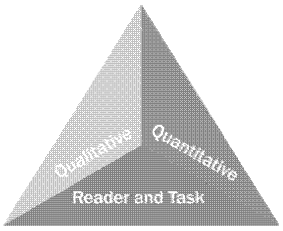
Grade 6 students:	Grade 7 students:	Grade 8 students:
Vocabulary Acquisition and Use		
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 6 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *audience*, *auditory*, *audible*). c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).	**4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 7 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *belligerent*, *bellicose*, *rebel*). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).	**4.** Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on *grade 8 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *precede*, *recede*, *secede*). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g., personification) in context. b. Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words. c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *stingy*, *scrimping*, *economical*, *unwasteful*, *thrifty*).	**5.** Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g., literary, biblical, and mythological allusions) in context. b. Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words. c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *refined*, *respectful*, *polite*, *diplomatic*, *condescending*).	**5.** Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g. verbal irony, puns) in context. b. Use the relationship between particular words to better understand each of the words. c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *bullheaded*, *willful*, *firm*, *persistent*, *resolute*).
6. Acquire and use accurately grade-appropriate general academic and domain-specific vocabulary.	**6.** Acquire and use accurately grade-appropriate general academic and domain-specific vocabulary.	**6.** Acquire and use accurately grade-appropriate general academic and domain-specific vocabulary.

Grades 9–10 students:	Grades 11–12 students:
Conventions	
1. Observe conventions of grammar and usage when writing or speaking. a. Use parallel structure.* b. Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to add variety and interest to writing or presentations.	**1.** Observe conventions of grammar and usage when writing or speaking. a. Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested. b. Resolve issues of complex or contested usage, consulting references (e.g., *Merriam-Webster's Dictionary of English Usage*, *Garner's Modern American English*) as needed.
2. Observe conventions of capitalization, punctuation, and spelling when writing. a. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses. b. Use a colon to introduce a list or quotation. c. Spell correctly.	**2.** Observe conventions of capitalization, punctuation, and spelling when writing. a. Observe hyphenation conventions. b. Spell correctly.
Effective Language Use	
3. Use language to enhance meaning, convey style, and achieve particular effects when writing or speaking. a. Write and edit work so that it conforms to the guidelines in a style manual (e.g., *MLA Handbook*, Turabian's *Manual for Writers*) appropriate for the discipline and writing type.	**3.** Use language to enhance meaning, convey style, and achieve particular effects when writing or speaking. a. Vary syntax for effect, consulting references (e.g., Tufte's *Artful Sentences*) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.
Vocabulary Acquisition and Use	
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 9–10 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., *analyze*, *analysis*, *analytical*; *advocate*, *advocacy*). b. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology. c. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).	**4.** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 11–12 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., *conceive, conception, conceivable*). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g., satire, sarcasm) in context and analyze their role in the text. b. Analyze nuances in the meaning of words with similar denotations.	**5.** Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text. b. Analyze nuances in the meaning of words with similar denotations.
6. Acquire and use accurately general academic and domain-specific vocabulary sufficient for reading, writing, speaking, and listening at the college and career readiness level.	**6.** Acquire and use accurately general academic and domain-specific vocabulary sufficient for reading, writing, speaking, and listening at the college and career readiness level.

Progressive Language Skills, by Grade								
Skill	3	4	5	6	7	8	9–10	11–12
Ensure subject-verb and pronoun-antecedent agreement.	■	■	■	■	■	■	■	■
Choose words and phrases for effect.	■	■	■	■	■	■	■	■
Produce complete sentences, recognizing and correcting rhetorically poor fragments and run-ons.		■	■	■	■	■	■	■
Correctly use frequently confused words (e.g., *to/too/two*; *there/their*).		■	■	■	■	■	■	■
Choose words and phrases to convey ideas precisely.		■	■	■				
Use punctuation for effect.		■	■	■	■	■	■	■
Recognize and correct inappropriate shifts in verb tense and aspect.			■	■	■	■	■	■
Use punctuation to separate items in a series.			■	■	■	■		
Recognize and correct inappropriate shifts in pronoun number and person.				■	■	■	■	■
Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).				■	■	■	■	■
Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.				■	■	■	■	■
Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.				■	■	■	■	■
Vary sentence patterns for meaning, reader/listener interest, and style.				■	■	■	■	
Maintain consistency in style and tone.				■	■	■	■	■
Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.					■	■	■	■
Choose language that expresses ideas precisely and concisely, eliminating wordiness and redundancy.						■	■	■
Recognize and correct inappropriate shifts in verb voice and mood.						■	■	■
Use parallel structure.							■	■

Standard 10: Range, Quality, and Complexity of Student Reading 6–12

Measuring Text Complexity: Three Factors



Qualitative evaluation of the text: Levels of meaning, structure, language conventionality and clarity, and knowledge demands

Quantitative evaluation of the text: Readability measures and other scores of text complexity

Matching reader to text and task: Reader knowledge, motivation, and interests as well as the complexity generated by the tasks assigned and the questions posed

Note: More detailed information on text complexity and how it is measured is contained in Appendix A.

Range of Text Types for 6–12

Students in grades 6–12 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

Literature			Informational Text
Stories	**Drama**	**Poetry**	**Literary Nonfiction**
Includes the subgenres of adventure stories, historical fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, and graphic novels	Includes one-act and multiact plays, both in written form and on film	Includes the subgenres of narrative poems, lyrical poems, free verse poems, sonnets, odes, ballads, and epics	Includes the subgenres of exposition, argument, and functional text in the form of personal essays, speeches, opinion pieces, essays about art or literature, biographies, memoirs, journalism, and historical, scientific, or economic accounts (including digital sources) written for a broad audience

Texts Illustrating the Complexity, Quality, and Range of Student Reading 6–12

	Literature: Stories, Dramas, Poetry	Informational Texts: Literary Nonfiction
6–8	▪ *Little Women* by Louisa May Alcott (1869) ▪ *The Adventures of Tom Sawyer* by Mark Twain (1876) ▪ "The Road Not Taken" by Robert Frost (1915) ▪ *The Dark Is Rising* by Susan Cooper (1973) ▪ *Dragonwings* by Laurence Yep (1975) ▪ *Roll of Thunder, Hear My Cry* by Mildred Taylor (1976)	▪ "Letter on Thomas Jefferson" by John Adams (1776) ▪ *Narrative of the Life of Frederick Douglass, an American Slave* by Frederick Douglass (1845) ▪ *Harriet Tubman: Conductor on the Underground Railroad* by Ann Petry (1955) ▪ *Travels with Charley: In Search of America* by John Steinbeck (1962) ▪ *The Great Fire* by Jim Murphy (1995) ▪ *This Land Was Made for You and Me: The Life and Songs of Woody Guthrie* by Elizabeth Partridge (2002)
9–10	▪ *The Tragedy of Romeo and Juliet* by William Shakespeare (1592) ▪ "Ozymandias" by Percy Bysshe Shelley (1817) ▪ "The Raven" by Edgar Allen Poe (1845) ▪ "The Gift of the Magi" by O. Henry (1906) ▪ *The Grapes of Wrath* by John Steinbeck (1939) ▪ *Fahrenheit 451* by Ray Bradbury (1953) ▪ *The Killer Angels* by Michael Shaara (1975)	▪ "Speech to the Second Virginia Convention" by Patrick Henry (1775) ▪ The Declaration of Independence by Thomas Jefferson (1776) ▪ "Second Inaugural Address" by Abraham Lincoln (1865) ▪ "State of the Union Address" by Franklin Delano Roosevelt (1941) ▪ *Cod: A Biography of the Fish That Changed the World* by Mark Kurlansky (1997) ▪ *The Race to Save Lord God Bird* by Phillip Hoose (2004)
11–CCR	▪ "Ode on a Grecian Urn" by John Keats (1820) ▪ *Jane Eyre* by Charlotte Brontë (1848) ▪ "Because I Could Not Stop for Death" by Emily Dickinson (1890) ▪ *The Great Gatsby* by F. Scott Fitzgerald (1925) ▪ *Their Eyes Were Watching God* by Zora Neale Hurston (1937) ▪ *A Raisin in the Sun* by Lorraine Hansberry (1959) ▪ *The Namesake* by Jhumpa Lahiri (2003)	▪ *The Crisis* by Thomas Paine (1776) ▪ *Walden* by Henry David Thoreau (1854) ▪ "Society and Solitude" by Ralph Waldo Emerson (1857) ▪ "Gettysburg Address" by Abraham Lincoln (1863) ▪ "Letter from Birmingham Jail" by Martin Luther King, Jr. (1964) ▪ *Google Hacks: Tips & Tools for Smarter Searching* by Tara Calishain and Rael Dornfest (2004) ▪ *America's Constitution: A Biography* by Akhil Reed Amar (2005)

Note: Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a range of topics and genres. (See Appendix B for excerpts of these and other texts illustrative of grades 6–12 text complexity, quality, and range.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes that generate knowledge and allow students to study those topics or themes in depth.

Standards for Literacy in History/Social Studies, Science, and Technical Subjects

6–12

College and Career Readiness Anchor Standards for Reading

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They relate to their College and Career Readiness (CCR) counterparts by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, or ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented graphically, visually, orally, and multimodally as well as in words within and across print and digital sources.*
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

*Please see "Research to Build and Present Knowledge" in Writing for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

Note on range and content of student reading

Reading is critical to building knowledge in history/social studies as well as in science and technical subjects. College- and career-ready reading in these fields requires an appreciation of the norms and conventions of each discipline, such as the kinds of evidence used in history and science; an understanding of domain-specific words and phrases; an attention to precise details; and the capacity to evaluate intricate arguments, synthesize complex information, and follow detailed descriptions of events and concepts. In history/social studies, for example, students need to be able to analyze, evaluate, and differentiate primary and secondary sources. When reading scientific and technical texts, students need to be able to gain knowledge from challenging texts that often make extensive use of elaborate diagrams and data to convey information and illustrate concepts. Students must be able to read complex informational texts in these fields with independence and confidence because the vast majority of reading in college and workforce training programs will be sophisticated nonfiction. It is important to note that these Reading standards are meant to complement the specific content demands of the disciplines, not replace them.

Reading Standards for Literacy in History/Social Studies 6–12 [RH]

The standards below begin at grade 6; standards for K–5 reading in history/social studies, science, and technical subjects are integrated into the K–5 Reading standards.

Grades 6–8 students:	Grades 9–10 students:	Grades 11–12 students:
Key Ideas and Details		
1. Cite specific textual evidence to support analysis of primary and secondary sources.	**1.** Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.	**1.** Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.	**2.** Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.	**2.** Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
3. Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).	**3.** Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.	**3.** Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.
Craft and Structure		
4. Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.	**4.** Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social science.	**4.** Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).
5. Describe how a text presents information (e.g., sequentially, comparatively, causally).	**5.** Analyze how a text uses structure to emphasize key points or advance a point of view.	**5.** Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
6. Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).	**6.** Compare the point of view of two or more authors by comparing how they treat the same or similar history/social science topics, including which details they include and emphasize in their respective accounts.	**6.** Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.
Integration of Knowledge and Ideas		
7. Integrate visual information (e.g., pictures, videos, maps) with other information within or across print or digital texts.	**7.** Integrate quantitative or technical information (e.g., charts, research data) with other information within or across print or digital texts.	**7.** Integrate and evaluate multiple sources of information presented in different formats (e.g., print or digital text, video, multimedia) in order to address a question, resolving conflicting information when possible.
8. Distinguish among fact, opinion, and reasoned judgment in a text.	**8.** Assess the extent to which the evidence in a text supports the author's claims.	**8.** Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other sources of information.
9. Analyze the relationship between a primary and secondary source on the same topic.	**9.** Compare and contrast treatments of the same topic in several primary and secondary sources.	**9.** Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.
Range of Reading and Level of Text Complexity		
10. By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently.	**10.** By the end of grade 10, read and comprehend history/social studies texts in the grades 9–10 text complexity band independently and proficiently.	**10.** By the end of grade 12, read and comprehend history/social studies texts in the grades 11–12 text complexity band independently and proficiently.

Grades 6–8 students:	Grades 9–10 students:	Grades 11–12 students:
Key Ideas and Details		
1. Cite specific textual evidence to support analysis of science and technical texts.	**1.** Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.	**1.** Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.
2. Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.	**2.** Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.	**2.** Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.	**3.** Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks attending to special cases or exceptions defined in the text.	**3.** Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
Craft and Structure		
4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.	**4.** Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 9–10 texts and topics*.	**4.** Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 11–12 texts and topics*.
5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.	**5.** Analyze the structure of the relationships among concepts in a text, including relationships among key terms pertaining to important ideas and processes (e.g., *force*, *friction*, *reaction force*, *energy*).	**5.** Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.
6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.	**6.** Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	**6.** Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved or uncertain.
Integration of Knowledge and Ideas		
7. Integrate quantitative or technical information provided by the words in a text with a version of that information expressed graphically (e.g., in a flowchart, diagram, model, graph, or table).	**7.** Demonstrate understanding of quantitative or technical information by translating information provided by the words in a text into graphical form (e.g., a table or chart) or translating information expressed graphically or mathematically (e.g., in an equation) into words.	**7.** Integrate and evaluate multiple sources of information presented in different formats (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem, resolving conflicting information when possible.
8. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.	**8.** Assess the extent to which the evidence in a text supports a claim or a recommendation for solving a scientific or technical problem.	**8.** Evaluate the hypotheses, data, and conclusions in a science or technical text, verifying data and corroborating or challenging conclusions when possible by using other sources of information.
9. Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.	**9.** Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.	**9.** Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
Range and Level of Text Complexity		
10. By the end of grade 8, read and comprehend	**10.** By the end of grade 10, read and comprehend	**10.** By the end of grade 12, read and comprehend

science/technical texts in the grades 6–8 text complexity band independently and proficiently.	science/technical texts in the grades 9–10 text complexity band independently and proficiently.	science/technical texts in the grades 11–12 text complexity band independently and proficiently.

College and Career Readiness Anchor Standards for Writing

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They relate to their College and Career Readiness (CCR) counterparts by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes[1]

1. Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.[2]
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

[1]These broad types of writing include many subgenres. See Appendix A for definitions of key writing types.

Note on range and content of student writing

For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college- and career-ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline and the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long time frames throughout the year.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6–12 [WHST]

The standards below begin at grade 6; standards for K–5 writing in history/social studies, science, and technical subjects are integrated into the K–5 Writing standards.

Grades 6–8 students:	Grades 9–10 students:	Grades 11–12 students:
Text Types and Purposes		
1. Write arguments focused on *discipline-specific content*. a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically. b. Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources. a. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence. b. Establish and maintain a formal style. c. Provide a concluding statement or section that follows from and supports the argument presented.	**1.** Write arguments focused on *discipline-specific content*. a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from or supports the argument presented.	**1.** Write arguments focused on *discipline-specific content*. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from or supports the argument presented.

Grades 6–8 students:	Grades 9–10 students:	Grades 11–12 students:
Text Types and Purposes (continued)		
2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style and objective tone. f. Provide a concluding statement or section that follows from and supports the information or explanation presented.	**2.** Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. a. Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers. e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	**2.** Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. d. Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. e. Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).
3. Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations that others can replicate them and (possibly) reach the same results.	**3.** Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations that others can replicate them and (possibly) reach the same results.	**3.** Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations that others can replicate them and (possibly) reach the same results.

Grades 6–8 students:	Grades 9–10 students:	Grades 11–12 students:
Production and Distribution of Writing		
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	**4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	**4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.	**5.** Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	**5.** Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
6. Use technology, including the Internet, to produce and publish a minimum of five pages of writing as well as to interact and collaborate with others.	**6.** Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.	**6.** Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
Research to Build and Present Knowledge		
7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.	**7.** Conduct short as well as more sustained research projects to answer a question (including a self-generate question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	**7.** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	**8.** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	**8.** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
9. Draw evidence from informational texts to support analysis reflection, and research.	**9.** Draw evidence from informational texts to support analysis, reflection, and research.	**9.** Draw evidence from informational texts to support analysis, reflection, and research.
Range of Writing		
10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

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Appendix B4: Evidence of International Benchmarking of Standards

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Benchmarking for Success:

Ensuring U.S. Students Receive a World-Class Education

A report by the National Governors Association, the Council of Chief State School Officers, and Achieve, Inc.

(b)(6)

National Governors Association

Founded in 1908, the National Governors Association (NGA) is the collective voice of the nation's governors and one of Washington, D.C.'s most respected public policy organizations. Its members are the governors of the 50 states, three territories and two commonwealths. NGA provides governors and their senior staff members with services that range from representing states on Capitol Hill and before the Administration on key federal issues to developing and implementing innovative solutions to public policy challenges through the NGA Center for Best Practices. For more information, visit www.nga.org.

Council of Chief State School Officers

The Council of Chief State School Officers (CCSSO) is a nonpartisan, nationwide, nonprofit organization of public officials who head departments of elementary and secondary education in the states, the District of Columbia, the Department of Defense Education Activity, and five U.S. extra-state jurisdictions. CCSSO provides leadership, advocacy, and technical assistance on major educational issues. The Council seeks member consensus on major educational issues and expresses their views to civic and professional organizations, federal agencies, Congress, and the public.

Achieve, Inc.

Created by the nation's governors and business leaders, Achieve is a bipartisan, non-profit organization that helps states raise academic standards, improve assessments and strengthen accountability to prepare all young people for postsecondary success. At the 2005 National Education Summit, Achieve launched the American Diploma Project (ADP) Network, a coalition that has grown to 34 states, educating nearly 85% of public school students in the United States. The ADP Network is committed to aligning high school expectations with the demands of college, career and life. To learn more about Achieve, visit www.achieve.org.

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Benchmarking for Success:

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the Council of Chief State School Officers, and Achieve, Inc.

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Foreword

We are living in a world without borders. To meet the realities of the 21st century global economy and maintain America's competitive edge into the future, we need students who are prepared to compete not only with their American peers, but with students from all across the globe for the jobs of tomorrow.

States have voluntarily taken the lead in developing standards-based education, but policymakers lack a critical tool for moving forward—international benchmarking. This report is intended to help states take the next steps toward ensuring that American students receive a world-class education that positions them to compete and innovate in the 21st century.

International benchmarking will help state policymakers identify the qualities and characteristics of education systems that best prepare students for success in the global marketplace. The stakes are high, and improving our educational system will require commitment and insight not just from state leaders but many other stakeholders as well. With this in mind, the National Governors Association, the Council of Chief State School Officers, and Achieve, Inc. have joined to provide to states a roadmap for benchmarking their K-12 education systems to those of top-performing nations.

The partners' recommendations were informed by an International Benchmarking Advisory Group consisting of education experts representing education institutions, the business community, researchers, former federal officials, and current state and local officials. The Advisory Group's expertise and experience helped the partners identify the need for international comparisons and provide guidance for benchmarking state education system practices in areas such as standards, accountability, educator workforce, and assessments. The partner organizations will work with states to develop and implement these recommendations.

Governors recognize that new economic realities mean it no longer matters how one U.S. state compares to another on a national test; what matters is how a state's students compare to those in countries around the globe. America must seize this moment to ensure that we have workers whose knowledge, skills, and talents are competitive with the best in the world.

Governor Janet Napolitano
Arizona

Governor Sonny Perdue
Georgia

Craig R. Barrett
Chairman of the Board
Intel Corporation

Co-Chairs, International Benchmarking Advisory Group

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International Benchmarking Advisory Group

To develop this report, the National Governors Association (NGA), Council of Chief State School Officers (CCSSO), and Achieve, Inc. invited national, state, and local education and policy leaders to serve on an International Benchmarking Advisory Group. The Advisory Group provided the three partner organizations with valuable insights and helped frame this bipartisan Call to Action. They collectively support the recommendations herein for internationally benchmarking state K-12 education systems.

Co-Chairs:

Governor Janet Napolitano, Arizona
Governor Sonny Perdue, Georgia
Craig R. Barrett, Chairman of the Board, Intel Corporation

Members:

Steven A. Ballmer, Chief Executive Officer, Microsoft Corporation

Governor Donald L. Carcieri, Rhode Island

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Dwight Jones, Commissioner of Education, Colorado Department of Education

Governor Tim Kaine, Virginia

Janet Murguía, President and Chief Executive Officer, National Council of La Raza

Thomas Payzant, Professor of Practice, Harvard Graduate School of Education

Charles B. Reed, Chancellor, California State University

Richard W. Riley, Senior Partner with EducationCounsel LLC, former U.S. Secretary of Education, and former Governor of South Carolina

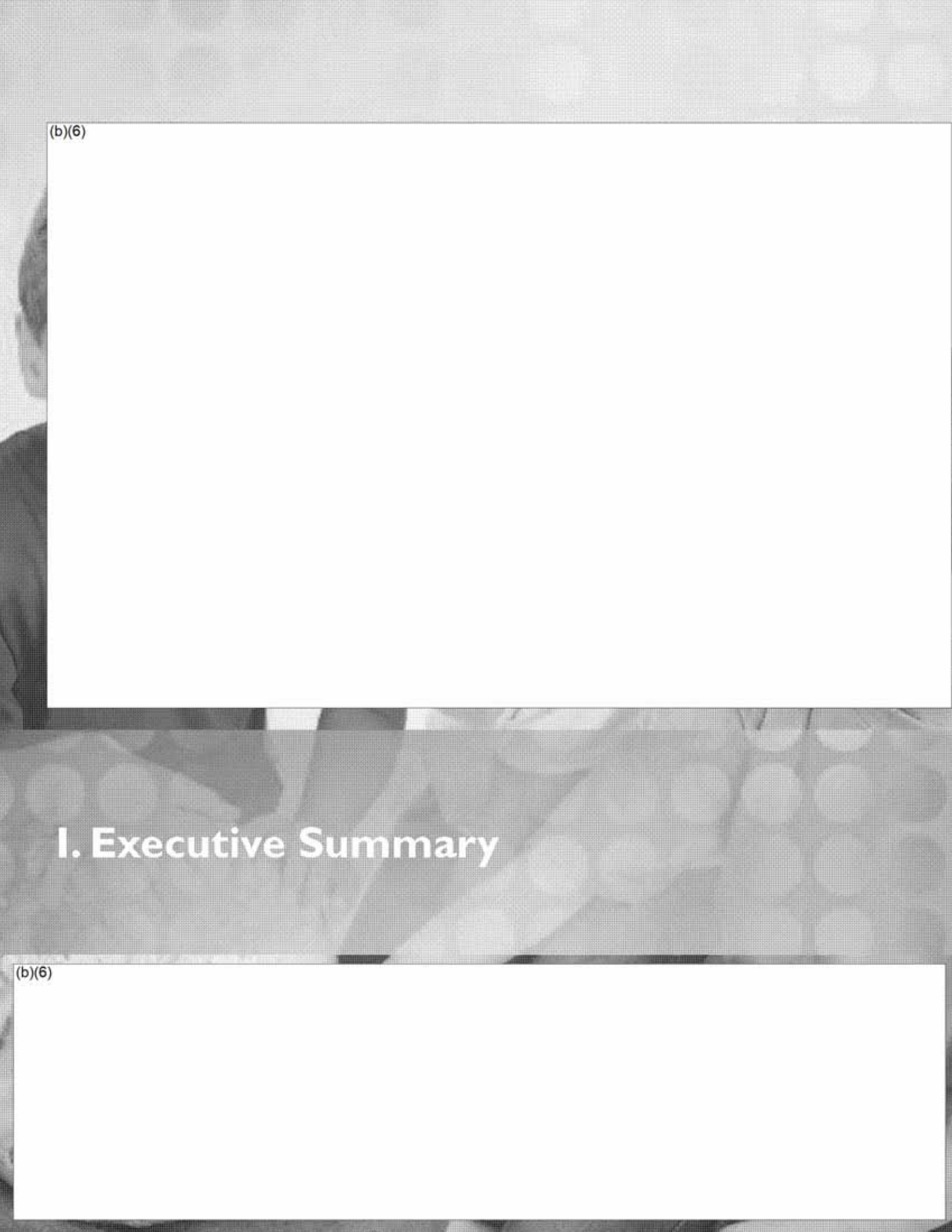
Andreas Schleicher, Head of the Indicators and Analysis Division, Directorate for Education, Organisation for Economic Co-Operation and Development

William H. Schmidt, University Distinguished Professor, Michigan State University

Vivien Stewart, Vice President for Education, Asia Society

Phillip Uri Treisman, Executive Director, The Charles A. Dana Center at the University of Texas at Austin

Bob Wise, President, Alliance for Excellent Education and former Governor of West Virginia



I. Executive Summary

I. Executive Summary

Around the globe, governments are eagerly comparing their educational outcomes to the best in the world. The goal is not just to see how they rank, but rather to identify and learn from top performers and rapid improvers—from nations and states that offer ideas for boosting their own performance. This process, known as "international benchmarking," has become a critical tool for governments striving to create world-class education systems.

In American education, "benchmarking" often simply means comparing performance outcomes or setting performance targets (or "benchmarks"). But in business and among education leaders in other countries, it means much more. The American Productivity and Quality Center puts it this way: "Benchmarking is the practice of being humble enough to admit that someone else has a better process and wise enough to learn how to match or even surpass them."

Countries and states have good reason to make the effort. Technological, economic, and political trends have combined to increase demand for higher skills while heightening competition for quality jobs. Rule-bound jobs on factory floors and in offices are being automated and outsourced. The world's knowledge-and-innovation economy favors workers who have postsecondary education or training, strong fundamental skills in math and reading, and the ability to solve unfamiliar problems and communicate effectively.

At the same time, new technologies and corporate strategies have opened the global labor market to billions of people from places like Eastern Europe, India, China, and Brazil who had been left out. An increasing variety of work tasks can be digitized and performed nearly anywhere in the world. More jobs are going to the best educated no matter where they live, which means that Americans will face more competition than ever for work.

International trade agreements, such as China's membership in the World Trade Organization in 2001, have hastened this transformation. Since 1980, global trade has grown 2.5 times faster than the global gross domestic product (GDP). Recent estimates put today's world exports at $12.5 trillion, nearly 20 percent of world GDP.

The global economy is here to stay, with recent research suggesting that it is evolving and its impact intensifying at a stunning pace. "Globalization is happening faster than people think," says Vivek Wadhwa, Wertheim Fellow at Harvard Law School's Labor and Worklife program and Duke University Executive in Residence. His recent research shows that companies are no longer just outsourcing production but are farming out *innovation* as well. "Having India and China conduct such sophisticated research and participate in drug discovery was unimaginable even five years ago," he says.

Education is a tremendously important lever for ensuring competitiveness and prosperity in the age of globalization, albeit not the only one. Recent economic studies show that high skills lead to better wages, more equitable distributions of income, and substantial gains in economic productivity. Higher math performance at the end of high school translates into a 12 percent increase in future earnings. If the United States raised students' math and science skills to globally competitive levels over the next two decades, its GDP would be an additional 36 percent higher 75 years from now.

The race is on among nations to create knowledge-fueled innovation economies. In Singapore, Germany, China, Brazil, Korea, and other countries around the world, educational improvement is viewed as a critical part of that mission. Nations and states are therefore working hard to benchmark their education systems to establish a solid foundation for economic development in the 21st century. Some are finding innovative ways to measure their students' progress internationally. Others are examining high-performing and fast-improving nations to learn about best practices that they then adapt or adopt to improve their own systems.

American education has not adequately responded to these new challenges. The United States is falling behind other countries in the resource that matters most in the new global economy: human capital. American 15-year-olds ranked 25th in math and 21st in science achievement on the most recent international assessment conducted in 2006. At the same time, the U.S. ranked high in inequity, with the third largest gap in science scores between students from different socioeconomic groups.

The U.S. is rapidly losing its historic edge in educational attainment as well. As recently as 1995, America still tied for first in college and university graduation rates, but by 2006 had dropped to 14th. That same year it had the second-highest college dropout rate of 27 countries.

State leaders already are deeply engaged in efforts to raise standards, advance teaching quality, and improve low-performing schools. International benchmarking provides an additional tool for making that process more effective, offering insights and ideas that cannot be garnered solely from looking within and across state lines. To that end, the partner organizations and International Benchmarking Advisory Group call on state leaders to take the following actions:

State leaders also should tackle "the equity imperative" by creating strategies for closing the achievement gap between students from different racial and socioeconomic backgrounds in each of the action steps above. Reducing inequality in education is not only socially just, it's essential for ensuring that the United States retain a competitive edge.

Research shows that education systems in the United States tend to give disadvantaged and low-achieving students a watered down curriculum and place them in larger classes taught by less qualified teachers—exactly opposite of the educational practices of high-performing countries.

Action 1: Upgrade state standards by adopting a common core of internationally benchmarked standards in math and language arts for grades K-12 to ensure that students are equipped with the necessary knowledge and skills to be globally competitive.

Action 2: Leverage states' collective influence to ensure that textbooks, digital media, curricula, and assessments are aligned to internationally benchmarked standards and draw on lessons from high-performing nations and states.

Action 3: Revise state policies for recruiting, preparing, developing, and supporting teachers and school leaders to reflect the human capital practices of top-performing nations and states around the world.

Action 4: Hold schools and systems accountable through monitoring, interventions, and support to ensure consistently high performance, drawing upon international best practices.

Action 5: Measure state-level education performance globally by examining student achievement and attainment in an international context to ensure that, over time, students are receiving the education they need to compete in the 21st century economy.

The federal government can play an enabling role as states engage in the critical but challenging work of international benchmarking. First, federal policymakers should offer funds to help underwrite the cost for states to take the five action steps described above. At the same time, policymakers should boost federal research and development (R&D) investments to provide state leaders with more and better information about international best practices, and should help states develop streamlined assessment strategies that facilitate cost-effective international comparisons of student performance.

As states reach important milestones on the way toward building internationally competitive education systems, the federal government should offer a range of tiered incentives to make the next stage of the journey easier, including increased flexibility in the use of federal funds and in meeting federal educational requirements and providing more resources to implement world-class educational best practices. Over the long term, the federal government will need to update laws to align national education policies with lessons learned from state benchmarking efforts and from federally funded research.

Nations around the world are facing a new education imperative, and many are seizing the historical moment to provide their citizens with better opportunities and stronger economies.

America must seize this moment too, with states leading the way. Many states already are working hard to improve standards, teaching quality, and accountability, but policymakers lack a critical tool—international benchmarking.

The U.S. can take pride in many aspects of its education system, from the high performance of its teenagers on international civics tests to the strength of its higher education institutions.

But if state leaders want to ensure that their citizens and their economies remain competitive, they must look beyond America's borders and benchmark their education systems with the best in the world. The state mandate to educate all students remains, but the world that students will enter after school has changed.

For Andreas Schleicher, head of the Indicators and Analysis Division at the Organisation for Economic Co-Operation and Development's Directorate for Education, the case for adopting a global view to improving education is undeniable:

> It is only through such benchmarking that countries can understand relative strengths and weaknesses of their education system and identify best practices and ways forward. The world is indifferent to tradition and past reputations, unforgiving of frailty and ignorant of custom or practice. Success will go to those individuals and countries which are swift to adapt, slow to complain, and open to change.

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II. The Need for Action

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II. The Need for Action

Around the globe, governments are eagerly comparing their educational outcomes to the best in the world. The goal is not just to see how they rank, but rather to identify and learn from top performers and rapid improvers—from nations and states that offer ideas for boosting their own performance. This process, known as "international benchmarking," has become a critical tool for governments striving to create world-class education systems.

In American education, "benchmarking" often simply means comparing performance outcomes or setting performance targets (or "benchmarks"). But in business and among education leaders in other countries, it means much more: Comparing outcomes to identify top performers or fast improvers, learning how they achieve great results, and applying those lessons to improve one's own performance. The American Productivity and Quality Center puts it this way: "Benchmarking is the practice of being humble enough to admit that someone else has a better process and wise enough to learn how to match or even surpass them."[1]

A Skills-Driven Global Economy

Governments have good reason to benchmark and improve their education systems. Technological, economic, and political trends have increased demand for higher skills while heightening competition for quality jobs. In the U.S., outsourcing and automation have dramatically altered the mix of jobs in the labor force. The proportion of American workers in blue-collar and administrative support jobs plummeted from 56 percent to 39 percent between 1969 and 1999, and the share of jobs requiring more education and specialized skills—work that is managerial, professional, and technical in nature—increased from 23 percent to 33 percent over the same period.[2]

Skill demands *within* jobs are rising as well. A study that analyzed typical tasks in the American workplace found that routine manual and cognitive tasks that follow a set of prescribed rules are rapidly being taken over by computers or workers in other countries. But more sophisticated tasks are on the rise, specifically those that require workers to "bring facts and relationships to bear in problem solving, the ability to judge when one problem-solving strategy is not working and another should be tried, and the ability to engage in complex communication with others," along with "foundational skills" in math and reading.[3]

Technology is changing not just how work gets done, but also where it can be done. Advances in telecommunications allow companies to digitize work tasks and products so that jobs can be performed virtually anywhere in the world. And new management software has enabled firms to shift from "vertical" production—where all tasks are done in sequence in the same place—to "horizontal" production in which tasks are carved up and shipped out to wherever they can be done best and cheapest. The result, according to a blue-ribbon commission report released last year, "is a world in which it is just as easy to create work teams on four continents as it is to create work teams composed of people from four divisions of the same firm located in the same city."[4]

While all these changes took place, political and economic developments opened the doors of this new global economy to more than a billion new workers from Russia, Eastern Europe, China, India, and other developing countries who now compete for jobs with those in developed nations. Harvard economist Richard Freeman calls this "The Great Doubling" of the global workforce. At first, low-skilled, low-paying jobs were outsourced to these workers, but now some higher skilled jobs—from analyzing X-rays to tutoring high school students to preparing tax returns—are migrating abroad, too.[5] The twin forces of globalization and computerization mean that any job reducible to a set of scripted rules is vulnerable to outsourcing or automation.[6]

International trade agreements, such as China's membership in the World Trade Organization in 2001, have sped this transformation along. Although some firms have long had global links, globalization is now pervasive: More nations are joining the marketplace, more goods and services are traded globally, and more of the production process is interconnected in a worldwide supply web. Since 1980, global trade has grown 2.5 times faster than the global gross domestic product (GDP). Recent estimates put today's world exports at $12.5 trillion, nearly 20 percent of world GDP.[7]

Recent research suggests that globalization is not only here to stay, it is evolving and intensifying at a rapid pace. In June, Harvard and Duke University researchers published the first in a series of studies documenting how corporations are no longer just outsourcing production; they are beginning to outsource *innovation* as well. For example, big pharmaceutical companies such as Merck, Eli Lilly, and Johnson & Johnson are relying on India and China not only for manufacturing and clinical trials, but also for advanced research and development. As a result, scientists in those countries are rapidly increasing their ability to innovate and create their own intellectual property; the global share of pharmaceutical patent applications originating in India and China increased fourfold from 1995 to 2006.[8]

"Globalization is happening faster than people think," says Vivek Wadhwa, the researcher and former entrepreneur who led the study. "Having India and China conduct such sophisticated research and participate in drug discovery was unimaginable even five years ago."[9] Wadhwa's team is finding the same kind of rapid change in a wide range of industries—from telecommunications and computer networking to aerospace and computers. Indeed, the National Academy of Engineering recently noted that nearly all of the top 20 U.S.-based semiconductor companies have opened design centers in India, nine of them since 2004.[10] "Our take is that the global technology landscape has changed dramatically over the last decade," says Wadhwa, "and that we're at the beginning of a new wave of globalization."[11]

Education for Economic Growth

As a result of these trends, American workers are competing not only with skilled workers here, but with those living in far-away places. Labor economists Frank Levy and Richard Murnane argue that "over the long run, better education is the best tool we have to prepare the population for a rapidly changing job market."[12] Studies show that higher math performance at the end of high school translates into substantially higher future earnings; an increase of one standard deviation in math scores translates into a 12 percent boost in wages.[13] Family income for households headed by someone with a college degree grew by nearly 40 percent from 1973 to 2006, compared with less than 6 percent for families headed by someone with only a high school diploma.[14]

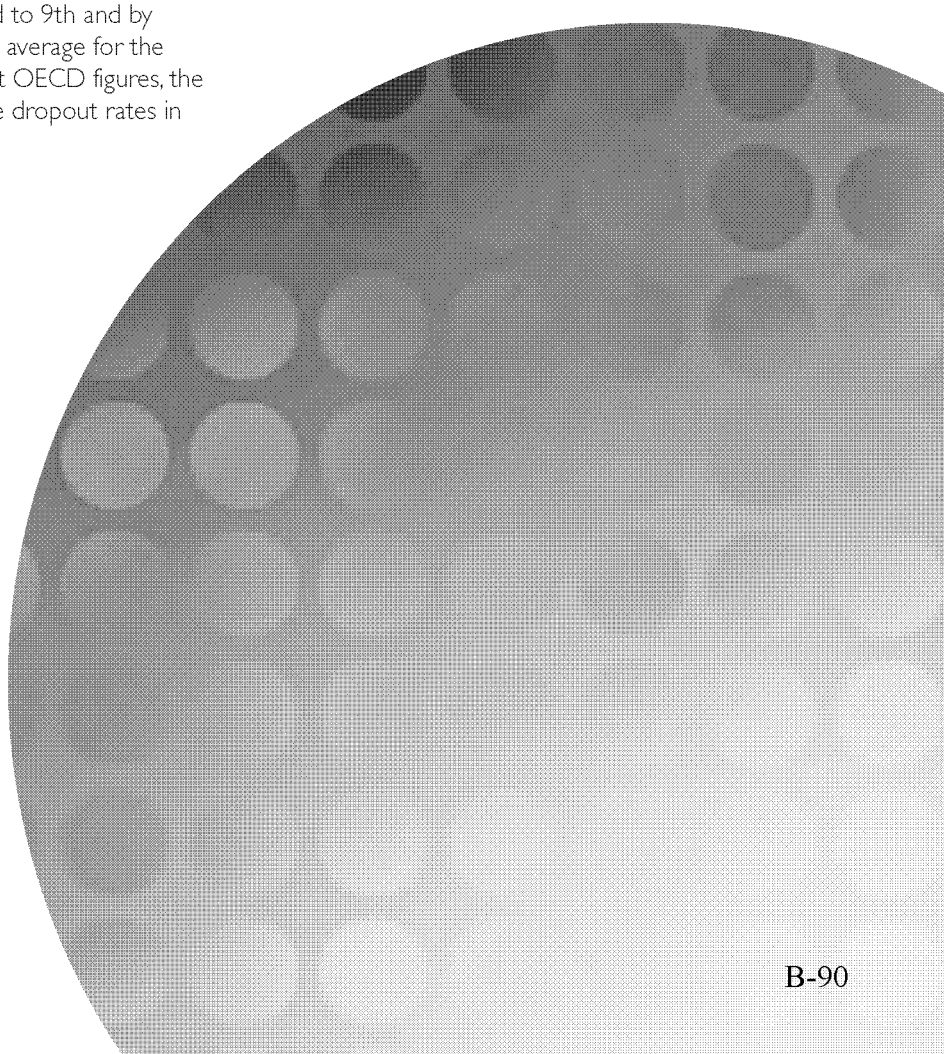
Fortune may favor the prepared mind, but it also favors the prepared *place*—whether that place is a nation, a region, or an individual state. To lay a solid foundation for widespread economic growth, governments around the world are adopting policies aligned with a 21st century economy that is increasingly knowledge-fueled, innovation-driven, and global in scope. The Organisation for Economic Co-Operation and Development (OECD) estimates that each additional year of schooling among the adult population raises a nation's economic output by between 3 percent and 6 percent.[15] New studies by Stanford economist Eric Hanushek and others have found strong evidence that high skills lead to elevated individual wages, a more equitable distribution of income, and substantial gains in economic productivity.[16]

Indeed, Hanushek estimates that if the U.S. improved enough to become a top-performing nation on international assessments between 2005 and 2025, by 2037 its GDP would be an additional 5 percent higher than if skills stayed the same. Improving human capital pays off even more handsomely over a longer time horizon: By 2080, America's GDP would be *36 percent higher* than would be the case if the U.S. remained mediocre in math and science.[17]

The implications are clear: In today's world, high wages follow high skills, and long-term economic growth increasingly depends on educational excellence. Unfortunately, American education has not adequately responded to these challenges. As other countries seize the opportunity to improve their education systems so their citizens can benefit from new economic opportunities, the United States is rapidly losing its leading edge in the resource that matters most for economic success: human capital.

Four decades ago America had the best high school graduation rate in the world, but by 2006 it had slipped to 18th out of 24 industrialized countries.[18] For most of the 20th century, the U.S. set the standard for quality in higher education—and, in many respects, it still does. But other countries learned from our success and are now catching up or pulling ahead. As recently as 1995 America was still tied for first in the proportion of young adults with a college degree, but by 2000 it had slipped to 9th and by 2006 to 14th—below the OECD average for the first time.[19] According to the latest OECD figures, the U.S. has one of the highest college dropout rates in the industrialized world.[20]

Even if the U.S. improves its high school and postsecondary graduation rates, it will be difficult if not impossible to maintain its historic dominance in the supply of educated workers. Already, America's share of the world's college students has dropped from 30 percent in 1970 to less than half that today.[21] And because of their sheer size, China and India will surpass both Europe and the United States in the number of secondary and postsecondary graduates produced over the next decade.[22] Many experts have concluded that since the U.S. can no longer compete in *quantity* of human capital, it will have to compete in *quality* by providing its young people with the highest level of math, science, reading, and problem-solving skills in the world.



But so far American education has not adequately responded to the skills challenge either. Out of 30 industrialized countries participating in the OECD's Programme for International Student Assessment (PISA) in 2006, the U.S. ranked 25th in math and 21st in science achievement (**Figure 1**). The performance gap between the United States and top-performing nations is huge: American students lag about a full year behind their peers in the countries that perform best in mathematics.[23] Even our "best and brightest" cannot compete with excellent students elsewhere. According to the OECD, "the United States does not just have more students performing badly—it also has many fewer students performing well."[24] America's best math students performed worse than the best math students in 22 other OECD nations. Moreover, only 1.3 percent of U.S. 15-year-olds performed at the highest PISA level in mathematics, while among the top 10 countries the share of high performers was three to seven times as large.[25]

American students seemed to perform better on the most recent Trends in International Mathematics and Science Study (TIMSS), conducted in 2003. For example, fourth-graders scored "above average" in mathematics among participating countries while eighth-graders scored either above average or about average depending on the calculation.[26] However, when compared only with more developed nations that are America's economic competitors, U.S. performance on TIMSS looks more like its performance on PISA. In 2005, the American Institutes for Research (AIR) analyzed a group of industrialized nations participating in both TIMSS and PISA; among that group, U.S. students consistently performed below average across international assessments. "U.S. performance is below the 12-country average at both low- and high-skill levels and low and high-levels of item difficulty."[27]

American students tend to perform better on international assessments of reading than they do in math and science. But U.S. 15-year-olds perform only about average among industrialized countries, and fourth graders' reading scores have stagnated while other countries have made sizeable gains. "Reforms aimed at improving reading achievement seem to have propelled Russia, Hong Kong, and Singapore from middle to top rankings [on the Progress in International Reading Literacy Study (PIRLS)]," *Education Week* reported last year, "even as U.S. performance stood still."[28]

Moreover, a 2003 PISA assessment of students' ability to solve real-world problems found that fewer than half of U.S. 15-year-olds are analytical problem-solvers who can communicate well about solutions. Among 29 industrialized nations, the U.S. had the fifth highest percentage of very weak problem-solvers and the sixth lowest percentage of strong problem-solvers.[29] Such results suggest that U.S. schools not only are failing to provide many students with strong foundational skills in subjects like math and science, but they also are not providing enough students with the broader skills that the modern workplace increasingly demands.

Schools also must find ways to provide students with the "global awareness" that the globalization of work requires.[30] To collaborate on international work teams, manage employees from other cultures and countries, and communicate with colleagues and clients abroad, Americans will need to know and understand much more about the rest of the world than they do now.[31] "A pervasive lack of knowledge about foreign cultures and foreign languages threatens the security of the United States as well as its ability to compete in the global marketplace and [to] produce an informed citizenry," the National Academy of Sciences warned last year.[32]

The Equity Imperative

Some might argue that it is enough to produce the next generation of elite "rocket scientists" who can invent new technologies and spur innovation. There is a widespread belief that providing America's top students with a world-class education is the single most important way to boost economic growth. This notion is often paired with a conviction that focusing on educational equity for all sacrifices excellence for the few who are already advanced. But these are myths. Our national commitment to closing achievement gaps is not only compatible with a global competitiveness agenda, it is essential for realizing that agenda.

Figure 1: U.S. 15-Year-Old Performance Compared with Other Countries

Programme for International Student Assessment (PISA)

Average is measurably higher than the U.S.
Average is measurably lower than the U.S.

Mathematics (2006)			Science (2006)			Reading (2003)			Problem Solving (2003)		
Rank		*Score*	*Rank*		*Score*	*Rank*		*Score*	*Rank*		*Score*
1	Finland	548	1	Finland	563	1	Finland	543	1	Korea	550
2	Korea	547	2	Canada	534	2	Korea	534	2	Finland	548
3	Netherlands	531	3	Japan	531	3	Canada	528	3	Japan	547
4	Switzerland	530	4	New Zealand	530	4	Australia	525	4	New Zealand	533
5	Canada	527	5	Australia	527	5	New Zealand	522	5	Australia	530
6	Japan	523	6	Netherlands	525	6	Ireland	515	6	Canada	529
7	New Zealand	522	7	Korea	522	7	Sweden	514	7	Belgium	525
8	Belgium	520	8	Germany	516	8	Netherlands	513	8	Switzerland	521
9	Australia	520	9	United Kingdom	515	9	Belgium	507	9	Netherlands	520
10	Denmark	513	10	Czech Republic	513	10	Norway	500	10	France	519
11	Czech Republic	510	11	Switzerland	512	11	Switzerland	499	11	Denmark	517
12	Iceland	506	12	Austria	511	12	Japan	498	12	Czech Republic	516
13	Austria	505	13	Belgium	510	13	Poland	497	13	Germany	513
14	Germany	504	14	Ireland	508	14	France	496	14	Sweden	509
15	Sweden	502	15	Hungary	504	15	United States	495	15	Austria	506
16	Ireland	501	16	Sweden	503	16	Denmark	492	16	Iceland	505
17	France	496	17	Poland	498	17	Iceland	492	17	Hungary	501
18	United Kingdom	495	18	Denmark	496	18	Germany	491	18	Ireland	498
19	Poland	495	19	France	495	19	Austria	491	19	Luxembourg	494
20	Slovak Republic	492	20	Iceland	491	20	Czech Republic	489	20	Slovak Republic	492
21	Hungary	491	21	United States	489	21	Hungary	482	21	Norway	490
22	Luxembourg	490	22	Slovak Republic	488	22	Spain	481	22	Poland	487
23	Norway	490	23	Spain	488	23	Luxembourg	479	23	Spain	482
24	Spain	480	24	Norway	487	24	Portugal	478	24	United States	477
25	United States	474	25	Luxembourg	486	25	Italy	476	25	Portugal	470
26	Portugal	466	26	Italy	475	26	Greece	472	26	Italy	469
27	Italy	462	27	Portugal	474	27	Slovak Republic	469	27	Greece	448
28	Greece	459	28	Greece	473	28	Turkey	441	28	Turkey	408
29	Turkey	424	29	Turkey	424	29	Mexico	400	29	Mexico	384
30	Mexico	406	30	Mexico	410						
OECD average		498	*OECD average*		500	*OECD average*		494	*OECD average*		500

Source: Organisation for Economic Co-Operation and Development and U.S. Department of Education.

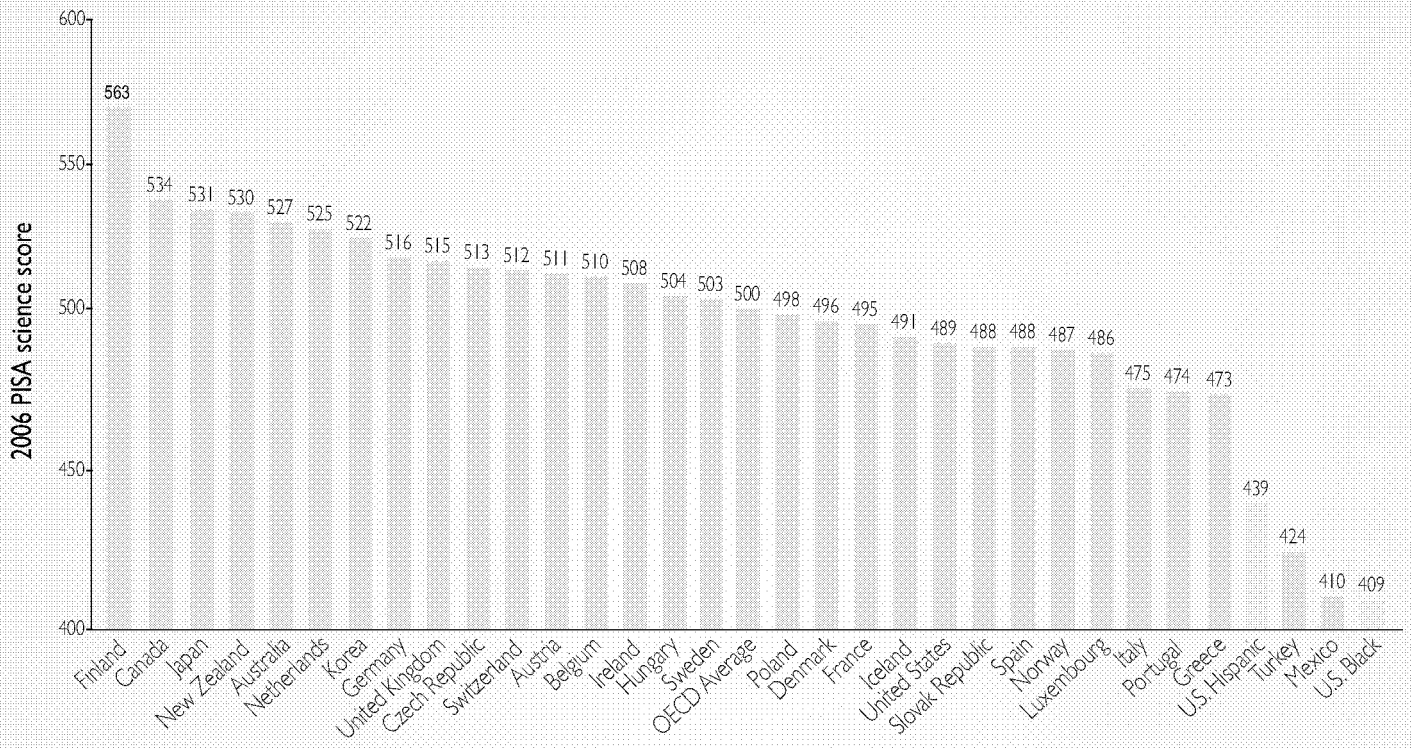
Recent studies offer compelling evidence that educational equity is just as important for economic competitiveness as it is for social justice. Hanushek and colleagues specifically analyzed economic data to answer this question: "Which is more important for growth—having a substantial cadre of high performers or bringing everyone up to a basic level of performance?" They found that to truly maximize growth, it is not enough to produce a high-achieving elite; a nation's economic success also depends on closing achievement gaps to ensure that all students attain a solid foundation of knowledge and skills.[33] Another recent study of 14 developed countries concluded that "increasing the average level of literacy will have a greater effect on growth than increasing the percentage of individuals who achieve high levels of literacy skills."[34]

But the U.S. has a long way to go before it achieves that goal. While American 15-year-olds rank in the *bottom-third* of developed nations in overall performance in math and science, they rank in the *top-third* when it comes to gaps between students from different family backgrounds.[35] In fact, the difference in science scores between students from different socioeconomic backgrounds is bigger in the United States than in almost any other country.[36] Fortunately, international assessments also show that it is possible to realize high average performance alongside more equitable performance. Across several continents, countries like Japan, Korea, Finland, and Canada demonstrate that students from disadvantaged backgrounds need not automatically perform poorly in school.[37]

Learning how some countries achieve performance that is both higher and more equitable has tremendous implications in this country given America's long-term demographic outlook. Demographers now predict that "minorities" will constitute the majority of schoolchildren by 2023 and of working-age Americans by 2039.[38] In 2006, U.S. Hispanic 15-year-olds performed below the average of every OECD country except Turkey and Mexico in science literacy, and black students performed even worse (**Figure 2**).[39] America cannot remain competitive if half of its population graduates from high school so poorly prepared that it is unable to thrive in the global knowledge economy. States that plan to grow their economies *must* find ways to close their achievement gaps.

Of course, some critics of international assessments claim that America's disappointing performance is inevitable precisely because of its demographic challenges. But the data do not support such beliefs: Overall, U.S. 15-year-olds are slightly above the international average when it comes to families' social, economic, and cultural status.[40] The problem is that America's education system does a poor job supporting students and offering equal learning opportunities. According to OECD, in 2006, the U.S. ranked fourth out of 30 countries in the relative *impact* that socioeconomic background had on students' PISA science achievement.[41] Another recent study measuring the impact of family background on TIMSS results found a similar pattern: "The U.S. falls in the top quarter of the most unequal countries."[42]

Figure 2: U.S. Minority Performance Below Averages of Most Industrialized Nations



Source: Baldi, S., Y. Jin., M. Skemer, P.J. Green, and D. Herget. Highlights from PISA 2006: Performance of U.S. 15-Year-Old Students in Science and Mathematics Literacy in an International Context. Washington, DC: U.S. Department of Education, National Center for Education Statistics, December 2007, pp. 6 &15.

Other Countries Pulling Ahead

America's global position is slipping not because U.S. schools are getting worse. Rather, America is losing ground because its educational outcomes have mostly stagnated while those in other countries have surged. Nations that formerly lagged far behind the U.S. have caught up with and in some cases even surpassed it.

Korea, for instance, has gone from well behind to significantly ahead of the United States in high school attainment in just a few generations—an education triumph that has helped fuel the country's tremendous progress (**Figure 3**). In 1960, Mexico's economic productivity was twice as large as Korea's, but by 2003 Korea's GDP was twice as large as Mexico's. According to the World Bank, "the contribution of knowledge … was a key factor in Korea's miracle of rapid economic growth."[43]

Other countries have made rapid strides in building competitive knowledge-and-innovation economies. "At the end of World War II, a single nation stood atop Mount Innovation, and it was the United States," notes former Harvard Business School professor John Kao in his 2007 book *Innovation Nation*. "Now, powerful new climbers have emerged to challenge U.S. supremacy. … Some may be surprising—Brazil, Denmark, Estonia, Finland, New Zealand, Singapore, and Taiwan."[44] *Not* surprisingly, some of those same nations also top the list of countries achieving high performance or seeing big gains on international assessments.

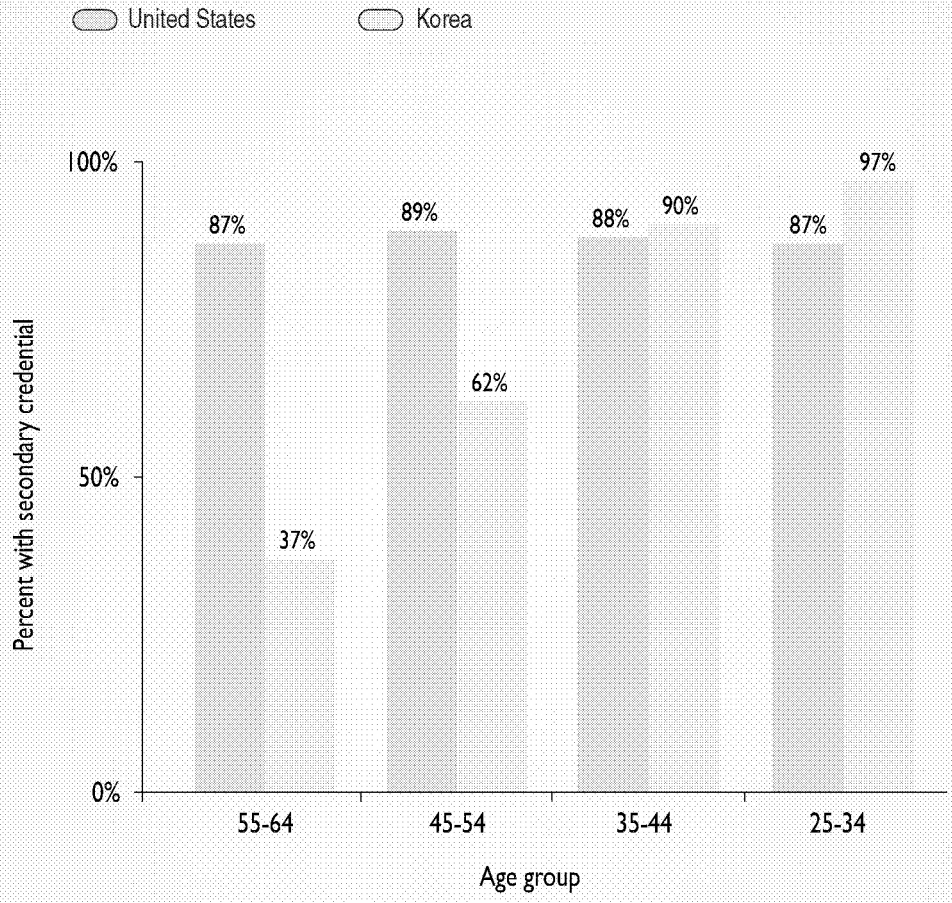
"Young Chinese, Indians, and Poles are not racing us to the bottom," *New York Times* columnist Thomas Friedman observed in 2005. "They do not want to work for us; they don't even want to be us. They want to dominate us—in the sense that they want to be creating the companies of the future …."[45]

These governments are giving their people an edge by making major efforts to improve K-12 education. Between 2000 and 2006, Poland increased its PISA reading achievement by 29 points—almost a year's worth of learning—while decreasing the proportion of achievement variation across schools from 51 percent to 12 percent. Improving average skills while decreasing the achievement gap is no accident: Poland's major education reforms are now bearing fruit.[46]

Some countries are working hard to compare their performance internationally and to use those comparisons to drive improvement. Mexico plans to link its national assessment to PISA and has set presidential targets for 2012 and for 2030. Brazil has benchmarked every secondary school against PISA so that each one receives two scores—one benchmarked to the national metric and one benchmarked to PISA. The goal is to have all Brazilian secondary schools achieving at the international average by 2021. "Instead of spending years complaining that they don't do well, they turned it around to talk about what to do about it and to measure progress," says Andreas Schleicher, head of the Indicators and Analysis Division at OECD's Directorate for Education.[47]

Many nations are going beyond performance to benchmark their policies and practices with the world's top performers—and making major strategic changes as a result. When Germany received disappointing results on the PISA 2000 assessment, leaders commissioned a team of experts from high-performing and innovative countries to investigate best practices and provide advice. In 2003, the German government launched a $4.6 billion package of education reforms, including a program to expand learning time by introducing 10,000 all-day schools across the country.[48] And by 2004, Germany's 16 *Länder* (states) began to adopt common, jointly developed "national education standards"—something that previously had been considered politically daunting if not impossible.[49]

Figure 3: Korea's Education Advancement



Source: Organisation for Economic Co-Operation and Development. Education at a Glance 2008. Paris: OECD, September 2008, p. 43, Table A1.2a.

Germany is not alone in its response to international assessment results. A recent evaluation of the policy impact of PISA found that the assessment has had a major influence on educational policy and practice in many OECD countries, most notably on educational standards and curricula as well as on systems of evaluation and accountability.[50]

Countries have responded to TIMSS and PIRLS results as well. A 2005 study found that 10 out of 18 developing nations had changed their science curricula in response to the TIMSS 1999 results, and eight had changed their math curricula—including "relocating into grade 8 topics that had been taught later."[51] Hong Kong's reading reforms, which boosted its fourth-grade PIRLS achievement from significantly below the U.S. to significantly above it, were enacted in response to disappointing results on the 2001 assessment.[52] Singapore's impressive math and science performance on TIMSS assessment is hardly a mistake; rather, the outcomes resulted from major education reforms the country launched in response to poor performance on the Second International Science Study (a precursor of TIMSS) in the mid-1980s.[53]

Vivien Stewart, vice president of the Asia Society, says she is often impressed by the openness and eagerness of education leaders in other countries to learn from and apply international best practice. "Singapore is currently at the top and China is rapidly improving and India is just beginning to improve, but they are all very interested in using international best practices," she says. "China, before it engages in any reforms, will send teams to examine best practices around the world. Although this is mostly done at the national level, it's increasingly done at the province level too. China is doing this with a vengeance because they traditionally have been cut off from the rest of the world, and they want to catch up quickly. A lot of the Chinese curriculum reforms are based on looking at systems in other parts of the world."[54]

China's educational efforts are well matched with its economic aspirations. In 2006, the country's Eleventh Five-Year-Plan put technological innovation squarely at the center, emphasizing the need to develop a "rich talent base" and calling for the government to "cultivate talents with creativity and completely improve our capacity of self-innovation so top universities in China will become an important force for the establishment of an innovation nation."[55] A July 2008 study found that the University of California, Berkeley had been displaced by not one but two Chinese universities as the top undergraduate feeder institutions for U.S. Ph.D. programs.[56] In addition, while America could once expect talented foreigners studying here to stay and contribute to the U.S. economy after graduation, foreign-born specialists educated in this country are increasingly returning home to take advantage of new economic opportunities in their own countries.

Many other regions and nations are working to benchmark and improve education to attract high-skilled, high-paying jobs. In 2000, the European Union (EU) heads of state adopted the goal of becoming "the most competitive and dynamic knowledge-based economy in the world," encouraging member nations to introduce a host of education and other reforms. Since then, the EU has adopted educational goals that are internationally benchmarked, and publishes an annual report that allows national leaders to compare results within Europe as well as with the U.S. and other countries around the world. The 2008 edition emphasizes the critical role of international benchmarking: "All Member States can learn from the best performers in the Union. . . . This is why the Council asked for the three best performing countries (leaders) in specific policy areas to be identified."[57]

Such attitudes stand in stark contrast to the United States, which so far has largely ignored the international benchmarking movement in education. "The U.S. education system in general is very introverted," observes Sir Michael Barber, a former top education official in Great Britain who now focuses on international benchmarking at McKinsey and Company, a global management consulting firm.[58] The U.S. participates in far fewer international benchmarking studies than do many other countries, especially compared with those working hardest to improve. In June, a group of governors attending an NGA- and Hunt Institute-sponsored seminar on educational competitiveness learned that the U.S. is the only OECD country with a federal-style education system where most state leaders have no regular and reliable information to compare student performance internationally.

Barber argues that will need to change if the U.S. wants to remain competitive. "All around the world," he says, "governments are seeking insights into how to improve education systems, and many understand that the only way for a country or a state to keep up globally is to look at what's happening with best practice around the world."[59]

Of course, the U.S. education system has strengths as well as weaknesses, and plenty to teach other countries. For example, U.S. ninth-graders scored well above average on the 1999 Civic Education Study, ranking sixth out of 28 countries overall and first in students' ability to critically interpret political information. Moreover, the U.S. was one of only two countries whose students scored above average not only in civics content, but also on measures of positive civic engagement and attitudes.[60] Clearly, educators in emerging democracies can look to the U.S. for lessons in how to prepare students for active civic engagement.

Many countries also find much to admire about America's higher education system and reforms around the globe have been informed by the U.S. "You have created a public-private partnership in tertiary education that is amazingly successful," Singapore's Education Minister Tharman Shanmugaratnam told *Newsweek* in 2006. "The government provides massive funding, and private and public colleges compete, raising everyone's standards." Moreover, some Asian countries have looked to U.S. schools for ideas on how to encourage innovation and risk taking. "America has a culture of learning that challenges conventional wisdom, even if it means challenging authority," says Shanmugaratnam. "These are the areas where Singapore must learn from America."[61]

But the U.S. cannot afford to rest on its past accomplishments. The global knowledge economy is here, and if state leaders want to ensure that their citizens can compete in it, they must seize the initiative, looking beyond America's borders and benchmarking their education systems with the best in the world. The state mandate to educate all students remains, but the world that schools are preparing students for has changed—and will continue to change—dramatically.

OECD's Schleicher says the case for adopting a global perspective on improving education is undeniable:

> It is only through such benchmarking that countries can understand relative strengths and weaknesses of their education system and identify best practices and ways forward. The world is indifferent to tradition and past reputations, unforgiving of frailty and ignorant of custom or practice. Success will go to those individuals and countries which are swift to adapt, slow to complain, and open to change.[62]

Myths and Realities about International Comparisons

Myth: *Other countries test a more select, elite group of students.*

Reality: That might have been true for early international assessments, but it is no longer true today. According to Jim Hull, who examined international assessments for the National School Boards Association, "Since the 1990s, due to better sampling techniques and a move by more countries to universal education, the results represent the performance of the whole student population, including students who attend public, private, and vocational schools, students with special needs, and students who are not native speakers of their nation's language."[63]

While the U.S. still sets a relatively high age for compulsory education among OECD nations, that does not automatically translate into higher rates of school enrollment. U.S. enrollment rates in primary and secondary education are the same as or below those in other industrialized nations. For example, among OECD member nations, the U.S. ranks only 22nd in school enrollment of 5- to 14-year-olds and 23rd in enrollment of 15- to 19-year-olds.[64]

Moreover, on the most recent PISA assessment, OECD member nations on average tested a *higher* proportion of 15-year-olds than did the U.S. (97 percent versus 96 percent of those enrolled in schools, and 89 percent versus 86 percent of the entire 15-year-old population), which refutes the idea that the U.S. was disadvantaged by testing a broader population.[65] While no assessment is perfect, PISA, TIMSS, and PIRLS all have tight quality-control mechanisms, including very strict and transparent guidelines for sampling students and administering assessments. All exclusions must be thoroughly documented and justified, and total exclusions must fall below established thresholds.

Myth: *The U.S. performs poorly because of poverty and other family factors.*

Reality: According to the U.S. Department of Education, the U.S. looks about average compared with other wealthy nations on most measures of family background.[66] Among the OECD's 30 member nations, U.S. 15-year-olds are slightly *above* the international average on a composite index of economic, social, and cultural status (ESCS); only 11 percent of U.S. students fall within the lowest 15 percent of the ESCS internationally.[67] Moreover, America's most affluent 15-year-olds ranked only 23rd in math and 17th in science on the 2006 PISA assessment when compared with affluent students in other industrialized nations.[68] In fact, when the OECD uses statistical methods to estimate how PISA scores would look if the ESCS index were equalized across all countries—a leveling of the playing field—U.S. performance actually looks *worse* rather than better.[69]

This is not to say that demographics are unimportant in American schools: The U.S. ranks high in the impact that family background has on student achievement (fourth out of 30 countries),[70] in part because its education system does a particularly poor job supporting students and equalizing learning opportunities. For example, a 2006 study published in the *European Journal of Political Economy* found that out of 18 developed nations, the U.S. is the only country where weaker students are more likely to be enrolled in larger classes.[71] Another study found that the U.S. has one of the largest gaps in access to qualified teachers between students of high and low socioeconomic status.[72]

Myth: *Cultural factors prevent U.S. students from performing as well as those in other nations, particularly Asian countries.*

Reality: U.S. 15-year-olds reported spending *more* time on self study or homework in science, math, and reading than did students on average across the 30 OECD nations taking the 2006 PISA assessment, including those in Japan and, except for math, in Korea.[73] Moreover, high-performing nations and states can be found all over the world, not just in Asia. For example, the five top-scoring nations in the 2006 PISA science assessment were located on four different continents, reflecting a range of cultures: Europe (Finland), North America (Canada), Asia (Japan), and Oceania (New Zealand and Australia).

Singapore is often singled out for its top performance on the TIMSS math assessment, which some say must be due to an unusually strong work ethic. But that belief was challenged in a 2005 study by the American Institutes for Research (AIR): "Singaporean students are hardworking, but if Singapore's success is attributable only to work ethic, how can we account for the fact that its high achievement is a comparatively recent development? On the Second International Science Study in the mid-1980s, Singaporean fourth graders scored only 13th out of 15 participating nations, and Singaporean eighth graders did no better than their U.S. counterparts .... In response to these poor scores, Singapore's Ministry of Education re-engineered and strengthened the education system, reforming both the science and mathematics curriculum."[74]

Countries such as Finland, Korea, and Hong Kong have achieved major improvements in learning outcomes over time without changing their national cultures. In fact, as recently as the mid-1980s Finnish students performed only about average among OECD nations on tests used at the time.[75] Hong Kong instituted numerous reading reforms that boosted its fourth-graders' performance from significantly below the U.S. in 2001 to significantly above it in 2006.[76]

Of course, cultural attitudes can play a role in achievement. Studies conducted in the 1980s found that mothers and students in some Asian countries were likely to attribute success in math more to effort than to innate ability, while the reverse was true for Americans.[77] But experimental studies have shown that students' beliefs can be changed in ways that positively impact learning; the National Mathematics Panel recommended that such strategies be used more widely in American classrooms.[78]

Myth: *Other countries are less diverse.*

Reality: The U.S. is a diverse nation, but that diversity should not prevent states from improving student achievement. Among the 11 other OECD countries that like the U.S. had more than 10 percent immigrant students, all of them performed higher in math and nine performed higher in science.[79] And Singapore, which scored at the top of the most recent TIMSS math assessment, is not as homogeneous as many assume. According to the 2005 AIR report, "Arguments about Singapore's homogeneity are not persuasive. ... Singapore has three major ethnic groups. About three-fourths of Singapore's population is Chinese, but almost a quarter is Malay or Indian. Like the United States, Singapore experienced serious ethnic strife in the 1960s."[80]

Cultural homogeneity has been cited as a factor in Finland's high achievement in that it lends itself to a great deal of agreement about education and education reform. But Finland's success also is attributable to very different educational policies and practices in areas like teacher recruitment and student support.[81]

Myth: *Wealthier countries spend more than the U.S. on education.*

Reality: The U.S. is wealthier and spends more on education than most other countries. Among the OECD's 30 member nations, the U.S. ranks highest in GDP per capita and second highest in educational expenditures.[82] A report on the U.S. economy published by OECD last year observed, "On average, and relative to other OECD countries, U.S. students come from well-educated, wealthy families and ... go to schools that are unusually well-financed. Given any of these factors, U.S. students might be expected to be among the world leaders."[83] However, while the U.S. ranks high in education spending, it ranks only near the middle of OECD nations in its "effort" to fund education when expenditures are compared with wealth (gross national product).[84]

Myth: *U.S. attainment rates cannot be compared with other countries' because the U.S. tries to educate many more students.*

Reality: The U.S. does rank higher than average on access to higher education, but that does not explain its very low college-completion rates. While America's entry rate for four-year and advanced postsecondary programs exceeds the OECD average by 10 percentage points (64 percent to 54 percent), its college "survival rate" trails the OECD average by 17 points (54 percent to 71 percent).[85] According to OECD, "Comparatively high drop out rates in the United States are [negatively] contributing to the United States' relative standing against other countries" in educational attainment.[86]

Myth: *Education does not really affect the economy anyway. A Nation at Risk warned that America's economy would suffer, but that never happened.*

Reality: While *A Nation at Risk* erred in linking the recession of the early 1980s to educational stagnation (other factors such as the business cycle are more important over the short term), the report was correct that improving education is critical to America's economic competitiveness. New research based on extensive data from many countries over several decades confirms that cognitive skills as measured by international tests strongly influence long-term economic growth.[87]

Other factors matter too, of course. In fact, America's historic advantages in other areas have made up for its students' mediocre skills and allowed the U.S. to grow its economy without significantly improving its schools. First, the sheer size of the U.S. and its much earlier investment in mass secondary and postsecondary education gave it a significant numerical advantage in human capital. Second, its open and agile economy, flexible labor markets, and intellectual property protections enabled industry to make better use of the human capital available.[88]

But those historic advantages are eroding as other countries imitate the U.S. example. America already has lost its lead in educational attainment, and many countries are instituting economic reforms. "Eventually, our competitors will narrow our economic lead as they learn how to create their own versions of agility and scale," says economist Anthony Carnevale. "At that point, the competition will really come down to who has the best human capital."[89]

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III. Five Steps Toward Building Globally Competitive Education Systems

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III. Five Steps Toward Building Globally Competitive Education Systems

States have both the authority and the responsibility to provide students with a high-quality education, and state leaders *already* are deeply engaged in efforts to raise standards, improve teaching quality, and help low-performing schools and students improve. For example, 34 states now belong to the American Diploma Project Network, an initiative dedicated to making sure that every high school graduate is prepared for college or work. In those states, governors, state superintendents of education, business executives, and college leaders are working to improve high school standards, assessments, and curricula by aligning expectations with the demands of postsecondary education and work.

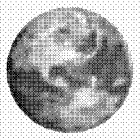
International benchmarking provides an additional tool for making every state's existing education policy and improvement process more effective, offering insights and ideas that cannot be garnered by examining educational practices only within U.S. borders. State leaders can use benchmarking to augment their "database of policy options" by adding strategies suggested by international best practice to the range of ideas already under consideration. Indeed, international benchmarking should not be a stand-alone project, but rather should function as a critical and well-integrated component of the regular policy planning process.

The following action steps were carefully chosen to help states focus their efforts on the policy areas that have both a high impact on student performance and also a high potential for best practice learning—in other words, where existing research has shown significant differences in how high-performing nations or states organize education compared with traditional approaches in most U.S. states. However, this should not be viewed as a static checklist. Benchmarking is a process of discovery as well as adaptation, and state leaders should keep an open mind as they collect information on practices abroad to expand their policy toolkits.

For example, action steps two through four address the major elements of what can be thought of as the "instructional delivery system"—the people, tools, and processes that translate educational expectations into teaching and, ultimately, into learning for students. Other countries have shown that all of these elements can be tightly aligned and focused through systematic reform, so they should not be considered in isolation. And because benchmarking is meant to broaden the policy lens, revealing lessons that might not be apparent in a limited state or national context, state leaders should be attuned to all the ways that other nations are delivering instruction more efficiently and effectively—from educational technology to school finance to governance.

Finally, higher education leaders should be asked to join international benchmarking efforts as full participants so existing initiatives are better coordinated with pre–K-12 and higher education policies through P-16 councils and other mechanisms. For example, higher education plays a key role in the recruitment and training of teachers and an increasingly important role in ensuring that high school graduation standards reflect college- and career-readiness requirements. Partnering with higher education also will facilitate a robust discussion about college graduation rates, which are very low in the United States and have contributed to the erosion of America's preeminence in higher education. Since the responsibility probably lies both with K-12 preparation and with higher education practice, leaders from both sectors should work together to ensure that attainment rates are internationally competitive.

The Action Steps



Action 1: *Upgrade state standards by adopting a common core of internationally benchmarked standards in math and language arts for grades K-12 to ensure that students are equipped with the necessary knowledge and skills to be globally competitive.*

Research has revealed striking similarities among the math and science standards in top-performing nations, along with stark differences between those world-class expectations and the standards adopted by most U.S. states. According to Bill Schmidt, a Michigan State University researcher and expert on international benchmarking, standards in the best-performing nations share the following three characteristics that are not commonly found in U.S. standards:

Focus. World-class content standards cover a smaller number of topics in greater depth at every grade level, enabling teachers to spend more time on each topic so that all students learn it well before they advance to more difficult content. In contrast, state content standards in the U.S. typically cover a large number of topics in each grade level—even first and second grade. U.S. schools therefore end up using curricula that are "a mile wide and an inch deep."

Rigor. By the eighth grade, students in top-performing nations are studying algebra and geometry, while in the U.S., most eighth-grade math courses focus on arithmetic. In science, American eighth-graders are memorizing the parts of the eye, while students in top-performing nations are learning about how the eye actually works by capturing photons that are translated into images by the brain.[90] In fact, the curriculum studied by the typical American eighth-grader is two full years behind the curriculum being studied by eighth-graders in high-performing countries.[91]

Coherence. Math and science standards in top-performing countries lay out an orderly progression of topics that follow the logic of the discipline, allowing thorough and deep coverage of content. In contrast, standards in many U.S. states resemble an arbitrary "laundry list" of topics, resulting in too much repetition across grades. "In the United States the principle that seems to guide our curriculum development is that you teach everything everywhere," says Michigan researcher Schmidt, "because then somehow somebody will learn something somewhere."[92]

To upgrade state standards, leaders will be able to leverage the Common State Standards Initiative, an upcoming joint project of NGA, CCSSO, Achieve, the Alliance for Excellent Education, and the James B. Hunt, Jr. Institute for Educational Leadership and Policy. The initiative will enable all states to adopt coherent and rigorous standards in K-12 math, reading, and language arts that are fully aligned with college and career expectations and also internationally benchmarked against leading nations. Achieve is developing an important tool for the initiative: a set of voluntary, globally competitive reference standards based on the existing American Diploma Project (ADP) framework. Because of how it was originally developed, the ADP framework *already* reflects the skills necessary to succeed in college and in well-paying jobs in today's labor market. Achieve is now working to further calibrate the framework to reflect international expectations as well as recent research on college and career readiness.

A key goal of the initiative will be to ensure that standards reflect all three of the critical dimensions exemplified by high-performing nations—not only rigor but also focus and coherence. In a study published last year, Schmidt and a colleague found that trying to cover too many topics per grade clearly has a negative influence on student learning, even when the order of topics is otherwise coherent. At the eighth-grade level, the researchers found "a decrease of fifty in the number of intended topics and grade combinations would predict an increase in achievement of almost three-fourths of a standard deviation. … The amount of 'clutter' created by covering too many topics … must be kept small."[93] Therefore, the internationally benchmarked common core of standards should not be seen as an addition to existing standards, but rather the foundation for states to establish rigorous standards that also are fewer and clearer (**Figure 4**).

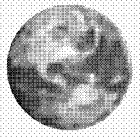
Figure 4: Mathematics Topics in Content Standards of 21 States

Topic	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Whole number meaning	●	●	●	●	⊙	○		
Whole number operations	●	●	●	●	⊙	○		
Measurement units	⊙	●	●	⊙	●	●	●	⊙
Common fractions	○	⊙	⊙	⊙	●	⊙	○	○
Equations and formulas	○	○	⊙	⊙	⊙	●	●	●
Data representation and analysis	●	●	●	●	●	●	●	⊙
2-D geometry: basics	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Polygons and circles	●	●	●	●	●	●	●	⊙
Perimeter, area and volume		○	○	○	⊙	●	●	⊙
Rounding and significant figures								
Estimating computations	○	○	⊙	⊙	⊙	⊙	⊙	⊙
Properties of whole number operations	○	○	○	○				
Estimating quantity and size			○					
Decimal fractions			○	⊙	⊙	⊙	○	○
Relationship of common and decimal fractions				○	○	○		
Properties of common and decimal fractions								
Percentages					○	⊙	⊙	○
Proportionality concepts						⊙	○	
Proportionality problems						⊙	⊙	⊙
2-D coordinate geometry			○	⊙	○	○	○	⊙
Geometry: transformations	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Negative numbers, integers, and their properties						○	⊙	○
Number theory					⊙	○	○	○
Exponents, roots and radicals						○	○	●
Exponents and orders of magnitude							○	○
Measurement estimation and errors	○	○	⊙	○	⊙	⊙	⊙	○
Constructions w/ straightedge/ruler and compass								
3-D geometry	●	●	●	⊙	●	⊙	●	⊙
Congruence and similarity					○	⊙	⊙	○
Rational numbers and their properties						⊙	⊙	○
Patterns, relations, and functions	⊙	●	●	●	⊙	●	●	●
Slope and trigonometry								

○ Intended by 67 percent of the 21 states
⊙ Intended by 83 percent of the 21 states
● Intended by *all* of the 21 states

Bold yellow line shows content coherence typical of top-performing countries

Source: Schmidt, W.H., C.H. Wang, and C.C. McKnight. Curriculum Coherence: An Examination of U.S. Mathematics and Science Content Standards from an International Perspective. Journal of Curriculum Studies 37, no. 5, 2005, pp. 525-559. (p. 541, Figure 4)



Action 2: *Leverage states' collective influence to ensure that textbooks, digital media, curricula, and assessments are aligned to internationally benchmarked standards and draw on lessons from high-performing nations and states.*

Research shows that top-performing countries support rigorous, coherent standards with a wide range of tightly aligned instructional tools—from assessments to classroom curriculum materials. In the U.S., while each state retains its own authority to make decisions in those areas, states can more efficiently reflect international best practice by working cooperatively on ways to upgrade those elements of their standards-based education systems.

Assessment offers a good example. Top-performing countries administer assessments that are more rigorous and better aligned with standards than the tests U.S. students typically take. For example, AIR found that Singapore's math assessments expect greater rigor and depth in mathematical knowledge; to test that knowledge, they employ fewer multiple choice questions and more problems that require multistep solutions and finding unknowns. In fact, Singapore's sixth-grade assessment proved more challenging than the eighth-grade math tests given in seven states as well as the eighth-grade National Assessment of Educational Progress.[94]

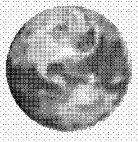
Such assessments typically are more expensive to develop and administer than the multiple-choice exams commonly used in the U.S. However, states can save time and money by sharing resources and expertise to develop high-quality voluntary assessments or a common pool of assessment items. That kind of collective effort also can ensure the availability of voluntary assessments or assessment items that are aligned with the internationally benchmarked standards to be developed through the Common State Standards Initiative.

The same is true when it comes to the components of the curriculum. Schmidt and colleagues found that the coherence typical of math standards in high-performing countries "is translated into textbooks, workbooks, diagnostic tests for teacher use, and other classroom materials that enable teachers to bring the curriculum into the classroom in a relatively consistent, effective way. In turn, the curriculum serves as an important basis for the nation's preservice teacher education and for ongoing professional development."[95]

While textbooks are only one of many kinds of instructional tools, they usefully illustrate the power of state collaboration to address international best practice. Researchers have found that U.S. textbooks, compared with those used in high-performing countries, are less aligned with standards and much less focused and coherent in the topics they cover. "If you look at U.S. textbooks," Schmidt and colleagues observe, "you'll find there is no textbook in the world that has as many topics as our mathematics textbooks, bar none."[96] For example, common elementary math textbooks in the U.S. cover almost twice as many topics per grade as do Singapore's. As a result, math textbooks in Singapore expect students to complete about one thorough lesson on a single topic per week, while U.S. students are expected to complete about one lesson on a narrowly focused topic each day.[97]

The problem is not simply a lack of focus and coherence in individual state standards, but also a lack of agreement *across* state standards. Publishers of math textbooks market them nationally by cramming them with enough topics to cover states' widely divergent standards. The Common State Standards Initiative partly solves this problem by providing a more focused and coherent set of expectations around which to develop textbooks and digital media. By working in concert to address concerns about length, focus, and coherence with commercial publishers, states can ensure that new expectations for textbooks, digital media, and other instructional materials are being addressed by the industry.

Finally, states can pool resources to develop entirely new tools, such as replacement units or diagnostic assessments that align with internationally benchmarked standards. In doing so, leaders should collaborate to ensure that curriculum supports take advantage of the newest technologies, including multimedia strategies, to support instruction. Harvard Business School professor Clayton Christensen predicts that by 2019 half of all high school courses will be delivered online.[98] Some research indicates that countries are pursuing a wide range of strategies and goals to encourage the use of computers and information technology for instruction, suggesting that there might be much to learn in this area from international benchmarking.[99]



Action 3: *Revise state policies for recruiting, preparing, developing, and supporting teachers and school leaders to reflect the human capital practices of top-performing nations and states around the world.*

Beyond establishing world-class educational standards, high-performing nations also adopt policies to ensure that students receive the best instruction possible. Recent studies have identified major differences in how top-performers and fast-improvers recruit, train, and support their teachers and school leaders compared with the policies in place in most U.S. states. Tackling these challenges can yield big dividends. Studies by U.S. researchers have found that assigning students to strong teachers for three years in a row can boost their test scores by as much as 50 percentile points above what they would gain with three ineffective teachers in a row.[100]

According to a study by Sir Michael Barber and Mona Mourshed of McKinsey and Company, the best-performing nations begin by recruiting top talent to the teaching profession: Korea recruits from the top 5 percent of graduates, Finland the top 10 percent, and Singapore the top 30 percent. The McKinsey researchers found that some countries accomplish this by setting a high initial bar and limiting access to teacher training to prevent an oversupply of candidates—especially weak ones—which, along with other strategies, raises the status of the profession and aids in recruitment.[101] "Finns have come to cherish good educators as Texans do ace quarterbacks," Kao writes in *Innovation Nation*.[102]

In contrast, the U.S. teacher pipeline seems to discourage individuals with competitive academic skills from entering and remaining in the profession. College students with high SAT and ACT scores are less likely to train to become teachers, less likely to take a teaching job, and less likely to stay in the classroom after a few years.[103] The likelihood that a highly talented female in the top 10 percent of her graduating class would become a teacher shrank by half, from about 20 percent to about 10 percent, between 1964 and 2000.[104]

Top-performing nations and provinces also use a range of strategies to provide teachers with excellent training and ongoing professional development—both of which are mostly mediocre in the United States. An international study released last year by the International Association for the Evaluation of Educational Achievement (IEA) and Michigan State University found that college students preparing to be teachers have weaker knowledge of mathematics and take less rigorous math courses than those in other countries. "What's most disturbing is that one of the areas in which U.S. future teachers tend to do the worst is algebra, and algebra is the heart of middle school math," say Bill Schmidt, who directed the study.[105]

Top-performing nations are going well beyond recruitment and initial training to build a 21st century teaching force, however. According to Schleicher and Stewart, "These countries are abandoning the traditional factory model, with teachers at the bottom of the production line receiving orders from on high, to move toward a professionalized model of teachers as knowledge workers. In this model, teachers are on a par with other professionals in terms of diagnosing problems and applying evidence-based practices and strategies to address the diversity in students' interests and abilities."[106] Such countries recognize that quality of classroom instruction is the most critical element of any education system, and they work to build cultures that combine high expectations with strong support and empowerment of teachers.

However, bolstering teacher professionalism does not mean asking teachers to create everything from scratch. Korea's Institute for Curriculum and Evaluation operates a Teaching and Learning Center that offers information about the national curriculum; promotes aligned instructional practices; and provides educators with a wide range of teaching materials, guidelines, and assessment tools.[107] The New Zealand Ministry of Education has supported development of tools for formative assessment, including Assessment Tools for Teaching and Learning, which can be used to assess literacy and numeracy of upper elementary and lower secondary students, as well as national curriculum exemplars in all subject areas. Teachers use the tools to evaluate the impact of instruction on student learning and adjust teaching to better meet students' needs.[108]

Based on conversations with many local educators across the United States, Education Trust President Kati Haycock underscores that benchmarking efforts should consider the immediate concerns of classroom teachers: "What do the leading countries do with children who arrive behind? What is international best practice for improving the performance of language minorities? How do teachers differentiate instruction without losing sight of rigorous standards?"[109] Since educators ultimately will be responsible for ensuring that students meet the new globally competitive standards, policymakers should take care to incorporate such questions into their benchmarking research.

Top nations and states also focus on developing excellent school leaders and charge principals with ensuring that teachers provide consistently high-quality instruction. The state of Victoria in southeastern Australia recently implemented an intensive strategy to improve educational leadership that has been dubbed "cutting edge" by international experts. The strategy is closely aligned with the state's comprehensive effort to improve schools and includes a rigorous principal selection process; mentoring programs for new principals and a coaching program for experienced ones; a "balanced scorecard" approach to principal performance management; an accelerated program for high-potential leaders; and a program to develop high-performing principals. The government has established 19 separate leadership-development opportunities, each firmly rooted in research and best practice (**Figure 5**).[110]

Singapore's approach to developing leaders is widely admired too. Singapore screens prospective school leaders using a rigorous process and then provides a six-month training program run by the National Institute of Education. The program includes management and leadership courses from leading executive training programs; one day per week spent in schools to come up with innovative solutions to practical problems; group projects; two-week overseas placements with major corporations; and rigorous evaluation.[111] Great Britain recently revamped its national approach to developing principals based on a careful study of that model.[112]

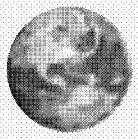
Sir Michael Barber emphasizes that there are important lessons for improving teaching and leadership that can be adapted and applied across nations—and vigorous policy efforts can result in rapid improvements. When the British government surveyed adults aged 24 to 35 in the year 2000 about switching jobs, teaching ranked 92nd out of 150 career choices. But in a follow-up survey conducted in 2005, after improvements to teacher training coupled with a vigorous marketing campaign, teaching came out on top.[113] "Our benchmarking suggests that the same broad policies are effective in different systems irrespective of the cultural context in which they are applied," Barber and Mourshed conclude in their report.[114] U.S. state leaders could learn much from such examples; particularly during the current economic downturn, there might be many adults with strong content backgrounds who could be induced to switch to a career in teaching.

In the U.S., costs related to human capital account for the vast majority of education spending. The goal for international benchmarking should be to ensure the most effective and efficient use of funds for preparation, recruitment, training, ongoing development, and support. This will require a careful examination of how higher education institutions and systems in top-performing countries are structured to encourage young people to enter the teaching field and prepare them to become quality instructors at the elementary and secondary level.

Figure 5: Leadership Development Opportunities in Victoria, Australia

Name of Programme	Open to	Description	Aspirant leaders	Assistant principals	Principals
Master in School Leadership	All after 5 years teaching	Taught modules, in-school elements and mentoring or shadowing; 2 years	√	√	√
Building capacity for improvement	Teams of teachers	Briefing, residential and day workshops, coaching support and feedback; 1 year	√	√	√
Building the capacity of school leadership teams	School leadership teams	Three-day residential, action research in school, 3 coaching sessions, follow-up workshop; 1 year	√	√	√
Leading across effective small schools	Small school teams	Three 1-day forums, action learning project, Web-based support, mentor with small school experience; 1 year	√	√	√
Leading in effective schools (strategic planning)	High potential leaders	Briefing, preparatory activities and 360-degree feedback, two workshops, 4 coaching sessions and ongoing e-mail contact; 1 year	√	√	
Preparing for leadership	Experienced teachers	Two-day conference, four-day workshops, background reading, pre- & post-programme 360-degree feedback, school based project, shadowing; 1 year	√		
Leading for student learning	Expert teachers	Five days workshops, reading and data collection, 360-degree feedback, peer learning groups; 1 year	√		
Leading professional learning	Professional development coordinators	One year part-time programme	√	√	
Scholarships for postgraduate study	Postgraduate teachers	Range of postgraduate courses	√	√	
Eleanor Davies school leadership programme	Female leading teachers / APs	Five months including mentoring, reading, seminars, school based project	√	√	
Leaders in the making	Assistant principals	One year with workshops and strategic planning project	√	√	
Stepping up to the principalship	Assistant principals	One year, including data-collection, workshop, shadowing, reviews		√	
Educational leadership: shaping pedagogy	APs and principals	One year, including preparation, intensive workshop, review, feedback, action planning		√	√
Human leadership: developing people	APs and principals	One year, development and implementation of a professional learning plan		√	√
Technical leadership: thinking and planning strategically	APs and principals	One year, including strategic planning project		√	√
Mentoring for first time principals	First time principals	One year			√
Coaching to enhance the capabilities of experienced principals	Experienced principals	One year with assigned coach			√
Development programme for high performing principals	Principals	Over a two-year period including contribution to system development and individual professional development			√
Building the capacity of the principals of small schools	Principals of small schools	One year			√
Teachers professional leave	All teachers	30 days	√		

Source: Matthews, P., H. Moorman, and D. Nusche. In Pont, B., D. Nusche, and D. Hopkins (Eds.), Improving School Leadership, Volume 2: Case Studies on System Leadership. Organisation for Economic Co-Operation and Development, Paris: OECD, 2008, pp. 179–213. (p. 196, Box 7.5)



Action 4: *Hold schools and systems accountable through monitoring, interventions, and support to ensure consistently high performance, drawing upon international best practices.*

Top-performing nations exhibit a wide range of different approaches to the functions commonly defined in the U.S. under the rubric of "accountability." But recent research suggests that such nations share several key strategic priorities and employ a broader range of tools for managing those priorities than is evident in this country.

First, most high-performing nations use multiple mechanisms to monitor school performance, including annual student assessments in key grades and whole-school reviews or "inspections." Such inspections evaluate the performance of a school against a broad set of criteria, including, but not limited to, student achievement and also examine the school *practices* that contribute to student results. Inspections take many different forms in different countries, including annual reviews conducted by an external agency; annual self evaluations complemented by an external review every few years; and self reviews coupled with external reviews on a much more occasional basis, often initiated by schools themselves.[115] New York City recently adopted a system of school inspections based on the British model.[116]

One advantage of such an approach is that leaders can more precisely diagnose the root causes of underperformance and, consequently, better match interventions with specific needs. According to a benchmarking report commissioned by Achieve for the state of Ohio, the British system "takes account of each school's day-to-day working and its capacity for change. . . . When [the Office for Standards in Education] finds poor student outcomes and poor quality leadership, for instance, it calls for stronger measures than it would for a school with bad test scores but competent leadership."[117]

Second, some top-performing countries have adopted policies to ensure that every student succeeds by monitoring students' progress and intervening to prevent them from falling too far behind. In Finland, every school employs "special education teachers" who receive additional training to provide individual or small-group support to students who need it, mainly in Finnish language arts and mathematics. On average, about 30 percent of students receive such additional help every year, sometimes even the best students. The goal is to identify any student who is having difficulty at a particular point in time and get that student caught up and able to handle a rigorous classroom curriculum.[118]

In Singapore, schools use a national examination to identify upper elementary grade students who are having difficulty in math. Those students then receive special instruction based on an adapted curriculum framework taught by trained Mathematics Support Teachers. Importantly, they also receive about 30 percent *more* math instruction than their peers so that they can cover the same rigorous content, only at a slower pace.[119]

According to Schleicher and Stewart, many of the countries that perform well on PISA have established strong norms and mechanisms to support students. Teachers in such countries "don't have the option of making students repeat the school year—retention is not permitted—or transferring students to schools with lower performance requirements," they say. "Even where retention or transfers are technically possible, incentive structures for teachers and schools encourage teachers to address and solve challenges rather than hand them to others."[120]

Moreover, a thoughtful approach to accountability can help ensure that students experience a curriculum consistent with state standards and also that academic expectations do not vary too much across schools and classrooms. Even though Finland has an educational culture that greatly values the autonomy granted to local educators, its government recently tightened the national core curriculum after evaluations revealed too many gaps between students' classroom grades and their assessment results. "Another reason for the new approach is the fact that students use their final school reports in basic education when applying to upper secondary education institutions," says Reijo Laukkanen of the Finnish National Board of Education. "Thus, the new rules also safeguard the equality of students."[121]

Finally, top-performing nations balance accountability with greater school autonomy. A number of studies based on PISA, TIMSS, and PIRLS have found that students perform better in systems that give schools greater freedom to hire and reward teachers, purchase supplies and make other school-specific budget allocations, and choose curriculum materials and teaching methods.[122] Those studies also show that decentralization works best when it is combined with various forms of accountability. According to one team of researchers, the positive impact of school autonomy coupled with choice and accountability amounts to more than one-and-a-half grade-level equivalents on the PISA assessment.[123]

In general, however, there is still much to learn about forms of accountability in other nations. One area that states might examine closely as part of their benchmarking work is how other nations use assessment for accountability. What kinds of assessments do they administer in which grades and subjects? What content and skills do those tests measure? What kinds of questions do they use—multiple choice or more open-ended problems? How are assessments scored? And how are the results published and used for accountability purposes?

Action 5: *Measure state-level education performance globally by examining student achievement and attainment in an international context to ensure that, over time, students are receiving the education they need to compete in the 21st century economy.*

As states establish world-class standards and adopt other policies based on international best practice, leaders will want information on whether students are benefiting from the changes and are meeting higher expectations. "States are no longer competing with just the states next door but with countries around the world," argues Vivien Stewart. "Their students are competing with students in Singapore, Shanghai, and Salzburg; it's important to have a sense of whether they are being prepared to thrive in a global, knowledge-based economy."[124] Over time such data also can help prevent newly upgraded, internationally benchmarked state standards from slipping back below globally competitive levels.

In most industrialized countries with a federal-style education system, state leaders already have access to that kind of information because most take part in PISA at state levels and some also participate in TIMSS. In the U.S., governors and chief state school officers would welcome the opportunity to compare student performance internationally. However, state leaders are concerned about the number of tests students already are required to take for various purposes as well as the costs of administering additional assessments. Currently the U.S. is characterized by an overly cumbersome and fragmented testing system in which the federal government, states, districts, and schools together administer many different assessments to meet a wide variety of purposes.

Therefore, states can best address this action step through cooperative action to find a streamlined and cost-effective solution for generating international student achievement comparisons. Since all states already are required to participate in the National Assessment of Educational Progress (NAEP), leaders can use their collective leverage to work with the National Assessment Governing Board (NAGB) to explore the feasibility of upgrading NAEP to yield results that are comparable with existing international assessments such as TIMSS, PIRLS, and PISA. The strategy should permit states to secure representative school-level samples to analyze the relationship between school-level practices and student achievement, which in turn would enable leaders to craft policies promoting more widespread use of effective practices.

Adapting NAEP to yield internationally comparable results will be easier to accomplish in the case of TIMSS and PIRLS. TIMSS is more closely aligned with NAEP, and they both assess students in math and science in grades four and eight. Similarly, PIRLS tests students in reading in grade four, though a recent U.S. Department of Education study found that PIRLS incorporates easier reading passages than NAEP while also assessing some kinds of reading tasks that NAEP does not.[125]

Since PISA assesses 15-year-olds in participating nations, NAGB would need to explore how to adjust NAEP samples to include a comparable group of young people, as well as how to incorporate the more open-ended assessment items that characterize PISA. (PISA relies on "constructed response" items over multiple choice questions by a margin of two to one, while the reverse is true for TIMSS and NAEP.[126]) However, many consider PISA to be an important complement to TIMSS and PIRLS because, while the majority of countries participating in TIMSS are low-

and middle-income countries, PISA focuses on the lead industrialized countries that are the main economic competitors of the United States (**Appendix A, pg. 41**). In addition, PISA assesses students near the end of compulsory education on whether they can *apply* what they have learned in math, science, and reading to solve real-world problems.

Governors, chief state school officers, and other leaders also should work to develop assessments that indicate whether students are on track for college readiness. The best example of such an initiative is California's Early Assessment Program (EAP), a collaborative effort among the California State Board of Education, the California Department of Education, and California State University (CSU). EAP allows students to take an additional component of the Grade 11 California Standards Test in reading and mathematics. The results provide an "early warning" that signals the student's college-readiness status; students who meet the benchmark are exempt from having to take the CSU placement test, which is normally given to students after they enroll.[127] Fourteen states in the American Diploma Project Network are developing a common end-of-course exam for Algebra II that is intended to serve the same purpose.

Of course, each state has the authority to make its own decisions regarding assessment and leaders always can choose to administer one or more of the existing international tests. For many policymakers, the most significant difference between TIMSS and PISA is in the type of content and skills each assesses. According to an analysis by the U.S. Department of Education, "TIMSS and NAEP appear to have the most in common, with a focus on material that is more likely to be taught through the school curriculum than PISA, which is more situation and phenomena-based. … TIMSS and PISA differ in a number of respects, including a greater focus on factual knowledge in mathematics and science in TIMSS than in PISA, and a greater focus on problem solving and the critical evaluation of information in PISA than in TIMSS. Moreover, PISA has a greater focus on data analysis, statistics and probability in mathematics than either TIMSS or NAEP [**Table 1**]."[128]

Some U.S. states already have participated in the TIMSS assessment, including Massachusetts and Minnesota in 2007. The IEA and the U.S. Department of Education are working to develop cost models for various levels of state participation in the next administrations of TIMSS and PIRLS in 2011. While no U.S. state has yet participated in PISA, most federal education systems around the world—including Australia, Belgium, Canada, Germany, Italy, Mexico, Spain, Switzerland, and the United Kingdom—have worked with OECD to report PISA results for states or provinces. Across OECD nations, state-level results are generated using a variety of strategies, offering U.S. states several proven models to consider.

A few nations and states have experimented with approaches that do not require students to take the full international assessment every few years. One option is to embed a selection of PISA or TIMSS items into existing state assessments. Another is to generate a statistical "link" using NAEP tests that can then be used to estimate state PISA or TIMSS performance. Such options are less expensive, and in practice are less burdensome on schools that must administer the tests, but what they save in dollars, time, and effort, they sacrifice in depth of data, since policymakers will not be able to dig beneath overall averages.

In addition to achievement, state leaders should gather information to compare educational *attainment* with top-performing and fast-improving nations, starting with indicators published by the OECD in its annual *Education at a Glance* report. Many of the raw data necessary are already collected by federal statistical agencies. For the OECD's 2008 report, the United States provided comparable data on the following key indicators:

- Percentage of 25- to 34-year-olds who have attained at least a high school degree;
- Percentage of 25- to 34-year-olds who have attained a postsecondary degree;
- Upper secondary graduation rate;
- Postsecondary entry rate;
- Postsecondary graduation and completion rates; and
- Number of postsecondary science degree holders per 100,000 employed among 25- to 34-year-olds.

Finally, state leaders should create an explicit plan to ensure that their investment yields more than a new set of numbers—including a strategy for communicating the results; a strategy for analyzing the results to dig beneath averages and identify significant patterns, strengths, and weaknesses; and the designation

Table 1. The Three Major International Assessments

	PISA	TIMSS	PIRLS
Sponsor	Organisation for Economic Co-Operation and Development	International Association for the Evaluation of Educational Achievement	International Association for the Evaluation of Educational Achievement
Grades or ages tested	15-year-olds	Fourth and eighth graders	Fourth graders
Subjects tested	Math, science, and reading every three years; special problem solving assessment in 2003	Math and science	Reading
Content tested	Ability to apply math, science, and reading to solve real-world problems	Attainment of knowledge and skills in math and science curriculum	Reading comprehension skills
Testing cycle	Every 3 years	Every 4 years	Every 5 years
Last administration	2006	2007	2006
Next administration	2009	2011	2011
Cost for state participation	2009: $250,000 to $550,000 depending on level of participation	2007: $600,000 for full participation including *both* 4th and 8th grades, or $350,000 for a full sample in just one grade 2011: To be determined	2011: To be determined
Type of test questions	About two-thirds constructed response and one-third multiple choice	About one-third constructed response and two-thirds multiple choice	About one-half constructed response and one-half multiple choice
Sub-topics for which scores are reported	**Math (2003):** Quantity; space and shape; change and relationships; uncertainty **Science (2006):** Overall knowledge; knowledge about earth and space; knowledge about living systems; knowledge about physical systems; identifying scientific issues; explaining phenomena scientifically; using scientific evidence **Reading (2000):** Retrieving information; interpreting texts; reflection and evaluation	**Math:** Grade 4–Number; patterns and relationships; measurement; geometry; data. Grade 8–Number; algebra; measurement; geometry; data **Science:** Grade 4–Life science; physical science; earth science. Grade 8–Life science; chemistry; physics; earth science; environmental science	Reading for literary purposes; reading for informational purposes; retrieving and straightforward inferencing; interpreting, integrating, and evaluating
Technical alignment with NAEP: Can scores be equated to NAEP?	Little alignment; not enough to crosswalk scales and scores	Significant alignment; enough for some researchers to crosswalk scales and scores*	Unknown
Nations participating	*Please refer to Appendix A for a complete list of countries participating in each.*		

* See for example Phillips, G. W. (2007). *Chance Favors the Prepared Mind: Mathematics and Science Indicators for Comparing States and Nations.* Washington, DC: American Institutes for Research.

of an agency or agencies responsible for collecting additional information and making recommendations for improvement.

Addressing the Equity Imperative

Rather than addressing equity as an isolated action step, state leaders should approach it as an overarching or "interdisciplinary" imperative as they tackle each of the action areas described above. Recent research shows that other nations arrange their education systems more equitably. For example, the U.S. falls short across the following dimensions:

- An opportunity gap in access to qualified teachers that is among the largest in the world;[129]
- The only country where lower performing students and children with less-educated parents are likely to be taught in *larger* classes;[130] and
- Math teachers less likely than those in high-performing countries to include conceptual strategies along with basic computation for low-achieving students.[131]

In other words, education systems in the United States tend to give disadvantaged and low-achieving students a watered down curriculum in larger classes taught by less qualified teachers—*exactly the opposite of what high-performing countries do.*

States could greatly improve their repertoire of policy strategies for promoting academic equity by examining specific strategies in other countries. Korea, for example, has two major policies for encouraging more equal access to qualified teachers. First, teachers are rotated within districts on a regular basis every five years. Second, the government offers educators a wide range of attractive incentives to teach in remote areas and regions with disadvantaged populations, including smaller class size, less in-class teaching time, salary stipends, the chance to choose the next school placement, and a competitive advantage when seeking administrative positions.[132]

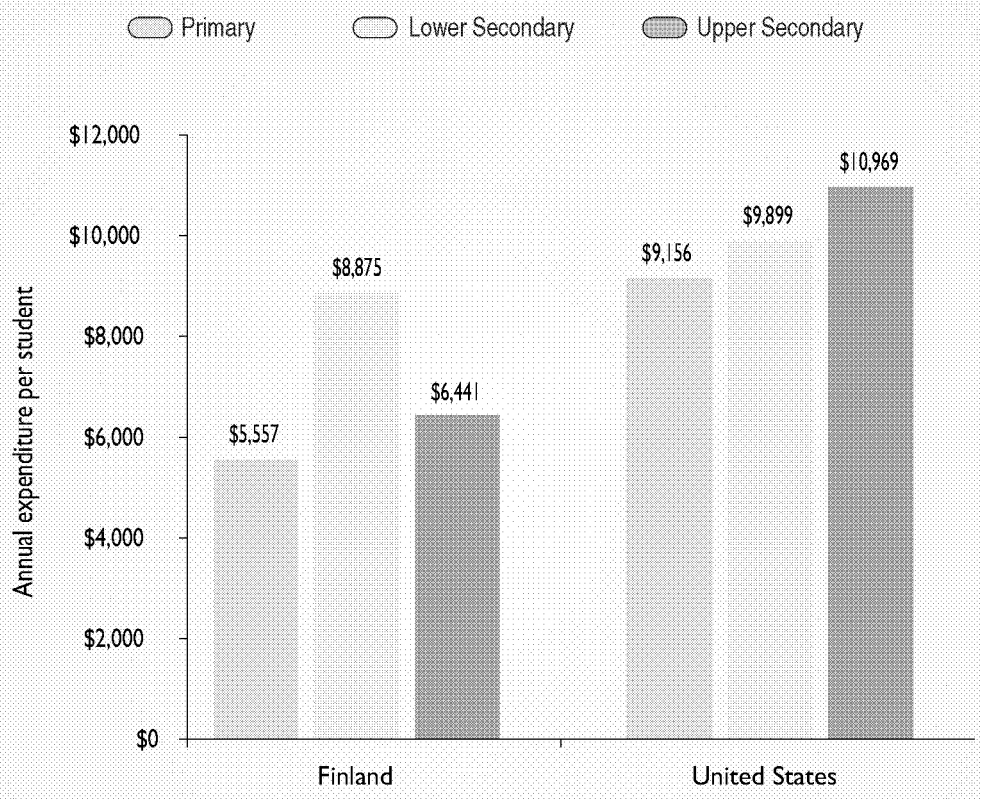
Many high-performing countries also provide intensive, targeted academic supports to students, such as the Finnish and Singaporean intervention strategies described above. The Finnish example is particularly interesting in that it is one of four overlapping "layers" of intensifying interventions for students who fall behind. The first line of attack is formed by regular classroom teachers who receive intensive training to deal with diverse learning challenges through teacher preparation internships, which might deal with "students performing at different levels to the special needs of immigrant children to more difficult cases of fetal alcohol syndrome or attention deficit hyperactivity disorder."[133]

The second line of attack is made up of classroom teaching aides who often work with individuals or small groups of students, followed by the highly trained "special education" teachers described above. Finally, students whose lack of progress is due to family or social difficulties outside of school can be referred to "multi-disciplinary teams."[134] According to a recent case study by the OECD, "Overall, these approaches to minimizing the number of students falling behind display two features: intensification (providing more time by more instructors) and alternative approaches (rather than 'more of the same') ... But they do so in consistent ways, working with the classroom teacher on the specific subjects students are having trouble with, rather than relying on a grab bag of after-school programs and tutoring efforts randomly distributed by grade levels and subjects."[135]

Such supports continue through lower secondary education, including a "class teacher" who follows a particular group of students for three years to monitor individual progress.[136] Indeed, when Finland ended early tracking of students and moved toward a more equitable system in the 1980s, leaders realized that lower secondary education would be a problem spot in the pipeline where vulnerable students might fall off track, so they specifically targeted greater funding toward the lower secondary grades—and continue to do so today (**Figure 6**).[137]

Some would argue that the U.S. cannot learn from Finland because it is a more equitable country socially and economically. However, it is telling that Finland's commitment to equity does not stop at the schoolhouse door; rather, the education system itself has been carefully constructed to maximize equity and ensure consistently high levels of performance for all students. According to an OECD report on educational equity best practices published last year, "Many countries could usefully follow the successful Finnish approach to learning difficulties, offering a sequence of intensifying interventions which draw back into the mainstream those who fall behind."[138]

Figure 6: Finland Targets Funds Toward Lower Secondary Where Needs Are Greatest



Source: Organisation for Economic Co-Operation and Development. Education at a Glance 2008. Paris: OECD, September 2008, p. 219, Table B1.1a. Figures represent annual expenditure on educational institutions per full-time equivalent students for all services in 2005, in equivalent U.S. dollars converted using purchasing power parity for gross domestic product.

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IV. The Federal Role

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If benchmarking were only about measuring and comparing outcomes, the federal government might be able to play a leading role. However, because benchmarking is also—and most critically—about improving policy, states must take the lead. States have primary authority over the policy areas that other nations are most eager to benchmark and improve: standards, assessments, curriculum, and the education workforce. States already have led in raising standards, with 16 having adopted a common core of college- and career-ready expectations in math and reading for high school graduation.

The United States is not alone in this regard. Countries such as Canada, Australia, Germany, and Spain have federal-style education systems where states retain a great deal of authority over education. And in many of those countries, states are taking a leading role in benchmarking educational performance and policies. For example, the public outcry over mediocre results on the 2000 PISA assessment led to a historic new partnership between Germany's federal government and its 16 *Länder* (states), with the *Länder* taking responsibility for the establishment of shared education standards and assessments for schools across the nation while the federal government provided support for those and other state reforms.

America can learn from that example, too: While states must take the lead, the federal government can help. And the federal government can do that best by playing an *enabling* role grounded in a new vision for the historic state–federal partnership in education—one that is *less* restrictive and mandate-driven and *more* encouraging of innovation. As states take on the important work of benchmarking their education systems to the best in the world, the federal government can assist states in specific ways at each stage of the journey:

- As soon as possible, the federal government should offer new funding or allow existing funds to be used to help underwrite the cost for states to take the five action steps described above related to standards and assessment, curriculum, human capital, and accountability.
- At the same time, the federal government should increase its own investment or focus existing resources toward better research and development in this area to provide state leaders with more and better information about tools for benchmarking and international best practice in education. For example, the U.S. Department of Education should:
  1) Support efforts to collect and share international achievement and attainment data relevant to states; help state leaders identify good comparison nations or provinces for benchmarking; and collect and disseminate information about best practices of high-performing and fast-improving nations and provinces around the world; and
  2) Convene a technical advisory committee on assessment to make recommendations for generating internationally benchmarked results by state without adding significantly to costs and testing time. The committee should disseminate useful technical information about existing assessments, share policy options for improving and streamlining state assessment systems, and review the feasibility of adapting NAEP to generate international comparisons as described above.
- As states reach important milestones on the way toward building internationally competitive education systems, the federal government should offer a range of tiered incentives to make the next stage of the journey easier. With accountability at the core for greater results, such incentives could include:
  1) Increased flexibility in the use of federal funds;
  2) Increased flexibility in meeting requirements of existing federal education laws so that states are not thwarted in their efforts to adapt and adopt international best practices; and
  3) Additional funds to help states implement world-class practices.
- Over the *long term*, the federal government should change existing federal laws to align national education policies with the lessons learned from state benchmarking efforts and from federally funded research.

Over time, the combination of better information, additional support, and more flexibility for innovation would greatly accelerate state progress in developing and implementing world-class education systems. And that, in turn, will benefit all Americans, safeguarding U.S. economic security and ensuring continued prosperity in the new global economy.

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V. Conclusion

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Other nations have benefited from America's historic example by expanding educational opportunities for their own citizens. Now it is time for U.S. leaders to ensure that Americans develop the skills they need to compete—and help the U.S. remain competitive—in a rapidly changing world.

The federal government can help, but states must lead. They must look beyond their borders and America's shores to fully understand how to benchmark expectations for student learning. They must significantly broaden the policy lens by drawing lessons from the highest performing, most equitable, and fastest advancing nations and states around the globe and adapting the very best educational practices to incorporate here at home.

If states in other countries can shape the response to the global education imperative, states in America must do so as well. And state leaders have both the authority and an obligation to ensure that students attend globally competitive schools and school districts. America cannot maintain its place in the world—economically, socially, or culturally—unless all of its students gain the skills that allow them to compete on a global scale. The United States will only achieve true international competitiveness when state education policies and institutions are restructured to meet 21st century realities.

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Appendix A: Countries Participating in International Assessments

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Table reflects the most recent test year for which participation information is available.

	PISA 2009	TIMSS 2007 4th	TIMSS 2007 8th	PIRLS 2006
Africa				
Algeria		X	X	
Botswana			X	
Djibouti		X		
Egypt			X	
Ghana			X	
Morocco		X	X	X
South Africa			X	X
Tunisia	X	X	X	
Asia				
Azerbaijan	X			
Bahrain			X	
Chinese Taipei	X	X	X	X
Dubai (UAE)	X			
Hong Kong SAR	X	X	X	X
Indonesia	X		X	X
Iran, Islamic Republic		X	X	X
Israel	X		X	X
Japan	X	X	X	
Jordan	X		X	
Kazakhstan	X			
Korea, Republic of	X		X	
Kuwait		X	X	X
Kyrgyzstan	X			
Lebanon			X	
Macao-China	X			
Malaysia			X	
Mongolia		X	X	
Oman			X	
Palestinian Authority			X	
Qatar	X	X	X	X
Saudi Arabia			X	
Shanghai (China)	X			
Singapore	X	X	X	X
Syria			X	
Thailand	X		X	
Turkey	X		X	
Uzbekistan			X	
Yemen		X		
South America				
Argentina	X			
Brazil	X			
Chile	X			
Colombia	X	X	X	
Dominican Republic	X			
Panama	X			
Peru	X			
Trinidad and Tobago	X			
Uruguay	X			
Oceania				
Australia	X	X	X	
New Zealand	X	X		X

	PISA 2009	TIMSS 2007 4th	TIMSS 2007 8th	PIRLS 2006
Europe				
Albania	X			
Armenia		X	X	
Austria	X	X		X
Belgium	X			X
Bosnia & Herc			X	
Bulgaria	X		X	X
Croatia	X			
Cyprus		X	X	
Czech Republic	X	X	X	
Denmark	X	X		X
England	X	X	X	X
Estonia	X			
Finland	X			
France	X			X
Georgia			X	X
Germany	X	X		X
Greece	X			
Hungary	X	X		X
Iceland	X			X
Ireland	X			
Italy	X	X	X	X
Latvia	X		X	X
Liechtenstein	X			
Lithuania	X	X	X	X
Luxembourg	X			X
Macedonia, Republic of				X
Malta		X		
Moldova, Republic of	X	X	X	X
Montenegro, Republic of	X			
Netherlands, The	X	X		X
Norway	X	X	X	X
Poland	X			X
Portugal	X			
Romania	X		X	X
Russian Federation	X	X	X	X
Scotland	X	X	X	X
Serbia, Republic of	X		X	
Slovak Republic	X	X		X
Slovenia	X	X	X	X
Spain	X		Basque	X
Sweden	X	X	X	X
Switzerland	X			
Ukraine		X	X	
North America				
Belize				
Canada	X	X	X	X
El Salvador		X	X	
Honduras		X	X	
Mexico	X			
Trinidad and Tobago				X
United States	X	X	X	X
Totals	*68*	*40*	*55*	*40*

Source: National Center for Education Statistics and Organisation for Economic Co-Operation and Development.

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Achieve

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Measuring Up

A Report on Education Standards and Assessments for MASSACHUSETTS

ACHIEVE'S BENCHMARKING INITIATIVE

About Achieve, Inc.

Achieve is an independent, bipartisan, nonprofit organization created by governors and corporate leaders to help states and the private sector raise standards and performance in America's schools. Founded at the 1996 National Education Summit, Achieve has sponsored two additional Summits in 1999 and 2001.

Achieve helps states raise academic standards, measure performance against those standards, establish clear accountability for results and strengthen public confidence in our education system. To do this, we:

- help states benchmark their standards, assessments and accountability systems against the best in the country and the world;
- provide sustained public leadership and advocacy for the movement to raise standards and improve student performance;
- build partnerships that allow states to work together to improve teaching and learning and raise student achievement; and
- serve as a national clearinghouse on education standards and school reform.

MEASURING UP:

A STANDARDS AND ASSESSMENT BENCHMARKING REPORT FOR

MASSACHUSETTS

Prepared by Achieve, Inc. for

Commissioner David P. Driscoll
Massachusetts Department of Education

October 2001

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EXECUTIVE SUMMARY

Achieve Inc. was created in 1996 by governors and business leaders to serve as a clearinghouse and resource center on education standards, assessments and accountability. As part of its mission, Achieve provides states with candid feedback on the quality of their academic standards, assessments, accountability systems and other policies to promote high academic achievement. To date, Achieve has analyzed the policies and expectations of 10 states and currently is working with seven others.

At the request of the Massachusetts Department of Education, Achieve conducted an evaluation of the state's K–12 mathematics standards and grade 10 Massachusetts Comprehensive Assessment System (MCAS) tests in English language arts and mathematics during the spring and summer of 2001. The state's English language arts standards were not analyzed because Achieve believes these are already among the best standards in the nation and uses them as "exemplary standards" against which other states' standards are compared.

This report presents the results of Achieve's in-depth evaluation of the quality, rigor and alignment of Massachusetts' expectations. In particular, it provides policymakers with answers to the following questions:

- How do Massachusetts' mathematics standards compare with those of high-performing states and nations? Are the expectations for schools and students rigorous yet reasonable?

- How well do the grade 10 MCAS tests in English language arts and mathematics measure the knowledge and skills laid out in the standards? How challenging are the assessments?

RESULTS FOR MASSACHUSETTS

Massachusetts has made substantial progress in developing and implementing two essential components of standards-based reform — strong standards and assessments that measure what the standards expect. The major findings:

- **Overall, Massachusetts' standards and high school tests are of high quality and are aligned, providing a solid foundation on which to build state education policy.** The grade 10 MCAS tests are rigorous and generally well aligned with the standards, ensuring that students are required to demonstrate important knowledge and skills before graduating from high school. While the mathematics standards are not without shortcomings, which are discussed in more detail below, overall these expectations represent an articulate statement of what students should know and be able to do, at least at a minimum, by the time they complete high school. (The English language arts standards, as noted above, previously have been judged among the strongest in the country.) Importantly, this sets Massachusetts apart from

the other nine state standards and assessment programs that Achieve has reviewed — it is the only state that has both strong standards and strong assessments.

- **The grade 10 tests are rigorous yet reasonable — and are, in fact, the most challenging of the exit-level tests Achieve has reviewed.** The MCAS tests measure the important knowledge and skills demanded by the standards, are technically sound, encourage high levels of performance, and provide a template for effective classroom instruction. And releasing all common items each year is an exemplary strategy that enhances not only educational practice, but also the credibility of the state's educational improvement efforts. Many students should be able to pass these tests by the end of the 10th grade, and it is realistic to expect that the other students, given sufficient curriculum and teaching support, should be able to meet the standards by the end of high school. Students who perform below the "needs improvement" level likely have a minimal level of skill and will need intensive instructional support to achieve the minimum standards.

- **The mathematics standards generally are well organized, jargon-free, clear and precise.** The standards embody reasonable minimum-level criteria for student competency and are generally comprehensive. However, the standards should be strengthened by placing more emphasis on developing students' conceptual understanding of mathematics. Also, they are not yet as challenging as standards from Japan, Arizona or Achieve's Mathematics Achievement Partnership, of which Massachusetts is a founding partner state.

RECOMMENDATIONS FOR MOVING FORWARD

As Massachusetts moves forward in implementing its system for standards-based educational improvement, Achieve recommends that the state consider two improvements in particular:

- ✓ **The MCAS high school tests include relatively minor flaws that should be fixed in subsequent rounds of testing. For example, the math test emphasizes some standards at the expense of others, and the English language arts test needs more treatment of nonfiction.** The MCAS mathematics test measures important content that all high school students should be responsible for knowing, yet it can be improved further. Achieve found a number of mathematics test items ostensibly designed to assess number concepts that instead more directly measure algebra standards; this has the effect of weighting the test more heavily toward algebra and omitting some advanced number concepts. Also, while the test is generally well constructed, the balance of items does not provide adequate coverage for all of the important knowledge and skills detailed in the standards. The state should ensure that items assessing numbers and data analysis are appropriately challenging on the next edition of the MCAS mathematics test.

  The language arts test is rich and rigorous, but it focuses too much on literature. All students should be exposed to a deep and engaging literary curriculum, but they also should learn how to read and interpret informational texts, such as historical documents, scientific journal

articles and technical manuals. And, the state should consider varying the 10th-grade writing prompt from year to year to assess students' skills in producing different kinds of compositions, rather than just literary analyses. By giving short shrift to students' abilities to work with informational texts, the test does not evaluate the full range of skills students need to participate meaningfully in the emerging "knowledge economy."

- ✓ **The mathematics standards should require more rigor and depth, attention to and emphasis on mathematical reasoning, and a sharper focus on essential content at each grade level.** At the middle and high school levels, students will need to be held to higher expectations to be fully prepared for success in college and high-performance workplaces. While Achieve acknowledges that many Massachusetts schools and students are struggling to meet the state's current standards — and these students will need intensive academic support in the short run — over time, as long-term changes in teacher recruitment, preparation and professional development begin to take effect, the state should raise the rigor of the mathematics standards. In the immediate future, the state may wish to publish companion materials to the mathematics standards that include numerous sample problems and activities and descriptions of how educators can build students' conceptual understanding of mathematics and reasoning ability.

* * *

Achieve also recently conducted a policy review for Massachusetts, the results of which are planned to be released in late fall of 2001. In the policy review, Achieve will address the findings of this report in addition to other core elements of a comprehensive system of standards-based education, such as capacity building, accountability and public engagement. By taking a hard look at the progress that has been made in the more than eight years Massachusetts has invested in implementing standards-based systems — and by identifying important work still to be done — Achieve hopes to help the state meet its goal of raising the achievement of all its students.

INTRODUCTION: RAISING STANDARDS IN AMERICA'S SCHOOLS

Since the release of *A Nation at Risk* in 1983, schools, states and national policymakers have been concerned with improving the level of academic achievement of all students. At that time, most school systems awarded diplomas based on Carnegie units, which generally represented "seat time," as opposed to a demonstration of knowledge and skills. Under the Carnegie or credit-based system, postsecondary institutions and employers had difficulty determining what students had learned, since course content varied from school to school. Additionally, it was increasingly clear that a large percentage of our nation's students, particularly minorities and the poor, were being dramatically underserved by their education system because they were not provided with the same rich curriculum and learning opportunities as their wealthier counterparts in the suburbs.

In an attempt to raise the level of student learning across the board and create a more publicly accountable education system, states, districts and national organizations began the process of drafting content standards to define what students should know and be able to do. In Massachusetts and across the country, standards are now the driving force in efforts to improve equity and excellence in education by holding *all* students to common, high expectations.

Since the early 1990s, 49 states have developed academic standards for their students, and 48 are putting in place assessments to measure those standards. By stating clearly the knowledge and skills students are expected to gain as a result of their schooling, reformers hope that students will better understand what is expected of them, schools will improve their programs to help students achieve those expectations, and low-performing districts and schools in particular will be challenged to raise the level of teaching and learning. Because states have made substantial investments in the new standards and tests — and many states are beginning to hold students and schools accountable for performance — policymakers and the public want to know how their standards compare to what other states and countries expect. Achieve was created precisely to address this issue.

Born out of the 1996 National Education Summit, Achieve helps states ensure that they have in place standards that compare favorably with the academic expectations of other states and high-performing nations and assessments that accurately measure student achievement against those standards. An independent, bipartisan, nonprofit organization overseen by a board of directors composed of governors and corporate CEOs, Achieve serves as a clearinghouse and resource center on education standards, testing and accountability, working primarily with states to support their work in these areas.

We have come a long way in the effort to improve schools for all students through the development and implementation of standards-based reform. In the initial stage of the standards movement, states found it challenging to develop quality standards. We now have a better picture of what strong academic standards look like. They are clear and specific enough to guide curriculum planning and test development without infringing on local control. They set rigorous yet reasonable expectations for all students and raise the bar higher than it is currently set for

many students. They integrate content knowledge with important thinking skills and learning processes. And they are widely read and understood by parents, educators, business people and policymakers. State assessments are evolving as well. More attention is being given to alignment, to incorporating a mix of formats (multiple choice, short answer and open-ended items) and to sharing concrete information with district educators and the general public.

States are also revisiting the issue of local control, with each state striking a different balance. States are realizing that respecting local control while ensuring high standards for all students means being explicit about the knowledge and skills students are expected to learn and assisting educators by providing tools and training. This new understanding is at the heart of standards-based reform: The previous state role of monitoring compliance to rules and regulations has shifted to one of setting expectations for results and supporting schools and districts in meeting those expectations.

States and schools are currently grappling with a host of thorny issues that accompany full implementation of standards-based reform, including:

- strengthening teacher certification and professional development;
- developing or identifying materials to support state standards and assessments;
- setting fair and defensible promotion and graduation requirements;
- providing additional funding and programs for struggling students;
- ensuring equitable treatment of special populations; and
- establishing genuine accountability for all education stakeholders and policymakers.

In a separate, yet complementary, report, "Taking Stock," Achieve will examine the progress Massachusetts has made to date in moving toward full implementation of a standards-based system. Achieve's report, slated for completion in late fall 2001, will focus on issues of equity and excellence and make recommendations to the state for the next decade of reform.

BENCHMARKING TO THE BEST

To help states like Massachusetts in their efforts to continuously improve expectations for all students, Achieve provides *standards and assessment benchmarking*. Through benchmarking, Achieve compares a state's academic expectations against the best available models from the United States and the world. States like Massachusetts that have sought benchmarking services from Achieve are committed to raising standards for student performance and holding schools accountable. These states want their citizens to know that the standards they have set compare favorably with the expectations other states and nations have for their students. They also want to understand whether the tests states use to assess student progress against the standards truly measure what they expect all students to know and be able to do. Lastly, they want objective, credible, concrete recommendations for ways to improve their standards and assessments.

Benchmarking is a highly respected practice in the business world. It is an activity that looks outward to find best practices and high performance and then measures actual business operations against those goals. Benchmarking in education follows the same principle. It is appropriate at a time when state education reforms are focused on raising student and school performance, as states want and need an external yardstick to gauge their efforts.

By benchmarking academic standards and assessments, Achieve hopes to help states answer the following questions:

- How do our education standards compare with those of other high-performing states and nations? Are the expectations for our students and schools high enough?

- How well do our assessments measure the knowledge and skills laid out in the standards?

Achieve is involved in benchmarking for another important reason: States have traditionally had limited access to high-quality, trustworthy information about education standards. This is due partly to the fact that the standards movement in education is relatively young. But it is also a result of the disparate nature of much of the work that has been done to date. While the standards reviews and "report cards" issued by other organizations have helped to focus national attention on the quality of standards, their judgments have often been in conflict, and their tone has not always been constructive. States increasingly are looking for independent, credible advice on these issues.

Achieve's benchmarking efforts are not designed to grade or rank states. Instead, we have created a service that is diagnostic in nature — one that yields detailed, reliable information that we hope states will find useful. In addition, our focus on assessments as well as standards and the alignment between the two allows us to truly determine what the state expects all its students to know and be able to do — and whether the standards and assessments are a strong enough foundation for the state's efforts to improve education performance.

THE ACHIEVE BENCHMARKING METHODOLOGY

Achieve's benchmarking methodology has been developed and tested over four years. Massachusetts is the tenth state to put itself through this intensive process. Achieve staff and consultants have reviewed dozens of standards and tests and bring their experience to bear in applying the benchmarking tools to Massachusetts' standards and tests.

STANDARDS BENCHMARKING

Achieve compares a state's standards to state, national and international benchmark standards recognized for their quality and/or for producing high student achievement. This comparison of state standards to benchmark standards is designed to answer the following questions:

- Do the standards define a comprehensive, yet manageable academic core for all students? Are there key concepts or skills missing in the standards?

- Do the standards convey both the breadth and depth of knowledge and skills expected of students? Have choices been made about what is most important for students to learn, and when?

- Are the standards as rigorous as they should be? Do the expectations described by the state standards compare favorably to those of the benchmark standards?

- Do the standards define both what students should know (i.e., content knowledge) and what they should be able to do with that knowledge? Are reasoning and problem solving skills fully developed? Or is one overemphasized at the expense of the other?

- Are the standards clear and explicit, conveyed in a way that educators and parents can understand and use to improve student achievement?

To ensure that the benchmark standards documents used as exemplars are indeed the best for this purpose, in early 1999, Achieve commissioned expert reviews of a variety of sets of standards. Reviewers concluded that California's and Massachusetts' standards in English, those of North Carolina, Texas and New Standards in early literacy, and those of Arizona and Japan in mathematics had the most value for benchmarking.[1]

Selecting these benchmarks proved to be a difficult task because no one set of standards is perfect, and judgments about the quality of standards are in some ways subjective. Still, we are confident that the choices used in our current work reflect some of the best thinking from around the country,

[1] Achieve created "benchmark profiles" for each of these documents that provide contextual information about the standards and summarize their strengths and weaknesses. The profiles are available upon request.

and that a careful comparison of the state standards to these benchmarks will yield helpful diagnostic information and policy suggestions for states to consider.

For example, in the area of language arts, California distinguishes those standards concerned with informational text from those concerned with literature. This makes it easy for teachers to help students grasp the different strategies used in reading, understanding and writing the two types of text. Massachusetts organizes its standards in grade spans of two years, as do a number of states, but Massachusetts articulates its expectations for student learning more precisely than do most states. In mathematics, Arizona's standards provide a level of specificity and detail that is helpful for teachers — especially for elementary generalists — while Japan's standards provide an economical, yet focused and rigorous treatment of the discipline.

ASSESSMENT-TO-STANDARDS ALIGNMENT ANALYSIS

Achieve's assessment-to-standards analysis is designed to address the alignment of tests to standards. It helps uncover answers to the following issues:

- **Fairness.** Does each assessment only measure content and skills reflected in the standards? Or put differently, can everything on the test be found in the state standards?

- **Balance.** Does each assessment measure the breadth and depth of content and skill in the standards? In other words, to what extent does each assessment measure the key content and skills for a grade level?

- **Rigor.** Overall, is each assessment sufficiently challenging for students? Do the assessments grow more sophisticated from grade to grade?

Alignment is not a "yes or no" question — nor it is a mathematical calculation. It is the extent to which standards and assessments are in agreement and serve in conjunction with one another to guide and support student learning. Consequently, responding to the above questions requires a systematic procedure to probe the different factors that contribute to alignment. Achieve's process or "protocol" for determining the alignment of assessments to standards is based upon five criteria. Application of the protocol provides rich information about alignment of tests and standards, which is typically unavailable to states. The fundamental criteria for Achieve's alignment process are:

- **Confirmation or construction of test blueprint**. Reviewers check to see that each item corresponds to at least one standard or objective. If no test blueprint is provided by the state or testing company, then Achieve's reviewers construct a new one. If the blueprint supplied by the test developer does not stand up to scrutiny (i.e., a significant number of items mapped to one standard or objective are found to be more closely related to a different one), reviewers make this known to the state.

- **Content centrality**. This criterion examines the quality of the match between the content of each test item and the content of the related standard. Reviewers determine how closely the content of the item aligns with that of the related standard, and then assign the item to one of four categories based on degree of alignment, from "not aligned" to "clearly aligned."

- **Performance centrality**. Each item places a certain type of cognitive demand on a student (e.g., the student is asked to "identify" or "analyze"). If an item simply requires a student to "identify" and the corresponding standard requires a student to "analyze," then there is a mismatch between the two performances. Reviewers assign each item to one of four categories based on the degree of alignment, from "not aligned" to "clearly aligned."

- **Challenge**. This criterion is applied to both the *individual items* and to the *set of items* that measure an entire strand, such as "Measurement." Its purpose is to determine whether doing well on these items requires students to master challenging subject matter. At the item level, reviewers consider two factors related to challenge: *source of challenge* and *level of cognitive demand.* At the set level, reviewers consider the overall *level of challenge* of the items mapped to a strand.

    - *Source of challenge.* This criterion attempts to uncover whether an individual test item is "fair." Reviewers analyze whether an item is difficult because of the knowledge and skills it targets, or for other reasons not related to the subject matter, such as relying unfairly on students' background knowledge, and rate each item as having an appropriate or inappropriate source of challenge. Any item judged to have an inappropriate source of challenge is *not* examined when item sets are evaluated for level of challenge.

    - *Level of cognitive demand.* This criterion focuses on the type and level of thinking and reasoning required by the student on a particular item.[2] A Level 1 (recall) item requires the recall of information such as a fact, definition, term or simple procedure. A Level 2 (skill/concept) item calls for the engagement of some mental processing beyond a habitual response, with students required to make some decisions as to how to approach a problem or activity. Level 3 (strategic thinking) items require students to reason, plan or use evidence. And Level 4 (extended thinking) items require complex reasoning, planning, developing and thinking, typically over an extended period of time.

    - *Level of challenge.* This term applies to the set of items that maps to a standard. Reviewers compare the overall demand encompassed by a set of items to the level of demand expressed in the standard itself. In addition to evaluating alignment, reviewers also judge whether the set of test items has a span of difficulty appropriate for students

[2] Norman L. Webb. (2001) *Levels for Determining Depth of Knowledge*. CCSSO TILSA Alignment Study, Version 2.0, May 21–24, 2001.

at a given grade level. This judgment is based on the standards, the assessment and supporting materials such as student responses. Reviewers write a succinct summary of the level of challenge of each item set.

- **Balance and range**. Balance compares the extent to which the knowledge and skills delineated in the standards receive the same emphasis on the assessment, and if that emphasis is appropriate. Range examines the degree to which the assessments sample the knowledge and skills described in the standards, since it is very difficult for one assessment to measure the full complement of knowledge and skills required by state standards. Evaluating balance and range provides both qualitative and quantitative information about the choices states or test developers have made.

WORKING WITH MASSACHUSETTS

The Achieve benchmarking process examined Massachusetts' mathematics standards against our benchmark standards and then compared Massachusetts' grade 10 MCAS 2001 test in mathematics and English language arts against the state standards.

Achieve did not benchmark Massachusetts' standards in English language arts — in effect, that judgment has already been made. As noted previously, when Achieve conducted its original search for exemplars, the 1997 Massachusetts Framework in English language arts emerged as one of the best standards documents in the country. The newly revised 2000 Framework contains significant improvements and has replaced the former edition as one of Achieve's benchmarks in English language arts.

As the first step in analyzing Massachusetts' mathematics standards, Achieve senior staff systematically compared the content and skills found in the Massachusetts standards to those of Arizona, Japan and Achieve's MAP expectations. Five national experts in standards then reviewed Massachusetts' standards and the comparisons to the benchmark standards and responded to a set of guiding questions. These experts hold diverse opinions about subject matter, curriculum and assessment issues, and each has considerable experience in writing, researching and analyzing standards.

Achieve's alignment analysis is a process of managing expert judgment. There is no mathematical formula for matching a test to standards. Rather, the process relies on experienced, knowledgeable educators who bring their experience and knowledge to bear in applying the criteria for judging alignment.

To gauge the alignment of Massachusetts' grade 10 tests to the standards, Achieve convened two teams of highly skilled educators to carefully study the tests and apply the Achieve alignment protocol. The reviewers selected by Achieve to analyze the alignment between Massachusetts' assessments and standards are a deliberate mix of classroom teachers, curriculum specialists and subject-matter experts, each with extensive expertise in content and assessment design. They often

have experience in large-scale assessments and/or standards development, represent a diversity of viewpoints on curriculum matters, and have worked in a variety of challenging school environments in rural, suburban and urban settings.

This diversity of backgrounds has proven invaluable in arriving at considered judgments (for example, determining the appropriateness of a test item for a particular grade level). Achieve's senior consultants in mathematics and English language arts led their teams through a stepwise application of the protocol, with the goal of arriving at consensus judgments for each of the alignment criteria.

In writing this report, Achieve synthesized the five reviews of the Massachusetts mathematics standards, highlighting the strengths and weaknesses of the document as identified by the subject area experts, and summarized the results of the alignment studies as reported by the review teams in mathematics and English language arts. The findings described in this report represent consensus opinions of Achieve's consultants and experts, but final judgments and conclusions rest with Achieve.

Brief biographies of Achieve's experts and consultants who participated in the standards benchmarking and assessment analysis for Massachusetts can be found in the Appendix.

RESULTS FOR MASSACHUSETTS

MAJOR FINDINGS: ALIGNMENT OF THE MCAS 2001 MATHEMATICS AND ENGLISH LANGUAGE ARTS ASSESSMENTS TO THE CURRICULUM FRAMEWORKS

Discipline-based teams of experienced reviewers examined the alignment of the grade 10 MCAS 2001 Mathematics test to the standards for grades 9–10 in the 2000 Mathematics Curriculum Framework and the alignment of the grade 10 MCAS English language arts test to the 9–12 standards in the 1997 English language arts Curriculum Framework, using Achieve's assessment-to-standards alignment protocol. Brief biographies of Achieve's expert reviewers are included in the appendix.

The Grade 10 MCAS mathematics test consists of three types of items: multiple choice, short answer and extended open response. The grade 10 English language arts test also consists of three item types: multiple choice, extended open response and a writing prompt. Short answer and open response questions make up 40 percent of the total possible score on the mathematics test (60 points maximum). The writing prompt and open response questions make up about 50 percent of the total possible score (72) on the English language arts test.

There are multiple forms for both of the mathematics and English assessments. Approximately 80 percent of the items in any form are identical. These items are referred to as "common" questions. The remaining 20 percent of the items vary from form to form and are called "matrixed-sampled" items. Student, school and district scores are based exclusively on common items. The common items are released after each administration of the test and replaced with items from the pool of matrixed-sampled items. A portion of the matrixed-sampled items are not used as replacement items, but are repeated across test administrations and used to link (equate) the tests from year to year. Because only common items are used to determine student, school and district scores, Achieve's reviewers were asked to limit their analysis to these questions.

The MCAS grade 10 mathematics test is administered in three sessions, with students being allowed to use calculators during two of the three sessions. The MCAS Grade 10 English Language Arts test contains two distinct parts: The Composition portion is based on a writing prompt, is structured to include some of the key elements of the writing process (drafting, revising and finalizing) and is administered in two sessions. The Language and Literature portion is based on grade appropriate reading passages, both fiction and nonfiction, and is administered in three test sessions. In English, students may use dictionaries for the writing prompt, and students with limited English proficiency can use bilingual word-to-word dictionaries; in mathematics, a Formula Reference Sheet is provided. MCAS tests are not strictly timed, and the state has made provisions for schools to extend the recommended testing time of 45 minutes per session.

MATHEMATICS

The 2000 Mathematics Curriculum Framework is organized into five strands (Number Sense and Operations; Patterns, Relations and Algebra; Geometry; Measurement; and Data Analysis, Statistics and Probability), whereas the 1996 framework contained four strands (Geometry and Measurement were combined). Massachusetts' decision to report 2001 results using the four 1996 strands, and to base test scores solely on learning standards common to both the 1996 and 2000 frameworks, will allow the state to ensure that scores at student, school and district levels are fair.

Strengths of the Grade 10 Assessment

Achieve's reviewers identified the following strengths in the grade 10 MCAS 2001 mathematics test:

1. **Massachusetts is committed to sharing assessment information with all stakeholders; what is tested is not a state secret.**

In its February 2001 document, *Overview of the MCAS 2001 Tests,* the state presented the distribution of item types and points for the four mathematics strands. Overall, the 2001 mathematics test adheres closely to those descriptions. Moreover, the percent of total points allocated to each item type is fair and appropriate across the test as a whole. This public presentation of the test elements is not common to all state assessment systems and is an important part of the mutual accountability effort displayed by Massachusetts.

Reviewers were impressed with the clarity and amount of information provided by the state on its assessments and commend the state for providing such easy access to information. The detailed feedback provided by MCAS reports at the student, school and district levels helps ensure that the testing is beneficial for individual diagnosis and curriculum and instructional planning. Massachusetts is also to be commended for the release of its common test items so promptly after test administration. The release of these items helps ensure public credibility and provides concrete models for teachers to use as they design and develop instructional activities. Such a high degree of public accessibility to information about a state assessment system is rare, yet essential to sustaining public support for higher standards.

2. **The test assesses only content and skills included in the standards, and test items generally align — either in their entirety or in part — with the content or performance expectations of the standards.**

Massachusetts made a wise decision in developing its own assessments rather than purchasing "off the shelf" tests. The vast majority of the items test content specified in the standards. When reviewers used the state-provided map, seven items were identified as not aligned to the standards, meaning that the mathematics of the item is peripheral to the content of the standard. However, reviewers were able to identify a more appropriate match for three of these seven items to other

expectations found in the state's standards. Consequently, in the final analysis, over 90 percent of MCAS test questions are aligned to content in the standards. This finding compares favorably with assessments in other states Achieve has reviewed, where in some cases a substantial number of items are not found in the standards at all or are very weak matches to the standards.

Reviewers also matched the performance required by the item to the performance described in the standard. As was the case with content, a large proportion of test questions (86 percent, if the original map is assumed) measure skills specified in the standards. If the reviewer-revised map is used, alignment improves to over 90 percent. Only one item received a score indicating that the related standard is stated in such general terms that reviewers could not be certain of direct alignment. This reflects highly on the Massachusetts standards, which tend to be written in clear and measurable language that specifies the precise skills that students are to learn.

3. **The grade 10 MCAS test in mathematics is a fair and appropriately challenging test for high school. Students who perform below the "needs improvement" level (currently a score of 219 or lower) likely have a minimal level of skill in mathematics and will need intensive instructional support to achieve the minimum standards.**

The level of challenge for the grade 10 assessment, as a whole, is appropriate when compared with the 8th- and 10th-grade standards to which the items are mapped. The test is more challenging than most other mathematics high school tests Achieve has reviewed, to be sure, but that is because many states have high school tests in mathematics that tend to be pitched at the grade 8 level.

Thirty-one percent of the 2001 grade 10 MCAS common items, or a total of 13 questions, were specifically designed to assess 8th-grade standards. Including such a large proportion of items that assess grade 8 standards has an impact on such alignment criteria as level of demand, balance and range. It also has important policy implications for Massachusetts, since a student who can correctly answer all of the 11 multiple-choice items and the single short-answer item, and get at least some points on the single open-response item, will receive from 13 to 16 points on the assessment. Only 21 points were required in 2000 for a student to "pass" the MCAS mathematics assessment by achieving the 220 "needs improvement" standard. This issue — and the fact that many of the less cognitively demanding aspects of the 10th-grade standards are assessed, rather than those aspects that are more challenging — contributes to Achieve's view that students who do not achieve the 220 score are minimally competent in mathematics.

The item set mapped to Patterns, Relations and Algebra tends to assess the more cognitively demanding aspects of the related standards, while still being at an appropriate level of challenge overall for 10th graders. It contains a rich mix of item types — five multiple-choice items, two short-answer items and three open-response items — and presents students with a higher level of challenge than do the item sets for the other strands. The mix of item types, with a relatively heavy emphasis on open-ended items, affords students the opportunity to demonstrate their abilities to not only model and solve equations and inequalities, but to also apply those skills to the solution of everyday problems.

The level of challenge of the items mapped to Geometry is appropriate for all 10th-graders, even though it is less demanding overall than the Patterns, Relations and Algebra questions. Several standards require students to use specific geometric knowledge and properties to solve problems, and the assessment follows through, requiring students to not only solve problems in a purely mathematical context, but also to solve everyday problems. The reviewers also deemed the level of challenge of the four items assessing Measurement concepts as appropriate, though a bit unbalanced. The four items all require students to apply formulas to calculate area or circumference, and three of the problems are presented in the context of a real world problem.

However, the items measuring Number Sense and Operations tend to assess the less cognitively demanding aspects of the standards. They place too much emphasis on numeric and symbolic manipulation, at the expense of application of number sense and computational skills to solve problems. In Achieve's view, a number of these items were designed to test Number Sense concepts, but instead more directly measure standards in the Algebra strand. This has the effect of weighting the test overall more heavily toward algebra and omitting more advanced number concepts that could be assessed.

Reviewers also expressed concern with the overall challenge of the set of items mapped to Data Analysis, Statistics and Probability as compared with the expectations laid out in the grade 10 standards. Their concern was based on the fact that so many of the items — seven of eight — assessed grade 8 standards at the expense of 10th-grade standards.

4. **The grade 10 MCAS 2001 is a technically well-crafted test; this is no small feat, considering that the state department of education works with teachers to create an entirely new assessment each year.**

Reviewers were pleased to find very few instances of such flaws as "trick" items, misleading graphics, multiple or no correct answers, or ambiguous directions. In addition, the distracters used in multiple-choice questions were plausible, meaning that students generally had to know the content to arrive at the correct answer and not get it by default because alternative choices were too far off the mark. Only two (4 percent) of the items caused reviewers concern. This contrasts with some other states, where as many as 25 percent of items on an assessment were problematic.

5. **The MCAS test is a solid measure of students' ability to reason, solve problems and connect various mathematical ideas. The assessment appropriately uses various formats — multiple choice, short answer and open response — to assess students' procedural, conceptual and problem solving skills.**

Importantly, we found that the grade 10 test does a good job of assessing students' conceptual knowledge, even though conceptual understanding is not as strongly developed in the state's standards as are procedural and problem solving skills. This is due in part to the state's judicious use of test formats. The multiple-choice items on the grade 10 assessment are generally strong:

They address important mathematical content, assess students' abilities to recall and apply simple algorithms, and test their skills in reasoning and solving more sophisticated problems.

One multiple-choice item, for example, requires students to demonstrate a more thorough understanding of the concept of "mean" than mere application of the formula for finding the "average." This particular item requires students to have a conceptual understanding of what the "mean" is so they can determine the impact of a change in one or more values of the data set. Massachusetts also effectively uses multiple-choice items to assess students' abilities to solve problems that require them to integrate different areas of mathematics. Item 9, for example, requires students to integrate their understanding of geometry (specifically, area of a circle) with probability to correctly solve a real-world problem.

Massachusetts should be commended on its use of a significant number of short-answer and open-response items on a large-scale, on-demand assessment. Out of a total of 51 test items, four are short answer, and six are open response. This amounts to 20 percent of the assessment and 40 percent of the score points. Including open-response items, rather than relying solely on a multiple-choice format, has a major effect on the way teachers teach and construct classroom assessments and the way in which students prepare for tests. Open-response items afford students the opportunity to demonstrate a deeper and more sophisticated understanding of content. Items of this nature provide opportunities to assess higher-level skills — such as students' abilities to construct graphs, write equations and explain their answers — which is usually impossible with multiple-choice items. Such items also provide a deeper venue to assess students' abilities to integrate multiple aspects of mathematics. In addition, the item-specific rubrics for all open-ended items assure that students are measured against meaningful criteria.

As a case in point, one of the open-response items on the assessment requires students to use data on alternative billing plans for a cellular phone to calculate a hypothetical monthly bill, derive an equation that generalizes how to calculate such a bill, construct a graph showing the monthly bills for a range of minutes, use the graph and/or equation to find the number of minutes of phone use for which two plans have the same cost, and explain how they came up with their answer.

Similarly, another open-response item — item 20 — requires students to use tabular data on the monthly income and expenses of a software company to construct graphs, estimate and predict income for a given month in the future, determine in which future month profit will exceed a given value, and explain how they determined their estimates.

Short-answer items can assess some essential content effectively and do it more efficiently than can open-response items. They also can tap a different level of skill than multiple-choice items. MCAS uses, for example, one short-answer item that requires students to write an equation that can be used to figure out how many passengers are on a bus before the first stop. While such content could be assessed with a multiple-choice format, using a short-answer item forces students to derive the equation, rather than select it from a list of four choices.

Areas for Improvement

Achieve's reviewers identified the following areas where future editions of the grade 10 MCAS 2001 mathematics test could be strengthened:

1. **While the state's "test blueprint" that matches individual test items to specific standards is generally good, a more accurate and detailed map might be helpful in future assessment development efforts.**

The Massachusetts Department of Education provided Achieve with a "test blueprint" that maps each of the 42 common items to the single learning standard in the 2000 framework that it is intended to assess. Achieve reviewers were provided with this map and asked to score items based on it. While Achieve reviewers generally agreed with the mapping of items to learning standards provided by the state, they also agreed that some items more closely measure learning standards other than the ones the state mapped them to. In particular, a number of test questions mapped by the state to the Number Sense strand are actually, in Achieve's view, more strongly aligned to Algebra standards; this results in a disproportionate number of items assessing the Algebra strand. Reviewers' concern is not about the items' quality or utility, but rather that the test tends to emphasize algebra concepts more than number concepts and is thus out of sync with the item distributions published in the *Overview of the MCAS 2001 Tests*.

The *Overview* document also explains that "some items incorporate standards identified for preceding grade levels … (e.g., grade 10 students may be tested on learning standards identified in the framework from pre-Kindergarten through grade 10)." This is a worthwhile strategy, particularly when states assess knowledge and skills at checkpoint grades, such as 4, 6, 8 and 10. It sends the message that the discipline builds on the understandings and skills of previous years and that students are expected to carry over that knowledge from year to year. However, Achieve's reviewers were concerned that such a large proportion of the 10^{th}-grade MCAS items measure middle school standards. The detailed map provided to Achieve of 10^{th}-grade test items to the state standards shows that 29 common items (69 percent) map to grade 10 learning standards, and the remaining 13 common items (31 percent) map to 8^{th}-grade standards.

This issue can be partly addressed in future rounds of testing. Massachusetts currently identifies only "primary" mappings of items to standards, i.e., one item measures only one standard. In Achieve's view, many test questions on MCAS actually assess more than one concept, often from different standards, so the state may wish to adopt the practice used in some other states and identify both primary and "secondary" mappings of items to standards. In practice, this means that an item might be noted, for example, as assessing both a 10^{th}-grade geometry standard and an 8^{th}-grade algebra standard. Such connections across strands are already evident in the test questions and should be explicitly communicated to educators and families in the *Overview* and other public assessment documents.

2. The balance of the grade 10 MCAS 2001 is somewhat uneven; this tends to depress the test's level of rigor.

While the item sets representing Number Sense and Operations, as well as Patterns, Relations and Algebra, tend to fairly represent the balance of content knowledge and skills expressed in the standards, the item sets for Geometry, Measurement, and Data Analysis, Statistics and Probability are less balanced.

The finding that four of nine items mapped to Number Sense and Operations did not actually assess the content expressed in the standards somewhat diminished the balance of the set and de-emphasized the more advanced number concepts that should be part of the high school curriculum for all students.

Reviewers commented that the balance of the set of items mapped to Patterns, Relations and Algebra would have been improved if standard 10.P.2 and the part of 10.P.3 that requires students to "Add, subtract and multiply polynomials" (allowable for testing in 2001) had been assessed. They observed that both standards contain key concepts, critical to the development of a strong foundation in algebra. Standard 10.P.3, for example, includes such concepts as using graphical and algebraic representations to determine slope and x- and y-intercepts *and* determining a linear equation from a graph or geometric description.

The Geometry item set is less demanding than the standards in many ways, as a number of key geometric concepts to which all students should be held accountable are omitted. For example, standard 10.G.4 requires students to "apply congruence and similarity correspondences … and properties of the figures to find missing parts of geometric figures …" Other standards — including 10.G.2, 10.G.3, 10.G.4, 10.G.8, and 10.G.10 — are also excluded from the assessment.

Reviewers also found that the balance of the set of items mapped to measurement needs improvement; some key measurement concepts identified in the grade 10 standards are not assessed by this test. Three of the four measurement items require area calculations (involving triangles, squares, rectangles and circles), and two of the four require students to be able to calculate circumference (formulas are provided on the Mathematics Reference Sheet). Students are not required to find the surface area or volume of three-dimensional shapes such as prisms, pyramids, cylinders and cones, as specified in standard 10.M.2. Likewise, the test does not require students to "relate changes in the measurement of one attribute of an object to changes in other attributes, e.g., how changing the radius or height of a cylinder affects its surface area or volume" (standard 10.M.3).

The mix of items assessing the strand on Data Analysis, Statistics and Probability is good. It includes items requiring students to address all three areas (Data Analysis, Statistics and Probability), and the items incorporate a variety of types of graphical and tabular data displays. That said, reviewers pointed out that while this strand contains three standards at grade 10, only one of the three 10^{th}-grade standards is assessed. Instead, seven of the eight items mapped to this

strand actually assess grade 8 standards. The reviewers were not troubled by the concept of cumulative progress — assessing important skills and concepts from earlier grades — which they found to be reasonable. Their concern was rather that such a large proportion of items in this one strand were mapped to grade 8 standards, and that the grade 8 standards, in this case, tend to be more foundational and descriptive than those in grade 10. As a result, important content in the grade 10 standards ended up not being assessed. For example, students are not required to "approximate a line of best fit for a given set of data" (standard 10.D.2) or to "describe and explain how the relative size of a sample and the population affect the validity of predictions from a set of data" (standard 10.D.3).

ENGLISH LANGUAGE ARTS

Although the Massachusetts English language arts (ELA) Curriculum Framework (adopted November 2000) has now been revised, the MCAS ELA 2001 tests are still based on the 1997 frameworks. 2002 test forms will be based on the revised frameworks. These learning standards were developed in collaboration with teachers, school and district administrators, reading and writing specialists, college faculty, and parents.

The language and literature portion of MCAS assesses learning standards number 4 through 17 of the framework's language and literature strands by requiring students to read a selection of literary and nonliterary passages and then respond to a set of multiple-choice and open-response items based on each passage. Approximately 50 percent of the passages are by authors listed in Appendices A and B of the 1997 framework. The composition portion of the test assesses students' skill at literary analysis, requiring them to use their knowledge of literary elements, themes and structures to analyze an excerpt from a literary text.

Strengths of the Grade 10 Assessment

Achieve's reviewers identified the following strengths in the grade 10 MCAS 2001 English language arts test:

1. **Massachusetts is committed to sharing assessment information with all stakeholders; what is tested is not a state secret.**

In its February 2001 document, *Overview of the MCAS 2001 Tests,* the state presented the distribution of item types and points for the three English language arts strands (Language, Reading and Writing). Overall, the 2001 English test adheres closely to those descriptions. Moreover, the percent of total points allocated to each item type is fair and appropriate across the test. This public presentation of the test elements is not common to all state assessment systems and is an important part of the mutual accountability effort displayed by Massachusetts.

Reviewers were impressed with the clarity and amount of information provided by the state on its assessments and commend the state for providing such easy access to information. The detailed feedback provided by MCAS reports at the student, school and district levels helps ensure that the testing is beneficial for individual diagnosis and for curriculum and instructional planning. Massachusetts is also to be commended for the release of its common test items so promptly after test administration. The release of these items helps ensure public credibility and provides concrete models for teachers to use as they design and develop instructional activities. Such a high degree of public accessibility to information about a state assessment system is rare, yet essential to sustaining public support for higher standards.

2. The match between the assessment items on the grade 10 test and the Massachusetts standards is strong; the test only addresses content or skills included in the standards.

All the test items align with the standards to a greater or lesser degree, and everything on the test can be found in the state standards. In terms of the content match between each test item and its related standard, of the 34 items assessing reading, 28 were strongly aligned or partially aligned in that they captured only part of the standards' intent. The remaining six items were partially aligned because the standards to which they were mapped are rather imprecise.

The grade 10 MCAS in English language arts received the highest scores in reading in performance centrality — the match between the performance required by an item compared to its related standard — that Achieve has seen in looking at more than 25 large-scale language arts assessments to date. Of the 34 items, 30 were scored as strongly aligned, indicating that the performance described in the standard is very consistent with that required by the item. When the standard required identification, the items required identification. When the standard required analysis, the items did as well.

3. The grade 10 MCAS 2001 test in English language arts is a rigorous, fair assessment of the Massachusetts standards and is set at a level appropriate for high school students.

With a few minor exceptions, the items in this assessment are very strong, requiring a level of literacy appropriate for 10^{th} grade. This test presents an admirable set of expectations for the high school student and is, in this manner, faithful to the intent of the rigorous standards upon which it was based. Students who score well on this assessment can be regarded as having masterful control of the elements described in the standards, and students who do not score well on this test need strong instructional support in order to master the basic skills required by the English language arts standards.

Moreover, unlike numerous state assessments reviewed by Achieve, the grade 10 test is a reasonable measure of the level of proficiency in English language arts reviewers would expect of high school students. Whereas some state assessments tend to over address low-level reading skill — even at the high school level — this assessment devotes the majority of its items to the assessment of higher-order comprehension skills, a demand that resonates with the expectations described in the Massachusetts Curriculum Framework.

Level of demand (1, 2, 3 or 4) is an alignment criterion that reviewers use to gauge the type and kind of thinking required by a student in answering an item. Level 1 items tend to call for basic identification or literal comprehension. Level 2 items generally demand the student to draw inferences. Level 3 items demand more in the way of reasoning and interpretation. And level 4 items usually require complex and extended analysis. (The level 4 category of evaluation and sophisticated analysis is typically reached only in an item that is an extended response, requiring some research and use of multiple references — a level not probable in an on-demand, large-scale situation.)

The levels of demand for the reading and vocabulary items ranged from 10 items scored at the literal/recall level (1) to 26 items scored at the inference and simple analysis level (2), to all four open-response items scored at the interpretation level (3). This range is commendable for a 10th-grade test. High school students should be expected to be able to go beyond basic comprehension, and this test asks them to do so. In comparison, other states have tended to pitch the majority of reading and vocabulary items at the level 1 category.

The 2001 grade 10 MCAS offered the students one writing prompt: "A frequent theme in literature is the conflict between the individual and society. From a work of literature you have read in or out of school, select a character who struggles with society. In a well-developed composition, identify the character and explain why this character's conflict with society is important." To determine whether the writing prompt was set at an appropriate level of challenge — neither too hard nor too easy for a 10th-grade student — the reviewers studied the anchor papers provided for this prompt. Anchor papers are examples of the various score ranges — in this case from 1 to 6 for topic development and 1 to 4 for use of conventions. It is in the selection of the anchor papers, those used by the scorers to determine score ranges, that the standards of performance are set.

In looking at these anchors, the questions for the reviewers were "How hard is it to get a passing score?" and "What is the level of writing skill that is required?" Reviewers determined that although the prompt presented a real challenge to the student, the score points established were very reasonable. In essence, a very high level of response was necessary to score a 6, but only a moderate response was necessary to score a "passing grade" of 4. The scoring is therefore set at an appropriate level of challenge for 10th-grade students and is in line with the expectations described in the standards. Students who earned 5 or 6 points for topic development are strong writers and literary analysts, while students who scored less than 4 points were minimally competent in these areas. Achieve's reviewers made the same judgment with respect to the scoring of conventions on the writing assessment.

4. **The 2001 grade 10 MCAS is a well-crafted test. No items have technical difficulties in the way they are constructed, though the state may wish to revisit the choice of writing topic in future editions of the MCAS.**

All of the items in both the language and the reading strands are soundly constructed. No items are trick questions, have implausible distracters or address elements of the texts that are so insignificant as not to be "fair game." Unfortunately, such unfair sources of challenge too often are used in other assessments that Achieve has reviewed. This test's language and literature strands were judged to be free from any elements that may cause a student's performance to be due merely to test-taking skills rather than to accomplishment in the subject matter.

Regarding writing, Achieve's reviewers have some concerns. The two basic criteria for the assessment of the writing sample — focus and development and use of standard English conventions — are detailed in the student test booklet, thereby giving the student clear direction

in his writing. The essays are scored against a generic rubric, which is a public document. This is a strong element of the assessment in that it makes the demands of the test public.

However, Massachusetts' particular choice of writing topic prompted some debate among the reviewers. The fact that students are allowed to choose a character from anything they had read, either in or out of school, was regarded as a plus. Such choice makes the topic accessible to students coming from a variety of curriculum and independent reading experiences. As is always the case, however, choice is a mixed blessing for the student test taker. Not all texts present a character who struggles with society, so a major part of the difficulty inherent in this topic is the selection of an appropriate text to discuss. As is evident in the anchor papers for this prompt, student selection of text often determined how successful the writing would be. A wise selection of a text increased the likelihood that the student's essay would be successful, whereas a poor selection diminished the essay's chances of being successful.

The explication of theme also presents a source of challenge in this prompt. Although theme is sometimes used in the same sense as motif to signify recurring concepts in literature, such as the conflict between the individual and society, the term more generally refers to the argument or overall idea expressed by a specific literary work, whether implied or explicitly stated.[3] These two different definitions of theme, the universal and the text specific, require different levels of abstraction when applied to a text.

It is the text-specific definition that is tested when students are asked in a multiple-choice item to determine that the first sentence of Loren Eiseley's "The Angry Winter" introduces the theme of the essay. ("The time comes when creatures whose destinies have crossed somewhere in the remote past are forced to appraise each other as though they were total strangers.") In contrast, the writing prompt tests students' ability to apply the highly abstract concept of universal themes. It is true that standard 11 requires students to "apply knowledge of the concept that theme or meaning of a selection may involve several ideas and then analyze and compare works that express a universal theme, providing evidence to support their ideas." Nonetheless, although this expectation is clearly described in the standard, the degree to which *specific* instruction in universal themes had been provided for the student may well have helped determine how successful s/he was in writing an essay on this prompt. In summary, a high score on this writing assessment does not only suggest a strong writer; it suggests a strong writer of literary analysis. The composition score on this test reflects as much, if not more, literary analytic skill as writing skill.

5. The grade 10 MCAS test in English language arts uses multiple kinds of item formats to good advantage.

The grade 10 English language arts test makes good use of multiple formats — multiple choice, open response and a writing sample — that are appropriately employed for the skills being tested. The multiple-choice items are unusually strong, being free of confusing formats and addressing important aspects of the reading passages. Additionally, the open-response items were used well in

[3] *The University of Victoria Writer's Guide,* The Department of English, University of Victoria, 1995.

this test. As noted previously, all four open-response items were judged by reviewers to be level 3 interpretation items. Students may need to apply knowledge of concepts to the text in order to determine meaning, explain, generalize or connect ideas and support their thinking. The items require a deeper level of analysis than multiple-choice items are capable of and the item-specific rubrics assure that the student responses are measured against meaningful criteria. Moreover, the rubrics are clear, and their wide publication should prove helpful for students who are preparing for this kind of assessment.

6. The quality of the reading passages on the grade 10 test is quite high.

Reviewers were impressed by the quality of the reading passages. The texts are appropriately complex for the grade level, and their sophistication made it possible to generate effective multiple-choice and open-response items. Another plus is that at least 50 percent of the passages were chosen from the list of authors included in the appendix in the curriculum framework and also represented a range of time periods. This contrasts with other states Achieve has reviewed, where the high school test's reading passages too often were of lesser quality. Massachusetts has run numerous reading-level scales on all of the passages, and they all fall well within a high school range.

In view of the fact that the state added a standard focused on drama in the 2000 standards revision, Massachusetts might wish to direct attention to Shakespeare's works — a notable part of every high school English curriculum — by using an excerpt from a play, instead of a sonnet.

Areas for Improvement

Achieve's reviewers identified the following areas where future editions of the grade 10 MCAS 2001 English language arts test could be strengthened:

1. The state should improve the balance of fiction and informational text included on the test.

All students are entitled to rich exposure to both literature and informational text. In the initial stages of the standards movement, many leaders, particularly those in business and industry, made the case that students should be proficient in reading and writing a broader range of text than traditionally studied in American classrooms — the kinds of text they would confront as citizens, employees and consumers. Nearly all state English language arts standards, including those of Massachusetts, expect schools to sample the spectrum of expository, functional, historical and public documents (e.g., speeches, historical documents, informational articles, journal articles from other academic disciplines, instructional manuals, editorials, political essays) in addition to the study of literature that includes fiction (short stories, novels, drama, poetry) and nonfiction (biography, autobiography, expository essay writing).

Each of these kinds of texts makes very different demands on the reader, writer, speaker or listener, and state assessments should include reading passages and test items that probe the various demands. In response, most states have chosen to include standards that explicitly call for students to be able to read and write various kinds of informational text and have also modified their assessments to include reading passages and test items that assess their ability to do so.

The MCAS grade 10 assessment in language arts is heavily weighted toward the interpretation of literary elements, however, whether they are in fiction or nonfiction texts. Such weighting is not necessarily a negative, in that the standards themselves are so weighted. What is slighted in this assessment, though, is a balanced attention to the nature and qualities of informational texts.

In the 2000 revision of the curriculum frameworks, a clear demarcation is described between imaginative/literary texts and informational/expository texts:

> **Standard 8: Students will identify the basic facts and essential ideas in a text and use them as the basis for interpretation.**
>
> Grades 9–10:
>
> For imaginative/literary texts:
>
> 8.29 Identify and analyze patterns of imagery or symbolism.
>
> 8.30 Identify and interpret themes, and give supporting evidence from a text
>
> For informational/expository texts:
>
> 8.31 Analyze the logic and use of evidence in an author's argument.

In developing the 2002 tests, Massachusetts should ensure that this additional emphasis on informational texts is reflected in both the passages selected and the kinds of questions asked, with an increased attention to argumentation and structure in expository materials. All of the passages on the current test are either fictional texts (a novel excerpt and two poems) or nonfiction (two essays and one autobiography excerpt). Although technically classified as nonfiction, the essay, "The Angry Winter," and the excerpt from *The Autobiography of an Ex-Colored Man* are both narrative in structure and written in a language rich in symbol and metaphor; both excerpts are, thus, highly literary in tone and style. In Achieve's view, no informational or expository text is represented is this assessment.

2. The state may wish to consider mapping items to more than one standard, where appropriate.

In the reading strand, reviewers noted many items that address multiple standards due to the over-lapping content of the standards and the relatively sophisticated nature of the test questions. For example, only one item was mapped to standard 11, "Students will identify, analyze and apply knowledge of theme in literature and provide evidence from the text to support their understanding." By devoting a separate standard to theme, the state highlights the importance of this literary element and should, therefore, assess it with more than one item, especially since understanding the theme of a text really means understanding the meaning of the passage — the

acid test of comprehension. And in reality, Achieve's reviewers found that other items on the 2001 test do assess theme, but are mapped to other standards. Consider these four open-response items:

> **Item 8:** Mark Twain said, "Make your vocation your vacation." Explain how this quotation relates to this article. Use specific evidence from the article to support your answer.
>
> **Item 15:** "Sonnet 116" does not have a title linked to the text; rather its title distinguishes it from Shakespeare's other sonnets.
>
> - What title would you give to "Sonnet 116"?
> - Provide evidence from the poem to support your answer.
>
> **Item 42:** Explain the significance of the statement in lines 82 and 83, "It was he who was civilized now," as it applies to both the man and the dog. Use specific evidence from the essay to support your answer.
>
> **Composition Topic:** A frequent theme in literature is the conflict between the individual and society. From a work of literature you have read in or out of school, select a character who struggles with society. In a well-developed composition, identify the character and explain why this character's conflict with society is important.

So, although the state map of the items makes it appear that standard 11 is under-represented with just one item, theme *is* adequately assessed. The present mapping strategy does not reveal this appropriately strong emphasis. The standard devoted to theme is a case in point. If an item addresses the theme of a nonfiction text, the state maps it to standard 13, the nonfiction standard. If an item addresses theme in poetry, the state maps to standard 14, the poetry standard. Yet in each case, the item actually addresses two standards —the theme standard and either the nonfiction or poetry standard. If these items were double-mapped to both standards, the message about balance in the test might be more accurate. Similar situations occur with standards 10 and 15.

In summary, even though the mapping of the test items to the general standard is appropriate for this assessment, the standards themselves overlap to the extent that distinguishing which item relates to which standard is often "guesswork," and some items may be legitimately mapped to more than one standard.

3. Massachusetts should consider adopting an item-specific rubric to score the writing sample on the grade 10 test.

Although item-specific rubrics are used to score the open-response items on both the mathematics and the language arts tests, the state chose to use a generic rubric to score the writing sample. The generic rubric addresses four elements of topic and idea development (idea development, organization, details and language/style) and three elements of the use of conventions (sentence structure, grammar and usage, and mechanics). Scorers are encouraged to provide analytic annotations for each element, noting either a commendation or a need. The state should be

commended for trying to provide detailed feedback to students and schools by means of analytic annotations. The development of an item-specific rubric for the writing prompt would complement this effort by helping students who are learning to write an effective literary analysis and more clearly communicating the expectations for a composition of this type to the public.

4. While Massachusetts deserves praise for assessing writing directly, the state may wish to reconsider the effect of confining the writing prompt to a single genre.

Standard 20 requires that "Students will select and use appropriate genres, modes of reasoning and speaking styles when writing for different audiences and rhetorical purposes." The 1997 Curriculum Framework, additionally, describes five "common modes of presentation." These include exposition, narration, argumentation, exposition, description likened in various ways to the four "aims of discourse," which are informational, persuasive, expressive and literary (p. 53). A variety of writing genres, therefore, is described in these curriculum frameworks.

Reviewers applauded Massachusetts' decision to assess compositional and convention skills directly. Developing a significant piece of writing takes time, however, and it is typical in large-scale testing that only one genre of writing is required per student, even though the standards call for a variety of writing types. It is also typical that the genre assessed on state tests varies over test forms: Pennsylvania uses a matrix of topics, meaning that different groups of students respond to a variety of prompts so that in any one year a student cannot predict the type of prompt s/he will confront; New York assesses a variety of writing types over the years; Oregon provides students with a choice of forms and topics each year. Massachusetts has instead chosen to identify a particular writing type that will be assessed each year for each grade tested: narrative at grade 4, persuasive at grade 8 and literary analysis at grade 10. The decision to designate only one type of writing for state assessment has both positive and negative implications for instruction.

On the plus side, students and teachers preparing for this 10th-grade exam know ahead of time just what the genre or mode of the prompt will be. They know that a clear and steady focus on literary analysis, at least at grade 10, will be the best preparation for the assessment. The required format will present no surprises; the requirements are public. In short, announcing the type of writing that will be assessed allows teachers to focus on that type of writing in their classrooms.

On the other hand, since testing often does drive instruction, other states have opted to vary the writing formats required on the yearly assessments. This helps ensure instruction in a variety of writing types described in the standards, so that no one genre receives undue instructional emphasis. One might argue that literary analysis is the proper genre for study in an English class — both traditionally and in practice — and is, therefore, the most important genre to be tested at the high school level. Reviewers observed that, in effect, the composition score for the 10th-grade MCAS is a determination of a student's ability to write a literary analysis. This is in contrast to states that either matrix the prompts or vary the genre from year to year, where the writing score is more of a generic assessment of a student's ability to approach any writing form.

MAJOR FINDINGS: MASSACHUSETTS' MATHEMATICS CURRICULUM FRAMEWORK

The Massachusetts Mathematics Curriculum Framework was adopted by the Board of Education in July 2000, replacing the 1996 Massachusetts Mathematics Curriculum Framework known as *Achieving Mathematical Power.* The 2000 framework presents revised state guidelines for learning, teaching and assessing mathematics, and reflects the hard work and dedication of public school teachers and administrators, mathematics education professors, university mathematicians and community members from across the commonwealth. Such a periodic review and revision of standards documents is required in Massachusetts by the Education Reform Act of 1993.

The 2000 framework is a significant improvement over the 1996 framework in several regards. First, the grade structure used to organize the two documents is tighter and more helpful for curriculum planning. The 2000 framework organizes student standards into bands consisting of two grades: Pre-K–K, 1–2, 3–4, 5–6, 7–8, 9–10 and 11–12, whereas the 1996 framework used broader bands — Pre-K–4, 5–8, 9–10 and 11–12. Secondly, the 2000 framework restructured the strands to more closely represent major domains of mathematics, adding an additional strand to separate measurement from geometry. Third, while neither the 1996 nor the 2000 document includes a separate strand for mathematical processes, both attempt to embed important mathematical processes into the content strands. The 2000 framework, however, describes five mathematical competencies: problem solving, communicating, reasoning and proof, making connections, and representations, whereas the 1996 framework focused on four such competencies: problem solving, communicating, reasoning and connecting. This is consistent with the recommendations made by the National Council of Teachers of Mathematics (NCTM), when each of the respective framework documents was drafted.

A number of other improvements have been made in the 2000 framework, with some being design changes and others being more substantive. For example, the revised framework contains a more streamlined introductory section and omits the vignettes used in the 1996 framework to depict what the standards might actually look like when implemented in the classroom. Both the 1996 and 2000 frameworks contain concrete examples that help translate the standards into practice, but the nature of the examples is different. The 1996 framework contains Examples of Student Learning that tend to be brief narrative descriptions of student activities or problems, whereas the 2000 framework provides Selected Problems or Classroom Activities that are more focused and are linked to specific standards.

The 1996 and 2000 frameworks also reflect differing philosophies toward the use of technology in the mathematics classroom. The 2000 framework is much more clear and direct about expectations relative to technology when it states: "… calculators should not be used as a replacement for basic understanding and skills … Elementary students should learn how to perform thoroughly the basic arithmetic operations independent of the use of a calculator … Although the use of a graphing calculator can help middle and secondary students to visualize properties of functions and their graphs, graphing calculators should be used to enhance their understanding and skills rather than

replace them." This philosophy is consistent with research showing that students can learn mathematics more deeply with the use of appropriate technology.

As noted previously, Achieve asked a cadre of five mathematics educators and mathematicians to review and benchmark Massachusetts' mathematics standards. The reviewers were selected because of their deep knowledge and experience with mathematics, mathematics education and Pre-K–12 mathematics standards — and because they represent a range of perspectives relative to mathematics that, when taken collectively, provide the state with a well-rounded, well-informed perspective on the standards. The charge to the reviewers was to critique the standards using a set of guiding questions drafted by Achieve and compare them to other identified exemplary mathematics standards documents: those of Japan, Arizona and Achieve's Mathematics Achievement Partnership (MAP), of which Massachusetts is a founding partner state.

It is important to place Japan and Achieve's MAP standards, limited to the middle grades, in the larger context of mathematics education reform across the states. Achieve's MAP standards look to the future; no state has yet articulated standards of equal rigor, and no state is yet ready to implement and hold students accountable for what is admittedly a high level of achievement. For this very reason, Achieve's MAP partnership with states like Massachusetts entails more than formulating a set of exemplary end-of-grade 8 standards; Achieve will also generate supportive professional development and identify aligned curriculum materials. Achieve's benchmarking process is designed to compare a state's standards to some of the best in the world. It is therefore unrealistic to expect a state's standards, its teachers and its students to align with these external benchmarks overnight. The message has been and remains one of "continuous improvement." Consequently, Achieve's analysis highlights areas in which Massachusetts does particularly well and areas where additional work may be warranted as the quality of both teacher and student preparation improves.

Massachusetts deserves high praise for its diligent efforts to improve its 1996 set of mathematics standards. One reviewer went so far as to say that, all in all, the Massachusetts mathematics standards are now one of the best in the country. That said, Achieve's standards are very high, and our recommendations for improvement are made in the spirit of how Massachusetts can, over time, take its mathematics standards to still another level, making them "world class."

Strengths of the 2000 Mathematics Standards

1. The standards are clear, measurable and jargon-free.

Massachusetts' standards use clear, specific and concrete language to define for educators and the public what students should know and be able to do. In terms of clarity and specificity, these standards are comparable to those of Arizona and superior to Japan's. There are some references that use specific mathematical language that may not be familiar to the general public (e.g., *Pythagorean Theorem* or *transversals of coplanar lines*), but these are appropriately used and would be very difficult to avoid.

The state also does an excellent job of not only defining what content students should know at specific grade spans but also what type of measurable skill (e.g., identifying, estimating, predicting, graphing) students need to be able to demonstrate. Clear and measurable standards such as these provide a solid foundation for teachers as they develop activities and assessments for their students and for test developers who work on large-scale assessments such as MCAS.

2. The guiding philosophy, guiding principles and strand overviews are clear and explicit.

If the introductory sections of a standards document are to be read and be useful to practitioners, brevity and clarity are key. Massachusetts has been successful in condensing its introduction, guiding philosophy, guiding principles and strand overviews into less than 15 pages. This is a reasonable length, while still being sufficient to lay the context and set the parameters for the document.

The revised introductory sections are substantive and clear. The Guiding Philosophy consists of five well-stated processes (problem solving, communicating, reasoning and proof, making connections, and representations) that appear as standards in other standards documents. They are positive additions and are included in the lead-in statement to every strand in the document. The Guiding Principles provide a helpful framework to describe the environment in which mathematics learning should occur. They address the areas of learning, equity, teaching, technology and assessment, and send the message that such issues must be attended to if students' opportunities to learn mathematics are to be optimized. Similarly, the Strand Overviews are compelling and provide a vision of the trajectory of learning within a strand that will be expected of students as they progress through the grades.

3. The inclusion of selected problems or classroom activities and a checklist of exploratory concepts and skills is an excellent strategy for making the standards concrete and clear to teachers and parents.

Relatively few states effectively use sample problems and activities to clarify the meaning of their standards for teachers and the public, and Massachusetts is to be commended for employing this strategy. Since the sample problems included in the 2000 framework are specifically linked to one or more standards, they are particularly effective in anchoring the level of expectation of the standards. As one reviewer noted, "Only by providing examples of sample problems can one determine the true meaning of the standard."

The Exploratory Concepts and Skills should also be helpful to teachers. They preview the direction in which learning will be going as students progress to the next level and call teachers' attention to ways to broaden and enrich instruction and make it more meaningful. They have the potential to be particularly useful as a guide to accelerated teaching and learning for teachers working with students ready to move beyond grade level expectations. One reviewer suggested that Massachusetts consider adding pedagogical commentary similar to that in Japan's standards to further enrich the Exploratory Concepts and Skills.

4. The standards are comprehensive, and the amount of content is reasonable.

The 2000 Standards include the most important content for grades Pre-K–12, and the amount of material presented in the learning standards is reasonable. Conversely, most of the content in the Massachusetts standards also appears in the benchmark documents; that is, there are not a lot of "extraneous" expectations in the Massachusetts document relative to the benchmark documents. Differences that do occur tend to be not so much in what content is included but rather in the ways that content is encountered. For example, while the Massachusetts standards include a mix of procedural, conceptual and problem solving expectations, they are more heavily weighted toward the procedural than are the benchmark documents.

5. The standards for grades Pre-K–6 generally do a good job of preparing students for more in-depth study of mathematics in the later grades.

The standards are particularly strong in the areas of computational fluency and the application of algorithms, aspects of mathematics that are important if students are to experience success in later grades. In referencing Massachusetts' Pre-K–6 standards, one reviewer noted that the subject matter is quite ambitious, with Massachusetts being well ahead of Arizona on many topics in these grades.

6. The standards generally demonstrate a clear progression of knowledge and skills from grade band to grade band.

Massachusetts clearly expects more from students as they progress through the elementary and middle grades. The numbers and geometric objects encountered increase in quantity and complexity, and number operations deal with expanding number sets and systems as students move through the grades. Number theory ideas, sequences and the use of variables all build from foundational ideas to more demanding ones as the standards are articulated for later grades. The skills demanded of students also increase in complexity. For example, in the area of geometry, students at the elementary grades are expected to name, identify, sort, draw, recognize, compare and describe. By the time they are middle school students, they are also expected to analyze, predict, explain, formulate and test, and apply geometric concepts to the solution of problems.

7. The division of the standards into two-year grade bands is effective, though there is some confusion about the use of two sets of standards in high schools.

The two-year spans strike a reasonable balance between the need to provide flexibility for local school districts in sequencing instruction and the needs to make expectations explicit and monitor progress regularly through the state's assessment system. It was not clear to the reviewers, however, that the alternative standards presented for the high school years are used most effectively (i.e., standards are presented both by course and by grade span). In particular, the course standards include content that is more advanced or goes into more depth than the standards for grades 9–10 and 11–12; Achieve's reviewers felt that a good deal of this additional content

should be expected of all students. The state may wish to clarify its intent in developing what amounts to two sets of standards: Is the purpose to provide flexibility in curriculum choice to schools and families or, indeed, to articulate two different sets of standards?

Recommendations for Improvement

1. **Massachusetts should strengthen its standards by emphasizing the critical role that mathematical reasoning plays in connecting the domains of mathematics to each other.**

Although Achieve's experts agreed that Massachusetts lays a strong foundation in procedural understanding in the early grades, they believe that the standards should be enhanced in the area of conceptual understanding. Japan (and China, according to Liping Ma, whose work is used as a reference in the 2000 framework) spends much time in the early grades establishing and building on the idea of place value and what it means for arithmetic operations. This lays a strong foundation for later computational work with fractions, decimals, percents and integers. Japan also pays special attention to establishing students' conceptual understanding of units of measure early on, setting the groundwork for more sophisticated measurement expectations as students progress through the grades. The Massachusetts standards, however, are lean across the grades and strands on expectations that focus on building conceptual understanding, strategic competence and adaptive reasoning. They instead tend to focus on expectations that require students to apply procedures and algorithms to do such things as read numbers, do arithmetic and measure objects.

The additional time required to build deeper conceptual understanding of arithmetic, algebra and geometry could be had by shifting the introduction of coordinate geometry and a portion of the data strand to grades 5 and 6. More emphasis on geometric and algebraic concepts is also needed at grades 5 and 6, if Massachusetts is to ensure that its middle school students are prepared for the rigors of higher-level mathematics.

Furthermore, although Massachusetts clearly and concisely addresses the importance of reasoning in its Guiding Philosophy and Guiding Principles, these topics should be infused into the standards themselves at all levels. The Arizona standards are particularly strong in this respect and might serve as a good model. For example, for grades 6–8, Arizona requires that students be able to "construct simple valid arguments using if … then statements based on geometric shapes, proportional reasoning in probability and syllogism" and to "solve problems using deductive reasoning."

In the same vein, Japan's standards for grade 8 frequently require students to "confirm" properties, implying an expectation of informal proof. The Massachusetts standards do not ask for anything like this in grades 7–8 and only hint at it in grades 9–10. Only in the separate geometry course is proof — formal or informal — listed as a standard. Interestingly enough, the 1996 framework did contain some very explicit expectations involving logical thinking and proofs in the grade 9–10 learning standards for Geometry and Spatial Sense, but these have been eliminated in the 2000 framework.

In addition, the 2000 framework, as currently constructed, does not capture the holistic nature of mathematics, its underlying structure and the relationship of one branch of study to another. Nor does it truly reflect the Guiding Philosophy's stated goal of "making connections." Reviewers offered suggestions as to how to fortify reasoning and logical thinking and transform this fragmentation. Most ideas centered on a more in-depth and strategic use of sample problems. One reviewer went further and suggested providing many problems at the end of each grade band, which are selected to illustrate the connective nature of mathematics, and which are not tied to any particular standard. These could be in addition to the Selected Problems or Classroom Activities that currently appear in the framework linked to specific standards. Such "cross-cutting" problems would also serve as models for how the mathematical processes, particularly problem solving and reasoning, can serve as a unifying thread throughout the document.

Unfortunately, some of the Selected Problems now included in the framework are not particularly representative of the breadth, focus and balance of the standards. More and better problems would be helpful to anchor the level of expectation of the standards and to make connections among mathematical ideas more explicit. The MAP expectations include extensive sample problems, which do more than show procedures or skills; rather, they demonstrate the depth of mathematical understanding and reasoning skills implied by the standards. They also typically focus on concepts that need clarification or are difficult to teach.

The intent of such illustrative problems is not to provide problems useful for assessing student performance but rather to show teachers how to help students think about the mathematics involved in a deeper way. Given that Massachusetts is a founding partner of MAP, it might make sense for Massachusetts to revisit its selection of sample problems, replacing or augmenting them to better capture the essence of the standards and support professional development.

2. **As the state's efforts in the areas of teacher development and support for struggling students intensify and take effect, Massachusetts should consider revising its middle school and high school standards to increase the level of rigor.**

Raising standards to world-class levels will take several years; Massachusetts has made many strides in this direction, but when the curriculum framework is next revised, the state should continue to inject greater depth and rigor. The level of rigor in a state's standards needs to be sufficient for students to have access to high performance jobs and/or college. The Education Trust estimates that as many as 80 percent of current students nationwide will enter two- or four-year colleges directly after high school. We realize that the expectations contained in the 2000 framework are indeed very challenging for many students. Massachusetts' standards have set a high floor, one that should be raising the level of curriculum and instruction throughout Massachusetts' schools right now. Achieve's reviewers generally agreed that the content and depth of the standards for grades 11–12 are a good foundation for success in college mathematics. Yet, they also believe that some of the key concepts now placed in these grades should be expected of all students by the end of 10th grade — regardless of their career paths — and, accordingly, that the middle school standards will need to be ramped up as well.

While a number of factors determine how rigorous a set of standards are, a principal determinant is whether the content is sufficiently challenging for the grade level. Without question, the end of grade 8 is a critical juncture in mathematics education. For students to have a genuine choice of mathematically divergent paths through their high school programs, and to not find themselves consigned to the less demanding courses by default, a state's Pre-K–8 standards must be rigorous in their conception and implementation. Algebraic and geometric knowledge and skills are gatekeepers for the two distinctly different mathematics programs common to most high schools.

Reviewers expressed concern about the rigor of content in the 2000 framework's standards for middle and high school students. Particular areas of weakness are in algebra, geometry, and probability and statistics. They generally agreed that the standards defined for grades 7–8 and grades 9–10 were insufficiently challenging compared to Japan and MAP. Massachusetts' standards for grades 7–8 in particular contain too much duplication and are too densely packed. Massachusetts might wish to shift a few of its standards to earlier grades. Currently, the standards list a number of expectations in grades 7–8 that are appropriate for grades 5–6. Japan, for example, expects students to focus on ratio and proportion at grade 6, whereas Massachusetts' students are not expected to be able to use ratio and proportion to solve problems before grades 7–8 (8.N.3). In addition, more than 30 percent of all standards for grades 7–8 focus on number sense and operations; this is too heavy a focus on number for the middle grades.

Similarly, reviewers identified a number of expectations now set for grades 9–10 that they believe are realistic for students in grades 7–8. These expectations span the various strands and include such topics as simplifying numerical expressions that may involve positive integer exponents and absolute value; understanding the geometry of lines and circles; demonstrating understanding of the relationship between various representations of a line; finding the perimeter, circumference and area of common figures such as triangles, parallelograms, trapezoids and circles; and applying congruence and similarity correspondences and properties of figures to find missing parts of geometric figures.

The fundamentally important concepts of linear and nonlinear equations deserve much greater attention in these standards. Both Japan and MAP tend to set higher expectations for middle school students for linear equations. Although Massachusetts' standards for grades 7–8 require that students be able to "set up and solve linear equations and inequalities with one or two variables, use linear equations to model and analyze problems" and "use tables and graphs to represent and compare linear growth patterns," they include no expectations for the solution of simultaneous linear equations, as do the Japanese and MAP standards. Not until grade 10 do Massachusetts' standards require students to be able to solve problems "that can be modeled using systems of linear equations or inequalities" (10.P.8/A1.P.12).

Japan and MAP also set higher expectations for students relative to nonlinear equations and functions. Japan's algebraic focus at grade 10 is on quadratic equations; by the time Japanese students reach grade 10, they are expected to have mastered linear functions. MAP standards are even more rigorous in that they expose students to nonlinear functions, and quadratic functions in

particular, in the middle grades. Massachusetts sets expectations for quadratic equations for students in grades 9–10 (e.g., 10.P.1, 10.P.5, 10.P.7), yet the approach is less ambitious than that of either Japan or MAP: The majority of Massachusetts learning standards in the patterns, relations and algebra strand for grades 9–10 reference only linear equations and inequalities (e.g., 10.P.1, 10.P.2, 10.P.6, 10.P.7, 10.P.8). To ratchet up expectations over time for student performance, Massachusetts should consider accelerating the teaching and learning of linear functions so that quadratic and nonlinear functions can get more attention in grades 9–10.

Arizona and Japan also require some knowledge of trigonometry as a core expectation for all students in grades 9–10. Arizona requires that all students be able to use the definitions of trigonometric functions to find the sine, cosine and tangent of the acute angles of a right triangle. Japanese students are expected to know about the sine, cosine and tangent functions for angles measuring from 0 to 180 degrees and to know about the law of sines and law of cosines. The 2000 framework has no trigonometry expectations prior to grades 11–12. Massachusetts may wish to reclaim the learning standard in the 1996 framework for grades 9–10 — which required students to apply trigonometry to problem situations involving right triangles — since the 2000 framework lays the groundwork by introducing students to the Pythagorean Theorem by the end of grade 8.

Another aspect of rigor is whether a set of standards exhibits a well-developed continuum of increasing complexity of knowledge and skills from kindergarten through grade 12. Reviewers generally agreed that the Massachusetts standards absolutely expect more from students as they progress through the elementary and middle grades. The one exception is the Data Analysis, Statistics and Probability strand, which contains comparatively weak standards across the grades. For example, during the elementary grades, collecting, organizing, representing and interpreting data are all part of the standards, but these concepts are not described with much richness. In addition, not much attention is given to issues of statistical design.

In the Data Analysis strand, progression is a particular concern from middle to high school. Except for standard 10.D.2, there is little advance in skills and knowledge from grades 7–8 to grades 9–10. At the high school level, one standard in grades 9–10 mentions sample size, but not as part of the larger issue of overall design of surveys and experiments. In comparison to Japan and Arizona, Massachusetts' standards for this strand are not as explicit or rigorous. For example, Japan includes standards for all students for formal counting techniques such as permutations and combinations in grade 10, whereas Massachusetts does not address the topic until grades 11–12. Similarly, Arizona includes expectations about correlation and the use of trend lines to make predictions. Making predictions from data does not appear clearly in the Massachusetts document until grades 11–12 (12.D.3); although it may be implied in grades 9–10 (10.D.2), there does not appear to be any expectation at this level for correlation.

Additionally, there is no specific mention of inferential statistics (e.g., using a density distribution to predict the likelihood that an event has occurred by chance or creating or interpreting a confidence interval). Many of the common mathematical concepts that one finds mentioned in daily newspapers (e.g., indices of inflation or of financial markets, the normal curve, accuracy

limits on polls, the concept of statistical significance, understanding risks) are not in the Pre-K–10 Massachusetts standards required of all students. Such common uses of mathematics are required for informed citizenship and should be included in future editions of the standards.

3. Although the standards generally contain appropriate content, they could be more sharply focused to signal the most essential content at each grade band and to encourage depth.

While the Pre-K–12 Massachusetts standards are comprehensive, they could benefit from a sharpened focus and greater depth. The state rightly targets number sense and operations in the early grades, but many topics within this strand are carried too far into the upper elementary years and even into middle school. Downshifting some of these topics from the middle to the elementary grades would be a move in the right direction. Massachusetts might also wish to include some of the more rigorous aspects of the Japanese standards, with the goal of deepening conceptual understanding. The Japanese elementary school standards for Number Sense tend to set higher and deeper expectations in such areas as representing and ordering fractions and decimals, computations with fractions and decimals, and whole number division.

As it stands now, standards in Number Sense and Operations compete for emphasis with standards in Algebra, Geometry and Data Analysis that should be receiving greater attention as students advance to the middle grades. As a result, the standards in these critical areas are not sufficiently developed. To be sure, Massachusetts has made progress in trying to limit the attention given to arithmetic, as the TIMSS (Third International Mathematics and Science Study) findings strongly suggest is essential, and this is an area that will undoubtedly shift as students and teachers become more knowledgeable about increased expectations in mathematics.

The Geometry strand is another case where the standards cover many ideas at too superficial a level. The depth to which these ideas are developed is not always apparent. For example, in grades 3–4, students are to "identify angles as acute, right or obtuse" and "describe and draw intersecting, parallel and perpendicular lines." The wording of the standard appears to favor knowledge at a vocabulary level rather than deeper understanding. Euclidean geometry is similarly not given adequate play in the middle grades, where the geometry is mostly focused on measurement and vocabulary. Again, the issue appears to be one of depth as opposed to content coverage. Japan is a benchmark to emulate in this regard, as its standards define fewer topics per grade level but go into great depth with those particular topics. Japan has made tough choices about areas of focus for each grade level and defined its choices, albeit without the level of specificity Massachusetts uses.

4. While the introductory statements about the appropriate use of technology are strong, more descriptions within the standards are needed to exemplify how technology can be used as a tool to enhance student learning.

In Guiding Principle III, Massachusetts makes a forthright statement regarding the use of technology in the mathematics classroom. While alluding to the general merits of technology use

in the classroom, the document clearly communicates the philosophy that technology should not be used to replace basic mathematical understanding and skills. Rather, if used properly, it is viewed as a means of enhancing the mathematics curriculum and the learning environment. This is consistent with NCTM's Principles and Standards for School Mathematics, which makes the same point.

With respect to the latter point, Massachusetts might wish to specify what appropriate use of technology looks like in the classroom by identifying opportunities where technology could be put to good use. For example, dynamic geometry software could be used to suggest conjectures or generate perspective drawings, nets and projections. A statistics software package could be used to sample data or create data plots. Computation and graphing technology could be beneficial when learning about compounding. Clarification in the wording of the standards themselves would help, as would the inclusion of sample problems that include appropriately employed technology.

RECOMMENDATIONS FOR MOVING FORWARD

Massachusetts has made substantial progress in developing and implementing two essential components of standards-based reform — strong standards and assessments that measure what the standards expect. As the state moves forward in implementing its system for standards-based education, Achieve recommends that the state consider two improvements in particular to the standards and assessments:

- ✓ **The MCAS high school tests include relatively minor flaws that should be fixed in subsequent rounds of testing. For example, the math test emphasizes some standards at the expense of others, and the English language arts test needs more treatment of nonfiction.** The MCAS mathematics test measures important content that all high school students should be responsible for knowing, yet it can be improved further. Achieve found a number of mathematics test items ostensibly designed to assess number concepts that instead more directly measure algebra standards; this has the effect of weighting the test more heavily toward algebra and omitting some advanced number concepts. Also, while the test is generally well constructed, the balance of items does not provide adequate coverage for all of the important knowledge and skills detailed in the standards. The state should ensure that items assessing numbers and data analysis are appropriately challenging on the next edition of the MCAS mathematics test.

  The language arts test is rich and rigorous, but it focuses too much on literature. All students should be exposed to a deep and engaging literary curriculum, but they also should learn how to read and interpret informational texts, such as historical documents, scientific journal articles and technical manuals. And, the state should consider varying the 10^{th}-grade writing prompt from year to year to assess students' skills in producing different kinds of compositions, rather than just literary analyses. By giving short shrift to students' abilities to work with informational texts, the test does not evaluate the full range of skills students need to participate meaningfully in the emerging "knowledge economy."

- ✓ **The mathematics standards should require more rigor and depth, attention to and emphasis on mathematical reasoning, and a sharper focus on essential content at each grade level.** At the middle and high school levels, students will need to be held to higher expectations to be fully prepared for success in college and high-performance workplaces. While Achieve acknowledges that many Massachusetts schools and students are struggling to meet the state's current standards — and these students will need intensive academic support in the short run — over time, as long-term changes in teacher recruitment, preparation and professional development begin to take effect, the state should raise the rigor of the mathematics standards. In the immediate future, the state may wish to publish companion materials to the mathematics standards that include numerous sample problems and activities

and descriptions of how educators can build students' conceptual understanding of mathematics and reasoning ability.

* * *

Achieve also recently conducted a policy review for Massachusetts, the results of which are planned to be released in late fall of 2001. In the policy review, Achieve will address the findings of this report in addition to other core elements of a comprehensive system of standards-based education, such as capacity building, accountability and public engagement. By taking a hard look at the progress that has been made in the more than eight years Massachusetts has invested in implementing standards-based systems — and by identifying important work still to be done — Achieve hopes to help the state meet its goal of raising the achievement of all its students.

APPENDIX

Achieve relied on a number of individuals in producing this report for Massachusetts and on the expertise of nationally respected experts in academic content, standards, curriculum and assessment design to inform and conduct the standards benchmarking and alignment of assessments to standards.

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she directed The Pittsburgh Discussion Model Project, funded by the Rockefeller Foundation and part of the CHART network, and later directed the imaginative writing part of the ARTS Propel Project, a joint project with Harvard's Project Zero and the Educational Testing Service. She was the Pittsburgh district coordinator for the New Standards Project and wrote the teachers' guides for the New Standards ELA Portfolios. In 1995, she was one of the original resident fellows at the Institute for Learning at the University of Pittsburgh's Learning Research and Development Center and coordinated the New Standards Linking Projects. From 1997 to March 2001, she was the coordinator of staff development in Community District Two in New York City, where she was responsible for the hiring, training and coordination of that district's staff development group.

Assessment Reviewers

Carlton Jordan received his mater's degree from the State University of New York at Albany. Mr. Jordan is a senior associate with The Education Trust, where his primary responsibilities include helping K–12 teachers implement standards-based education and helping middle and high school English language arts departments de-track English language arts. Prior to joining the Trust in August 1998, Mr. Jordan was an adjunct lecturer in the department of African Studies at the State University of New York at Albany; previously, he taught middle and high school English language arts in Montclair, N.J. The efforts of Mr. Jordan and his colleagues in de-tracking 9th-grade English language arts led to an article by Michelle Fine, Lois Weiss and Linda Powell in a book called *Critical Ethnicity* and a video called *Off Track: Classroom Privilege for All* distributed by Teachers College Press. The video won the National Educational Media Network's Silver Apple award.

Laura McGiffert is the assistant director of the Mathematics Achievement Partnership (MAP), a multistate collaboration to dramatically improve mathematics performance in the middle grades. As the principal manager of this project, Ms. McGiffert assumed primary responsibility for the development of *Foundations for Success: Mathematics for the Middle Grades*, which represents the core knowledge and skills that students should learn to prepared for high school and beyond. To this end, she coordinated Achieve's Mathematics Advisory Panel, an expert panel of mathematicians, mathematics educators, curriculum specialists, and state and local math supervisors representing a broad spectrum of perspectives about mathematics education. Before joining Achieve in 1998, Ms. McGiffert was a high school English language arts teacher for five years in Colorado, where she was involved in a districtwide effort to refine and align local standards and assessments. In 1995, she was awarded "Best First Year Teacher" in Eagle County School District at the high school level. She also taught writing and literature at Colorado Mountain College. Currently, she brings these experiences to bear as a member of the English language arts team for Achieve's Benchmarking Initiative, which assists states in benchmarking their academic standards, assessments and accountability policies against the best in the nation and the world. A native Washingtonian, Ms. McGiffert hold a master's degree in education policy from the Georgetown University Public Policy Institute, a master's degree in secondary education from the University of Colorado at Boulder and a bachelor's degree in English and American literature from Harvard University.

LeRoy Miller received his bachelor's degree in English from Fairleigh Dickinson University and his master's in Secondary English from Miami University. Mr. Miller is in his 28th year of teaching 11th-grade English at Sidney High School, where he also serves as English Department Chair for a nine-member department. Mr. Miller is also a teacher of advanced placement and honors American literature and an advisor for the Academic Competition Team. In addition, he served as a commissioner on the Governor's Commission on Student Success in 2000 and is a member of Ohio's Academic Content Standards Writing Team for English language arts.

Diane Ravitch received her doctorate from Columbia University. Dr. Ravitch is a research professor at New York University and holds the Brown Chair in Education Policy at the Brookings Institution in Washington, D.C., where she is a senior fellow and edits the *Brookings Papers on Education Policy.* She is also a member of the National Assessment Governing Board, to which Secretary of Education Riley appointed her in 1997. Previously, Dr. Ravitch served as assistant secretary for educational research and improvement in the George H.W. Bush Administration. The author of numerous books, scholarly and popular essays, she most recently published *Left Back: A Century of Failed School Reform* (2000).

Alice Turner Venson received her bachelor's degree in English from Hampton University (formerly Hampton Institute in Virginia), a master's degree in education from the University of Pittsburgh, and has done doctoral study in reading and language arts K–12 at the University of Pittsburgh. Ms. Turner Venson is a senior associate with the National Center on Education and the Economy. Her area of concentration is English language arts at the secondary level. Previously, she coordinated the New American Schools school reform initiative for the Pittsburgh Public Schools. Ms. Turner Venson has also been a high school English teacher, guidance counselor, vice principal, instructional supervisory specialist for English at the secondary level, a state and national trainer for writing assessment, and a national trainer for standards development.

MATHEMATICS

Kaye R. Forgione began consulting work with Achieve in 2000 and joined Achieve as senior associate for mathematics in March 2001. Dr. Forgione's primary responsibilities are managing and providing intellectual leadership to Achieve's standards and benchmarking work involving mathematics. Before joining Achieve, she served as assistant director of the Systemic Research Collaborative for Mathematics, Science and Technology Education (SYRCE) project at the University of Texas at Austin. Her responsibilities also included administrative and design responsibilities for UTeach, a collaborative project of the College of Education and the College of Natural Sciences to train and support the next generation of math and science teachers in Texas. Prior to her work at the University of Texas, Dr. Forgione was director of academic standards programs at the Council for Basic Education, a nonprofit education organization based in Washington, D.C. Prior to joining the Council for Basic Education in 1997, Dr. Forgione worked in the K–12 arena in a variety of contexts, including district-level curriculum supervisor for mathematics, assessment and gifted/talented programs. She was also team leader for assessments and task development and supervisor in the areas of assessment, school profiles, and educational

indicators at the Delaware Department of Education, senior research associate for development at the Delaware Education Research and Development Center at the University of Delaware, and a high school mathematics teacher. Her personal portfolio of work includes mathematics-related and policy development work in a number of states (including Nevada, Maryland and Hawaii), school districts (including Cleveland; East Allen County, Ind.; and Los Angeles) and in partnership with a number of organizations (including Achieve, George Washington University, and the Institute for Educational Leadership). Dr. Forgione earned her doctorate from the University of Delaware.

Standards Reviewers

Susan K. Eddins has both a bachelor's and master's degree in mathematics. She has taught students in kindergarten through college for over 30 years — 24 years at the high school level. She is the recipient of several honors for her teaching, including the Presidential Award for Excellence in Mathematics Teaching, and she is a National Board Certified Teacher in Adolescent and Young Adult Mathematics. Ms. Eddins is a faculty member, an instructional facilitator and the curriculum and assessment leader in mathematics at the Illinois Mathematics and Science Academy, where she has taught since the school's inception in 1986. She has served in leadership capacities in several professional organizations and is currently a member of the Board of Directors of the National Council of Teachers of Mathematics (NCTM). Ms. Eddins was a member of the 9–12 writing group for NCTM's *Principles and Standards for School Mathematics.* Ms. Eddins is co-author of a chapter in NCTM's *Windows of Opportunity* and is a co-author of *UCSMP Algebra.* Ms. Eddins is a past panel member and editor of NCTM's *Student Math Notes* and has authored several articles in refereed journals. Over the past four years, in addition to numerous workshops and presentations, her most extensive work has been in the area of standards development, standards review and alignment of standards to assessments. For Achieve, she has reviewed academic standards or assessments from Alaska, Illinois, Indiana, Minnesota, New Jersey, Oregon, Pennsylvania, Texas and Washington.

Roger E. Howe received his doctorate in mathematics from the University of California at Berkeley. Dr. Howe currently is a professor of mathematics at Yale University. He is a member of the National Academy of Sciences and the American Academy of Arts and Sciences. Dr. Howe is a member of the Board of Directors, Connecticut Academy for Education in Mathematics, Science and Technology. He was the chair of American Mathematical Society Consultative Committee to the NCTM Standards 2000, served on the Mathematical Association of America Committee on Education of Mathematics Teachers and participated in the National Research Council Study Committee on Mathematics Learning.

Donald R. King received his doctorate in mathematics from the Massachusetts Institute of Technology. Dr. King is an associate professor of Mathematics at Northeastern University. Previously, he was a visiting assistant professor at Salem State College, a visiting assistant professor at the University of California at San Diego and a high school mathematics teacher in Boston, Mass. Dr. King is a member of the Mathematical Association of America, American Mathematical Society and the National Association of Mathematicians. Dr. King is active in professional and community service: He was a parent member of the Mathematics Focus Group

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Lynn A. Steen received his doctorate in mathematics from the Massachusetts Institute of Technology. Dr. Steen has been a member of the St. Olaf College faculty since 1965 and currently is the director of institutional research and planning. Dr. Steen is leader of the quantitative literacy initiative of the National Council on Education and the Disciplines (NCED) at the Woodrow Wilson Foundation and a member of the Mathematics Achievement Partnership (MAP), a project of Achieve, Inc., to create a common set of expectations and assessments for mathematics in the middle grades. Dr. Steen is former president of the Mathematical Association of America and former chair of the Council of Scientific Society Presidents. He has reviewed mathematics standards for Achieve from Texas, Oklahoma and Massachusetts.

Assessment Reviewers

Lucio Calzada received his master's in school administration from Texas A&I University and is an advanced doctoral candidate at the Texas A&M University. Mr. Calzada is currently the principal of Fulmore Middle School in Austin, Texas. Prior to joining Fulmore, Mr. Calzada was the principal of South Park Middle School in Corpus Christi, Texas, where he played a role in the development and the implementation of the academic standards supported by the Edna McConnell Clark Foundation. He has also been a mathematics consultant, an assistant principal of Taft Junior High School, and teacher of mathematics, trigonometry, analytic geometry, geometry, algebra and prealgebra at H.M. King High School in Kingsville, Texas.

Ruben Carriedo received his doctorate from the Harvard University Graduate School of Education. Dr. Carriedo currently serves as a senior research associate at the University of Michigan School of Education. He is part of the Study of Instructional Improvement, a comprehensive longitudinal study of instructional interventions at 125 elementary schools across the country. Dr. Carriedo has been a teacher, coach, counselor, and secondary school and central office administrator in New York City and San Diego public schools. He served as the assistant superintendent for the Planning Assessment, Accountability and Development Division in the San Diego City Schools from 1987 to 1999. He has served on the California Assessment Program Policy and Technical Advisory committees, New Standards Project Technical Committee, the National Advisory Panel for the Center on the Reorganization and Restructuring of Schools, the National Advisory Panel on Chicago School Restructuring, PACE/Rockefeller Project Advisory Committee, *Editorial Board of the Educational Evaluation and Policy Analysis Journal,* Advisory Committee of the Learning, Research and Development Center at the University of Pittsburgh. He

currently serves on the TIMSS-R Technical Review Panel, Advisory Committee on Education Statistics at the National Center for Education Statistics, Trustee Committee on Research and Development of the College Board, and Title I Assessment Committee at the National Research Council and National Academy of Science. He has worked as a consultant to the Spencer and MacArthur foundations and Booz-Allen on Chicago school reform. In addition, he has consulted with the Ford Foundation to plan a national symposium on assessment and equity. He also served as a member of the national evaluation panel for the Children Achieving reform initiative in Philadelphia.

Donald R. King received his doctorate in mathematics from the Massachusetts Institute of Technology. Dr. King is an associate professor of Mathematics at Northeastern University. Previously, he was a visiting assistant professor at Salem State College, a visiting assistant professor at the University of California at San Diego and a high school mathematics teacher in Boston, Mass. Dr. King is a member of the Mathematical Association of America, American Mathematical Society and the National Association of Mathematicians. Dr. King is active in professional and community service: He was a parent member of the Mathematics Focus Group for Boston Public Schools in 1997; director from 1993 to 1994 of NUMATH, Northeastern University's program to foster minority mathematical achievement and talent in high school; an advisor to algebra-in-middle-schools projects from 1990 to 1992; a review panelist for three years for Ford Foundation post-doctoral fellowships for minorities; and an advisor to Massachusetts' pre-engineering program for minorities from 1988 to 1991. Dr. King recently gave a speech at the American Mathematical Society's Special Session on Teaching Mathematics in the New Millennium: "Changing school outcomes: Raising standards and promoting equity," and he has advised Achieve on the quality of standards and assessments in a number of states including Minnesota, Oklahoma, New Jersey and Texas.

Norman Webb received his doctorate from Stanford University. Dr. Webb is a senior research scientist at the Wisconsin Center for Education Research, located in the University of Wisconsin at Madison. Before joining the University of Wisconsin, Dr. Webb worked for Wisconsin's Department of Public Instruction, as section chief for the Bureau of Achievement Testing. Dr. Webb was recently awarded a grant by the Joyce Foundation entitled Center for the Study of Systemic Reform in Milwaukee Public Schools. In addition, Dr. Webb authored *Alignment of Science and Mathematics Standards and Assessments in Four States* for the National Institute for Science Education and the Council of Chief State School Officers in 1999. He has worked with Achieve to review tests for Illinois, Minnesota, New Jersey and Pennsylvania and to refine Achieve's assessment-to-standards alignment protocol.

ACHIEVE PROJECT STAFF

Matthew D. Gandal is vice president of Achieve, Inc. Mr. Gandal manages the Washington, D.C., office and is responsible for overseeing Achieve's major initiatives. These include the 1999 National Education Summit and a series of follow-up activities Achieve has launched to help states address the Summit challenges; the Benchmarking Initiative that helps states compare their

standards, assessments and accountability policies with other states and nations; and the Mathematics Achievement Partnership, designed to help states improve curriculum and instruction in middle school mathematics and measure student achievement using a common, internationally benchmarked 8th-grade test. Before joining Achieve, Mr. Gandal was assistant director for educational issues at the American Federation of Teachers. Mr. Gandal helped the AFT launch a variety of programs and publications designed to support standards-based reform efforts in states and school districts. He was the author and chief architect of *Making Standards Matter,* an annual AFT report evaluating the quality of the academic standards, assessments and accountability policies in the 50 states. He also authored a series of reports that compared student standards and achievement in the United States with that of other industrialized nations. Mr. Gandal is a proud graduate of the public school system in the state of Maryland and earned a bachelor's degree in philosophy from Trinity College in Hartford, Conn.

Lauren B. Resnick is an internationally known scholar in the cognitive science of learning and instruction. Her recent research has focused on socializing intelligence, the nature and development of thinking abilities, and the relation between school learning and everyday competence, with special attention to mathematics and literacy. Her current work lies at the intersection of cognitive science and policy for education. Dr. Resnick founded and directs the Institute for Learning, which focuses on professional development based on cognitive learning principles and effort-oriented education. She is cofounder and codirector of the New Standards Project, which has developed standards and assessments that have widely influenced state and school district practice. Dr. Resnick was a member of the Commission on the Skills of the American Workforce and served as chair of the assessment committee of the SCANS Commission and of the Resource Group on Student Achievement of the National Education Goals Panel. She has served on the Commission on Behavioral and Social Sciences and Education and on the Mathematical Sciences Education Board at the National Research Council. Her National Academy of Sciences monograph, *Education and Learning to Think,* has been influential in school reform efforts, and her widely circulated Presidential Address to the American Educational Research Association, "Learning In School and Out," has shaped thinking about youth apprenticeship and school-to-work transition. Dr. Resnick is professor of psychology at the University of Pittsburgh, where she directs the prestigious Learning Research and Development Center. Educated at Radcliff and Harvard, she has been a member of the Smithsonian Council and was the recipient of the 1998 E.L.Thorndike Award from the American Psychological Association and the 1999 Oeuvre Award from the European Association for Research on Learning and Instruction.

Robert Schwartz is the president of Achieve, Inc. Over the previous three-and-a-half decades, Mr. Schwartz has had a rich and varied career in education and government. He has been a high school English teacher and principal; an education advisor to the mayor of Boston and governor of Massachusetts; an assistant director of the National Institute of Education; a special assistant to the president of the University of Massachusetts; the executive director of the Boston Compact, a public-private partnership designed to improve access to higher education and employment for urban high school graduates; and a lecturer on education at the Harvard University Graduate School of Education. From 1990 to 1996, Mr. Schwartz directed the education grant-making

program of The Pew Charitable Trusts, one of the nation's largest private philanthropies. Among the major reform projects initiated during his tenure at the Trusts were New Standards, a voluntary national system of student performance standards and assessments developed jointly by the University of Pittsburgh, the National Center on Education and the Economy, and 17 partner states; and the Pew Network for Standards-Based Reform, a collaborative venture among seven medium-size school districts committed to systemic reform based on high academic standards. Mr. Schwartz has written and spoken widely on such topics as urban school reform, public-private partnerships and the role of higher education in K–12 reform. He holds degrees from Harvard and Brandeis Universities and continues to serve as a part-time faculty member at Harvard, where he teaches a course each spring on educational policy and administration.

Jean B. Slattery has been a consultant for Achieve since 1999; she currently serves as associate director, Benchmarking Initiative. She was supervising director of curriculum development and support in Rochester, N.Y., from 1989 to 1997, with responsibility for overseeing the work of all subject-area directors in the K–12 instructional program. Her earlier responsibilities as a district-level administrator included serving as director of the Middle School (1987–89) and Junior High (1985–87) Programs. During this period, she initiated Teachers As Partners, a peer-coaching staff development program funded by the Ford and Matsushita (Panasonic) Foundations. Prior to her work in central office, Dr. Slattery served as vice principal of the Nathaniel Rochester Community School. She taught chemistry for 15 years in Rochester, New Haven and Branford, Conn. She was district coordinator for the New Standards Project of the National Center on Education and the Economy (NCEE) from 1991 to 1997 and served on the faculty of the July Institutes on Assessment of the Harvard University School of Education from 1990 to 1999. Dr. Slattery also is a peer consultant on standards and assessment for the U.S. Department of Education. She has served as a consultant to the Washington, D.C. School District, the San Diego Unified School District, a Washington state consortium of rural schools, and the Alabama and Illinois Departments of Education. She has worked for the Council for Basic Education on projects involving the Flint Community School District, the Nevada Education Department and the Cleveland Municipal School District. She received a bachelor's degree in chemistry from Albertus Magnus College, a master's in science education from Yale University and a doctorate in science curriculum from the University of Rochester.

Jennifer L. Vranek is the director of Benchmarking and State Services for Achieve, Inc., where she has directed successful projects with more than 15 states, working closely with state education superintendents, governors and business executives to benchmark state education reforms and share best practices. Ms. Vranek was a key staff member in the planning, preparation and follow-up activities for the 1999 and 2001 National Education Summits, hosted by Achieve, and in the research, development and launch of the Mathematics Achievement Partnership. In addition, Ms. Vranek recently planned and launched a two-year, $2.4-million project spearheaded by Achieve in collaboration with The Education Trust, Thomas B. Fordham Foundation and the National Alliance of Business to help states close the gap between current high school graduation standards and college/employer admissions. Before joining Achieve in 1997, Ms. Vranek was a research assistant at the American Federation of Teachers, where she was a principal researcher for *Making*

Standards Matter, an annual AFT report evaluating the quality of the academic standards, assessments and accountability policies in the 50 states, and *Setting Higher Sights,* a comparative analysis of the quality of mathematics assessments in the United States and abroad. Previously, Ms. Vranek lived in Brasilia, Brazil, where she was a project consultant to the World Bank's G-7 Pilot Program to Conserve the Brazilian Rainforest and also served as the administrative secretary to the Board of Directors of the American School of Brasilia. A graduate of the public schools in San Antonio, Texas, Ms. Vranek holds a master's degree in public policy from the Georgetown University Public Policy Institute and a bachelor's degree in history with minors in music and public policy from the College of William and Mary in Virginia.

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Appendix B6: CCSSO States Collaborative on Assessment and Student Standards: Implementing the Common Core System

Implementing the Common Core System (ICCS)

Because all students should graduate from high school prepared to tackle the challenges of college or a 21st century career, 48 states, two territories, and the District of Columbia have partnered to develop the Common Core Standards. These standards in mathematics and English Language Arts help to set clearer, fewer, and higher standards for our students. Not only do these standards articulate a new and ambitious goal for each student, they detail grade by grade benchmarking to track student progress. Over 40 states have committed to adopting the Common Core by summer 2010.

In adopting the Common Core Standards, states will confront daunting logistical challenges associated with the necessary changes to instructional delivery, curriculum content and sequence, assessment practice, performance expectations, professional development, and potentially, governance.

To help states meet these challenges effectively, the SCASS System is offering a new Implementing the Common Core System SCASS (ICCS) beginning for the 2010/2011 fiscal year.

This SCASS will study how changes to certain areas of the education system will impact others. Each area, each sub-system must be studied and adjusted based on the role it serves in the whole of the educational system. For example, new curriculum cannot be taught without prerequisite professional development and re-aligned assessment systems.

With the momentum for comprehensive educational reform and with incentives to experiment with next generational learning programs, this is an unprecedented opportunity to enact systemic changes. The Implementing the Common Core System (ICCS) SCASS will solve the problems of moving to a common core of standards by evolving policies and practices which fully connect, coordinate, and integrate the sub-systems (curriculum, instruction, professional development, accommodations, assessment, etc.) which together form the educational delivery system for students.

This SCASS (like all others) will be primarily membership funded. ICCS will also seek additional external funding. Membership in ICCS is contingent on a state being a member of at least one other SCASS. The number of state memberships will be capped at a

manageable number to facilitate productive work. Each ICCS state team will include six people, but will be discounted to $25,000 per state. The specific attendees are up to each state member, however, we suggest: [a] an SEA deputy, [b] the SEA curriculum director, [c] the SEA assessment director, [d] the SEA ELL or special education director, [e] the SEA professional development director, and [f] an LEA deputy superintendent.

ICCS will be led by co-Collaborative Advisors, one with a rich grounding in systems change and design, and one with extensive, multi-level experience in education administration. Generally, the ICCS SCASS will work through several phases including: defining policies and operations rules for the system; identifying and clarifying the role of each sub-system; identifying and clarifying the interactions and dependencies between and among the sub-systems; defining policies and operations rules for each sub-system; documenting the educational system; and, disseminating the information, policy, operations guidance, and tools arising from this work.

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Appendix B7: Massachusetts Scholars and Educators Represented on Common Core Teams

Massachusetts Representation on the Common Core Development Teams

Mathematics

- Sol Garfunkel, Executive Director, COMAP, the Consortium for Mathematics and its Applications
- Deborah Hughes Hallett, Adjunct Professor of public policy, Harvard Kennedy School
- Barbara Libby, Director of the Office of Science, Technology, Engineering and Mathematics, Massachusetts Department of Elementary and Secondary Education
- Katherine Richard, Associate Director, Mathematics Programs, Lesley University
- Sharyn Sweeney, Curriculum Specialist, Director of the Office of Science, Technology, Engineering and Mathematics, Massachusetts Department of Elementary and Secondary Education

English Language Arts

- Sorel Berman, English Teacher, Retired, Brookline (MA) High School
- David Buchanan, Curriculum Specialist, Office for Humanities, History and Social Science, Massachusetts Department of Elementary and Secondary Education
- Cheryl Liebling, Director of the Office of Literacy, Massachusetts Department of Elementary and Secondary Education
- Julia Phelps, Executive Director of the Center for Curriculum and Instruction, Massachusetts Department of Elementary and Secondary Education
- Susan Wheltle, Director of the Office for Humanities, History and Social Science, Massachusetts Department of Elementary and Secondary Education

Massachusetts Representation on the Common Core Feedback Teams

Mathematics

- Andrew Chen, President, EduTron Corporation
- Wilfried Schmid, Professor, Mathematics, Harvard University

English Language Arts

- Deborah D. Perry, Director, K-12 ELA, Arlington (MA) Public Schools
- Catherine Snow, Patricia Albjerg Graham Profession, Harvard Graduate School of Education

Massachusetts Representation on the Common Core Validation Team

English Language Arts

- Sandra Stotsky, Member, Massachusetts Board of Elementary and Secondary Education

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Mitchell D. Chester, Ed.D.
Commissioner

Overall Impressions of the March 10, 2010 *Public Comment Draft of the Common Core State Standards in English Language Arts and Literacy in History/Social Studies and Science* and the *Public Comment Draft of the Common Core Standards for Mathematics* April 8, 2010

The staff of the Massachusetts Department of Elementary and Secondary Education and many of the Commonwealth's educators who have reviewed the public comment drafts are impressed with the comprehensiveness and high level of academic expectation in these standards. While in past reviews we have noted a jarring dissimilarity in the use of terms and structures across the two documents, it is evident that the writing teams from both disciplines have begun to reconcile those differences. We commend the writing teams for the major improvements have been made since the February drafts and especially want to thank Susan Pimentel and Jason Zimba for coming to Massachusetts on March 22 and 23 to listen to comments from our educators and our Board of Elementary and Secondary Education.

We look forward to the next iteration of the standards and recommend that a preliminary draft be released to states for review before a final version is released to the public.

We have three major observations about the March 10 drafts.

- **Raising students' content knowledge must be the foremost purpose of these standards.**

It is very important that the Common Core standards embody specific, rigorous academic content knowledge about mathematics, literature, literary concepts, and modes of writing at all grade levels. The wording of the standards must be as precise as possible and at the same time accessible to the general reader. We believe the writers are making good progress in this regard. In the standards for English language arts, we believe the expectations for students' mastery of literary concepts and terms could be clearer and more specific, particularly if a glossary were included, as it is in mathematics.

- **Defining the bars for "college and career readiness" and for "kindergarten" with clarity is imperative.**

College and Career Readiness

The project has, from the start, proclaimed that its ultimate goal is to provide a set of standards that insure that all students are "college and career ready." Yet for this term to be more than a hollow

phrase, it must have solid meaning in terms of what students know, what they can do, and their attitude toward independent learning and productive collaboration in college and in the workplace.

In Mathematics, the standards and course pathways suggest that there is a firm body of academic knowledge that constitutes preparedness for first-year college mathematics courses and for careers. The use of the "STEM" designation indicates a threshold for more advanced standards. In English, presently there are two sets of standards that ostensibly pertain to college and career readiness: the grades 9-10 and 11-12 standards and those labeled "college and career readiness standards." We believe this dual layer of standards only creates confusion. Our recommendation is to indicate within the grades 9-10 and 11-12 standards which are essential to first-year college credit-bearing courses and entry level jobs and which standards are more advanced or specialized. We also recommend that sample courses based on the standards be defined for English, as they have been for mathematics.

The ELA "College and Career Readiness" Standards, as the writers point out on page 1, come from "a prior initiative" of CCSSO and NGA from the summer of 2009. They have served a useful purpose in launching the Common Core project and in organizing the present draft but are now redundant. We suggest removing the label "standards" from them and making the cumulative K-12 standards the true "backbone" of the document.

Kindergarten

At the other end of the educational spectrum, we urge the writers to explain whether the kindergarten standards are expectations for full- or half-day kindergarten programs. While educators implementing the grades 1-12 standards across the states will have roughly equivalent hours for teaching and learning, the same is far from true in kindergarten, which exists nationally in a patchwork of full-day and half-day, voluntary and mandatory programs.

- **Adopting a common format and unique numbering system for the standards will make future technology applications more efficient.**

We are pleased with the progress that has been made in uniting the two documents in structure and terminology since November. Our Department's Technology staff is concerned about inconsistencies in nomenclature (e.g., strands in ELA and not in math; "Mathematical Practices" called standards in math and not in ELA; different ways of designating "college and career readiness" standards in ELA and math) and the lack of a unique numerical/letter code for each standard in ELA. They say that the inconsistent use of terms and lack of unique codes will make it difficult to establish a common hierarchy for a searchable database of the standards, an application that is frequently used by teachers in writing units and lesson plans. We urge CCSSO and NGA to seek advice from various states on technology applications that link standards, digital teaching resources, and assessment items so that the design issues related to technology applications are understood before final versions of the standards are published.

Our detailed response has the following two sections:

1. Comments on the *English Language Arts Standards* (page 3);
2. Comments on the *Mathematics Standards* (page 8);
3. Appendix I: Samples of text complexity exemplars related to selected standards (page 15);
4. Appendix II: Samples of charts to show growth in literary concepts (page 18).

Please note that we will also send line edits to the respective writing teams separately.

Overall Impressions of the March 10, 2010
Public Comment Draft of the Common Core State Standards in English Language Arts and Literacy in History/Social Studies and Science
April 8, 2010

The English Language Arts draft was reviewed by Department staff and groups of Massachusetts educators from the early childhood, elementary, middle, high school and college levels. ELA, reading, science, and social studies educators as well as specialists for English language learning and special education read the drafts and their comments are summarized here.

Content

On the positive side, reviewers said that they believed that the standards presented essential reading, writing, speaking and listening skills well. They cited the following as particularly strong and more demanding than current Massachusetts standards or more illuminating than current Massachusetts resources:

- Reading standard #6 on analyzing point of view in written texts;
- Reading standard #10 on reading "independently, proficiently, and fluently";
- Reading standards at the high school level that specify knowledge of American literature, foundational documents, Shakespeare, and American dramatists;
- Speaking and Listening standard #3 on evaluating a speaker's point of view;
- Writing standards #1, 2, and 3 on writing arguments, exposition, and narrative;
- Writing standards # 7, 8, 9 on research;
- Standards for Literacy in History/Social Studies and Science;
- The integration of media skills throughout the standards;
- Research cited in Appendix A (particularly the text complexity section);
- Illustrative texts of Appendix B, cited for their quality as well as exemplifying levels of text complexity;
- Annotated examples of different types of student writing in Appendix C; and
- Explicit connections to NAEP Frameworks for Reading and Writing.

On the negative side, reviewers said that the Common Core standards were less demanding than the 2001 Massachusetts ELA Framework and the Massachusetts draft standards for ELA of 2009 in these areas:

- Less attention to detailed and increasing knowledge of literary concepts and genres;
- Foundational reading skills standards that go to grade 3 and that are less specific than Massachusetts 2009 foundational reading draft standards that go to grade 6;
- Vocabulary standards for grades 6-12 that are verbose and that omit several approaches to vocabulary development found in the Massachusetts 2009 vocabulary draft standards;
- The lack of a list of recommended authors or texts to guide curriculum and assessment development;
- Many adjacent grade-level standards that repeat or paraphrase standards of the previous grades rather than increasing in complexity.

Recommendations are included in the sections on Reading, Writing, Speaking and Listening, and Language below.

College and Career Readiness

Reactions to the organizing function of the "College and Career Readiness Standards" were mixed. On the one hand, some readers liked the idea that, for example, ten standards carried the knowledge about reading texts across both literary and informational text from kindergarten to college and career. Yet others found these standards too generic and questioned how the grade 9-12 standards related to the College and Career standards. The readers who also had read the math standards commented that the requirements for college and career readiness were a lot clearer for mathematics.

The writers, with the help of ELA high school faculty and faculty of beginning college writing and literature courses, need to come to terms with the issue of what knowledge about literature, rhetoric, writing, and language is sufficient preparation for entry-level college courses and what goes beyond that level. Generic statements, such as those in the "College and Career Readiness Standards," summarize the K-12 standards, but provide no additional information. Their vagueness, we worry, will become a justification for those who want to avoid the more specific content in the high school standards.

We speak from the vantage point of having written, and lived for ten years with the consequences of having both general and grade-cluster standards. The 2001 Massachusetts ELA Curriculum Framework has 27 "General Standards" that are generic statements roughly equivalent in purpose to "College and Career Readiness Standards." In practice, we have found that textbook publishers and assessment developers, even teachers developing lesson plans, will often turn (erroneously, in our view) to these generic standards, rather than grade-specific standards, as evidence for alignment of their products to "Massachusetts standards." We urge the writers of the Common Core to take our experience in this matter to heart, if they intend the specific grade-level standards to be taken seriously and used as the basis for curriculum, instruction, and assessment development.

Recommendation

Follow the mathematics model of assuming all high school standards are college and career readiness standards unless otherwise noted. For ELA, high school/college advisors should decide which standards should be designated as advanced. Remove the designation "standards" from the current College and Career Readiness statements and call them "A Framework for College and Career Readiness" and leave them in their current position in the document as organizers.

Overall Structure

In general, readers found the drafts "lucid," "easy to follow" and generally comprehensive. They particularly liked the layout (on page 8 and subsequent pages) that allowed them to see at a glance a progression of a standard across three grades and at the same time see all of the standards for a particular topic and grade (e.g., reading literature, grade 2). They found this layout pleasing and superior to the way the Massachusetts standards have been presented.

The ordering of the strands places the emphasis on reading and writing, which already have a secure place in the English language arts curriculum. Far less attention is paid to the development of effective speaking and listening, skills that are critical to success in college and the workplace, yet not part of statewide testing and accountability systems, thus sometimes neglected in K-12 schools. Reviewers would like to see the speaking and listening standards better emphasized.

We anticipate that teachers eventually will be able to download the standards for their grade alone. If they did so now, they would receive, we think, the wrong impression, particularly in reading. Thus the writers must find a way to communicate the cumulative nature of the standards, particularly those for reading. This may be done be done with a few additional words and charts.

Recommendations

1. To give greater prominence to speaking and listening, change in the order of the strands to the following organization:

   Speaking and Listening, Language, Reading, Writing

2. To encourage greater continuity across the grades, we recommend adding a statement that students at each grade level are also responsible for the previous grades' standards. (This could be accomplished by adding a line at the top of each grade, e.g.,

   "Grade 4 students build on their knowledge of previous standards and are able to:").

3. Reviewers liked the format of the Language Conventions Chart on page 51 and suggested that similar charts could be made for the Reading Standards to emphasize the cumulative nature of the reading standards. (See further comments under Reading, below, and Appendix II.)

Reading

Reviewers were pleased to see grade-level standards K-8, and found that the 9-10 and 11-12 groupings in high school were appropriate. Their biggest concern was the lack of enough content on literature.

Recommendations

1. Provide more explicit guidance on literature. Presently Reading Standard 8 is written to apply only to informational text. Create a new Standard 8 for Literature that describes analysis of literature that is based on knowledge of genres, literary concepts, and literary history:

   Analyze fiction, poetry, drama, and traditional literature, applying knowledge of literary genres and concepts and knowledge of the history of literature.

   Reword Reading Standard 10 to explicitly refer to genres students are expected to read each year:

   Read fiction and nonfiction narratives, informational texts, poetry, drama, and traditional literature independently, proficiently, and fluently, sustaining concentration, and monitoring comprehension as needed.

2. Expand the Foundational Skills standards to include writing foundations (e.g., printing/writing letters, leaving spacing between words and sentences) as well as expanding reading foundations to Grade 12, including the following skills from the MA ELA 2009 draft:

   Grade 4

   Write legibly in cursive, leaving spaces between words.

   Use knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multi-syllabic words.

   Read and correctly spell grade-appropriate roots (e.g., un<u>necessary</u>, <u>cowardly</u>), prefixes and suffixes (mis-, un-, -ful, -ing), and important words from all grade-specific content curricula.

   Grade 5

   Read and spell correctly all key words from grade-specific content curricula and hyphenate them correctly.

   Read and spell correctly grade-appropriate words with prefixes (understood/<u>mis</u>understood, excused/<u>un</u>excused) or suffixes (final/finally, mean/meanness) and contractions (will not/won't, it is/it's, they would/they'd).

   Grade 6

   Read and spell correctly Latin plurals (e.g., alumnus/alumni) in assigned curriculum materials.

   Correctly spell frequently misspelled words (e.g., license, recommendation, exaggerate).

   Grades 7-12

   Continue to address earlier standards as they apply to more difficult texts.

3. Add a list of recommended authors or works for Grades 9-10 and Grades 11-12 Reading Literature Standard 9; expand the list of recommended authors or works for Grades 9-10 and 11-12 Reading

Informational Text Standard 6. Expand the text exemplars in Appendix B to include major authors from world literature and major authors before the 19th century.

4. Connect the text complexity exemplars to the standards through the inclusion of short examples, as used in many state frameworks and the Achieve Benchmarks. A set of possible examples is included as Appendix I of this commentary.
5. Show the continuity of development of literary concepts in charts. Two such examples are included as Appendix II of this commentary.
6. Include understanding of the differences between primary and secondary sources beginning in grade 5 (presently this concept turns up first in grade 6-8 Literacy Standards for History/Social Studies). The distinction between primary/secondary is useful for English language arts in teaching about autobiography/biography and by grade 5 social studies students frequently encounter the concept.
7. Review all standards to ensure that there is a progression in complexity; add examples as needed to illustrate how one level differs from adjacent ones.

Writing

Reviewers were encouraged to see that narrative has won a place in the high school standards and commended linking of writing and reading standards in Writing Standard 9. This standard, however, is misplaced under research and belongs in the section on text types and purposes for writing. While readers thought the emphasis on writing arguments, exposition, and narrative was appropriate, they felt at the high school level, in particular, the standards for each should include some acknowledgement of how writers combine elements of different kinds of writing. They worry that without this nod to stylistic choice in writing there is the danger of the standards becoming the basis for formulaic writing that will not prepare students well for college or careers.

In grades K-5, we are glad to see that simple research now begins in kindergarten. Research standards at all grades should include the formulation of questions that are open-ended and that can be answered by some kind of research, whether it be a literature search, an interview, a survey, or an experiment. Narrowing a research topic is a key college readiness skill that should be added and then articulated through the grades.

Recommendations

1. Place Writing Standard 9 under Text types and Purposes
2. In the high school writing standards, include the idea that effective and nuanced complex writing often draws on multiple modes (e.g., narrative within an argument, exposition within a narrative); echo these ideas in the reading standards and provide text exemplars that show this technique at work.
3. Include the formulation and narrowing of research questions in the research standards.
4. Simplify some of the Writing Standards that are wordy or awkward:

   #3 Write narratives that convey how real or imagined experiences, individuals, or events develop over time.

   #4 Produce writing in which topic development, style, and organization are appropriate to task, purpose and audience.

   #7 Conduct short- and long-term research projects that demonstrate understanding of a topic or problem.
5. Add summarizing and précis writing to the writing standards; while summarizing is mentioned in the Reading standards beginning in grade 4, it also belongs under writing and research.

Speaking and Listening

These are very good in general. As noted under Structure, above, we could see them as the first set of standards in document. For one thing, this organization would make sense developmentally, for we humans

speak and listen before we read and write; for another, speaking and listening to others is a very useful way of expanding one's thinking before writing begins.

Language

The standards for Conventions are inevitably the driest, and probably most arbitrary of the standards, in terms of when particular concepts are introduced. That said, reviewers liked the chart presentation on pages 27 and 51. These standards could be enlivened by some examples from literature. (See Sylvia Tufte's *Artful Sentences: Syntax as Style*, Graphics Press, 2006 for a collection of examples from literature that might illustrate these standards.)

The Vocabulary Standards for K-5 seem reasonable, but those for 6-12 show no progression and are often pretentiously worded.

Recommendations

1. Rewrite the Vocabulary section, particularly from 6-12 to include greater attention to an understanding of prefixes, suffixes, and roots, morphology, use of glossaries, general dictionaries and specialized dictionaries (see the Massachusetts November 2009 draft).
2. Add some examples from literature to the Conventions Standards.

Literacy in History/Social Studies and Science

This section was well-regarded by reviewers as an addition that goes beyond what is currently in the *Massachusetts English Language Arts, Science and Technology/Engineering*, and *History/Social Science Frameworks.* It provides a good model for a section on literacy in mathematics, which we recommend in our comments on the math document.

Appendix A

Readers found the explanation of the research behind text complexity and writing potentially useful. An experienced high school educator commented that "the research has interesting implications for reinforcing the design of reading workshop and vocabulary development courses for all students. The section on writing….also gives weight to writing workshop courses, with a focus on expository writing."

Appendix B

Reviewers found the exemplars well chosen but essentially isolated from the rest of the document. See the recommendation under Reading, above, for connecting these to the reading standards, also Appendix I of this commentary.

Appendix C

Reviewers had similar comments to Appendix B and C: the student writing exemplars were well annotated and potentially useful, but isolated.

Recommendation:

Make explicit cross-references between the writing standards and the text exemplars. Possibly include some commentary about how a teacher would guide a student into the production of stronger writing.

Massachusetts Department of Elementary and Secondary Education
Overall Impressions of the
Public Comment Draft of the Common Core Standards for Mathematics
April 8, 2010

The March 10th Public Comment draft has many notable strengths. During this public comment period, we invited a variety of stakeholders to respond to this document. We convened a special meeting with educators and the MA Board of Elementary and Secondary Education to discuss the Mathematics March 10th draft. Massachusetts educators, faculty, administrators, curriculum coordinators, state department staff, and math leaders have provided considerable feedback to us. This summary incorporates and summarizes this feedback and the responses to the NGA/CCSSO public comment survey from Massachusetts individuals and groups.

Overall Concern about 3 Key Elements that have Not Yet Been Addressed
Massachusetts has noted in each of our past state reports that there were 3 critical fundamental elements of the CC standards that must be addressed. We are concerned that these 3 major elements have still not been fully addressed at this advanced stage in the revision process.

1. **Unclear definitions of the fundamental terms that underlie the entire document**. There is still inconsistency in the use of the term "standard" and there is still a lack of clarity as to the definition and standards that define "college- and career-readiness" across the Math and the ELA documents.

2. **Addressing Algebra I and the Grade 8 standards.**
   If the intent of the K-7 standards is to prepare students for Algebra I in Grade 8, then it must be clearly stated in several places (the document introduction, the Grade 7 introduction, and the Grade 8 introduction to suggest a few places) and the standards in the Grade 8 position must be Algebra I standards that encompass the full range of a traditional Algebra I course.

   If the intent is to have the K-8 standards prepare students for Algebra I in Grade 9, then that must be clearly stated, and the standards would be presented as they are in the March draft. In this case, an alternative pathway would include an example of how the K-8 standards could be addressed to prepare Grade 8 students for the full, authentic Algebra I course in Grade 8.

   Alternative pathways may be suggested, including one that would represent an Algebra I course over two years that begins with the Grade 8 standards as published in the March draft and continues to the topics of Algebra I as included in Appendix A.

3. **The high school standards still need considerable work**.
   High School Standards should be presented in the document as recognizable courses (using the familiar course titles). Other presentations, including progressions or teaching units may be included as an Appendix.

   A third clear pathway needs to be included that illustrates a progression that leads to Calculus while in high school. Further explanation is needed to provide readers options that compress the K-8 standards to appropriately prepare a student for Algebra I in grade 8 and describe how this leads to a pathway to calculus in high school.

   High school standards need to be more specific. At least 29 standards are included in both Pathway A Course 1 and Pathway A Course 3a/b. For example, "A.IF.6 Sketch a graph that exhibits the qualitative

features of a function that models a relationship between two quantities" should be several different standards that each indicates specifically which type of function (linear, quadratic, exponential, etc.) is to be sketched in a particular course/year.

Coherence: Connecting the Standards, Concepts, and Mathematical Practices

Reviewers of this draft continue to have positive comments about the Mathematical Practices. However, there continues to be concern that the document lacks a sense of coherence because there are no clear connections made among the Mathematical Practices Standards (K-12), the K-8 Concepts and Skills, and the High School standards' Conceptual Categories. To show the connections between the Practices and the standards, the reviewers overwhelmingly suggested that the practices should be incorporated into the standards, K-12.

Recommendation

We suggest that the terminology used in the Practices narrative be embedded into the standards, for example: using the term precise or "with precision" in a standard that expects students to calculate accurately. Future drafts could cross-reference the practices to the related standard(s).

We note that in the ELA documents, the term "Practices" has been dropped altogether and the statements recast as descriptions of the characteristics of college- and career-ready students. Addressing the practices in different ways is confusing and indicates that the writers need to develop common assumptions about these Practices.

The Heart of the Matter: Clear measurable standards

We received many positive comments that the standards (K-8) have improved significantly from the previous drafts. Reviewers continue to provide feedback regarding the wording of the standards, noting that all the standards should be clear, well articulated, measurable/assessable, and describe with clarity what we expect students to know and be able to do. The most frequent comment we received is that the *use of the term "understanding" in the math standards is still too prevalent.*

Standards that begin with "understand" are frequently followed by standards that are similar, but begin with grade-level appropriate verbs. The over-use of "understand" will limit expectations of students to the "understanding" level in Blooms Revised Taxonomy, never getting to application, analysis, or evaluation of those concepts in lessons or assessments. For example, Grade 1 on page 14, *"1.G.2 Understand that shapes can be joined together (composed) to form a large shape or taken apart (decomposed) into a collection of smaller shapes. Composing multiples of some shapes creates tilings."* is similar to the standard *"1.G.3 Compose two-dimensional shapes to create a unit, using cutouts of rectangles, squares, triangles, half circles, and quarter circles. Form new shapes by repeating the unit."*

Recommendation

When at all possible "understanding" should be replaced with a variety of verbs indicating different levels of cognitive demand (aligned to Bloom's Revised Taxonomy, for example). If needed, the phrase "Demonstrate an understanding of…." is preferred by reviewers. If we are aiming for those higher level demonstrations of student knowledge, we need to indicate that with a wider range of verbs.

Possible edit: *1.G.2 compose two-dimensional shapes to create a unit by joining together cutouts of rectangles, squares, triangles, half circles, and quarter circles. Compose tilings using the new shape.*

Mathematics Terminology and Vocabulary by Grade level

Again, reviewers noted that there had been significant improvement in many instances regarding the vocabulary and terminology from previous drafts. There remains a great variability in the level of detail across the standards. Some reviewers noted positively that this helped explain the standard and made it clearer; other reviewers felt that it was bordering on too prescriptive and pedagogical. Some reviewers felt that there were still some terms in this draft, such as: *rigid motions, decade, teens, dot plots* that are not generally used in elementary mathematics education and should

be replaced or better defined. Other reviewers felt that there seemed to be more use of technical language than the prior versions. For example:

- Standard 2-MD 4 reads:

  Understand that units can be decomposed into smaller units, e.g., 1 foot can be decomposed into 12 inches and 1 meter can be decomposed into 100 centimeters. A small number of long units might compose a greater length than a large number of small units.

  …while the prior version read

  Units can be decomposed into an appropriate number of smaller units, e.g., a foot contains 12 inches and a meter contains 100 centimeters. A small number of long units might form a greater total length than a larger number of small units.

Recommendation

The prior version used *decompose* once then used more common language to clarify and explain that term, while the current version replaced all common language with *decompose.* While we understand the need to use precise mathematical language, this may not be useful for elementary teachers who do not necessarily use that language (nor expect students to use it). The prior wording is more desirable.

In other cases there is overly complex sentence construction. For example:

- Standard 3-MD 4 reads:

  Understand that multiplication of whole numbers can be represented by area models; a rectangular region that is a length units by b length units (where a and b are whole numbers) and tiled with unit squares illustrates why the rectangle encloses an area of a x b square units."

Recommendation

Possible edit: *"Demonstrate an understanding that area models represent multiplication of whole numbers; show that a rectangular region that is* a *length units by* b *length units (where* a *and* b *are whole numbers) can be tiled with* a x b *square units."*

Where at all possible we suggest the use of more common language and efficiency of language in the standards. In standards where technical mathematical language is used in the current draft there is often a good example that illustrates what this technical language means. Alternatively, there is occasionally a definition provided right in the standard (in parentheses or clarifying text) or a link to the glossary. These are immensely valuable in conveying what is meant by technical terms and what students should be able to know or do in mathematics. Please continue to add these to any standard where technical mathematical terms are used.

Reconceptualize the document based on 4 years of high school mathematics, not College and Career Readiness

The document should shift its current paradigm; the Common Core K-12 standards should explain that the expectation is that ALL students (not just STEM students) will work toward, and many will advance past the College and Career Ready benchmark. Designating a set of advanced standards as "STEM" is equivalent to identifying a specific set of students who can pursue this pathway and thereby limiting others. A Massachusetts educator poignantly asked: *Where does this leave the student who intends to be English major and who wants to take calculus in high school?* We would also like to suggest replacing the "STEM" notation with "Calculus-Ready".

Recommendation

The CC document should provide a K-16 view that bridges smoothly ("handshakes") from high school to college/career (for basic college credit bearing math courses and entry careers as well as a pathway(s) beyond this

level). The document should show examples of a mathematically proficient student's work for each grade, and in the high school section include examples of the range of what a 12th grade student's math ability would look like.

The presentation of high school standards is an opportunity for parallel formatting in the ELA and the Math documents. Currently, the Mathematics document presents high school standards that prepare students to be college- and career-ready and indicates additional standards that are **beyond** the college-and career-readiness level coded by STEM. There is no equivalent to this in ELA, which presents standards for Grades 9-10 and then for Grades 11-CCR.
Recommendation
Reviewers suggest that the ELA and Math writers discuss these differences, and decide on a consistent, clear, and common presentation of college- and career-readiness at the high school level.

Mathematical applications in various contexts including careers and connections to science
Reviewers noted that they did not see problem solving as an integral part of the standards. This was seen as a major omission not only in terms of the mathematics, but also in terms of problem solving skills needed for careers.
Recommendation
The writers need to clearly indicate standards that expect students to problem solve and apply mathematics in various everyday contexts and experiences, in particular, examples related to various careers.

Several science specialists reviewed this draft and overall they felt that the mathematics concepts that are expected are relevant and applicable to science, introduced early enough to be useful, and in a way that allows for co-teaching (or at least an articulated relationship) of math and science concepts. With the introduction of mathematics topics as currently laid out, science educators will be able to develop stronger science standards and include more application of mathematics to support science learning. For example, our current life science standards about ecology (population dynamics), biodiversity, and evolution are entirely conceptual. With the purposeful inclusion and development of statistics concepts in middle school (and even in K-5 in the "representing and interpreting data" clusters), these life science concepts can be explored both conceptually and mathematically. That would be a significant enhancement to science learning. In turn, the study of these life science concepts in science class can raise the need for, and show the application of, learning statistics concepts.

Technology to support the standards
Many reviewers noted that technology appeared to be emphasized in the draft, but that there should be a clearer explanation about the appropriate use of technology.
Recommendation
We suggest that the writers add more specific references to which technologies should be used and would be helpful, such as: calculators, computers, spreadsheets, software for teaching geometry, etc.

Content
Overall, reviewers noted that the document presented both concepts and skills well. However, further clarity of when mastery is expected is needed. Many comments stated that the K-8 section reads well, is coherent, and that the authors have done a high-quality job of describing a comprehensive K-8 math curriculum.

Reviewers cited the following as particularly strong and more demanding than the current MA math standards or more illustrative than the current Massachusetts resources:

- The March 10th draft addresses place value as a thoughtful coherent progression of well written standards.
- Middle grades are rigorous and the standards are presented in coherent progressions.
- There is a balance of expecting students to use a range of strategies for computation including the

standard algorithm.
- Grade level overviews provide focus and the grade level descriptions clearly define what concepts and skills are most important at each grade level.

On the negative side, reviewers said that the Common Core standards were less demanding in these areas:

- *Overall pacing:* The Common Core standards are below international benchmarks in some instances. For example, scientific notation is on the eighth grade NAEP but not discussed until the Common Core ninth grade (Appendix A, page 9, N.Q.4). Exponents and roots are also included in 8th grade on NAEP.
- *Topics omitted*: Several reviewers noted that there should be a better balance of number sense and number theory. Topics omitted include: prime factorization (factor trees), least common multiple, greatest common divisor, 1/3 as a decimal; other repeating decimals; divisibility tests, and understanding |a-b| as the distance between *a* and *b* on the number line. Other topics, e.g. division with remainder, could be made more explicit.

  There is a need for groundwork before grade 3 to develop concept of fractions, using visual models. Although the concept of part/whole is developed in the Geometry standards (beginning with 1.G.5) it is not recognized as developing fraction understanding.
  Recommendation:
  Attention should be drawn to the concrete exploration of part/whole and its relationship to the understanding of fraction. In addition, the concepts of whole and half are very familiar to kindergarten students (half a glass of milk, half a cookie each); there could be a kindergarten Geometry standard that reflects this understanding.

  Many reviewers noted that they did not see any evidence of the development of algebraic thinking in the early grades. In their comments they made specific references to the omission of functions and rules vis-à-vis input/output tables, add 5, and patterns in the early grades.
  Recommendation
  These comments give rise to the need for a clearer explanation of how the writers are defining pre-algebraic thinking.

K-5 Standards

Treatment of arithmetic in the lower grades. Reviewers noted the inconsistency in terminology about automaticity in knowledge of number facts. For example, the grade 2 introduction uses "fluency" to refer to both knowledge of basic number facts and the ability to use these facts to add and subtract accurately. However, without automatic recall of number facts, a reviewer asked how such fluency will be achieved. Secondly, the pacing of learning number facts is slower than MA state standards and those of high achieving countries. All the multiplication facts should be included in grade 3 (not split over two years). Also, reviewers prefer "automatic recall" to "know from memory".

A reviewer noted that not mastering the full multiplication table until the fourth grade makes the approach to understanding multiplication and division in grade 3 problematic. It makes it unlikely that many 3rd grade children will learn the "basic properties of multiplication and solve word problems involving multiplication and division within a hundred" (pg. 19) without automaticity of these number facts.
Recommendation
Students should learn all multiplication number facts and related division facts to automaticity by the end of 3rd grade.

Additional comments, K-5

- Early childhood educators who reviewed the draft suggested the following:
  - Reconsider the developmental appropriateness of expressions and equations for first graders.
  - Consider introducing children to telling time by the minute first, then by quarter-hours/half hours.
  - Also include addition/subtraction work in grade 3 since they need this time to solidify these skills.
  - Introduce even/odd in early grades.
- Estimation should be threaded throughout the grades. Estimation is confined to testing the reasonableness of an answer in grade 4 and is not addressed in the earlier or later grades. Estimation is a valuable skill that has a variety of uses and this omission should be addressed.
- Coordinate systems are introduced in fifth grade, but there is no reference to the numbers below or to the left of the origin. It would be appropriate to introduce negative numbers in this context. Currently negative numbers are not introduced until sixth grade.
- Grade 3: Page 20, N.BT.7: Replace the current example with: 4 x 12 as 4 x 10 plus 4 x 2, this would be much more helpful to demonstrate the usefulness of the distributive property.
- The concept and term "order of operations" should be introduced in 5th grade.

Grades 6-8

- Square roots and irrational numbers need to be addressed in grade 8 with the Pythagorean Theorem.
- Pi as an irrational number needs to be addressed in 7th grade (7.G.7.) with circumference and area of circles.
- Percents should be an integral part of understanding decimals and fractions.

High School Standards

Acknowledging that the high school standards are a work in progress, we still have great reservations about the high school section. In all, the high school piece lacks the coherence of the K-8 piece, and should more clearly explain the level of mathematical thinking and understanding to be achieved.

Although the standards are presented by conceptual categories in the main document; reviewers overwhelmingly requested to see these standards presented by courses that were familiar to them using the traditional course titles: Algebra I, Geometry, Algebra II, Precalculus, etc.

As with the K-8 standards, there are "understand" standards that are repeated later by more skill-related standards. For example, the first two Real Number standards on page 44, *("N.RN.1 Understand that the laws of exponents for positive integer exponents follow from an understanding of exponents as indicating repeated multiplication, and from the associative law for multiplication* and *N.RN.2 Understand that the definition of the meaning of zero, positive rational, and negative exponents follows from extending the laws of exponents to those values, allowing for radicals in terms of rational exponents"*) are repeated in the application standard *"N.RN.5 Rewrite expressions using the laws of exponents."* In fact, the examples given for N.RN.2 and N.RN.5 are very similar.

The standards for courses should be presented simply, not in units. In the current format, some standards are repeated in more than one unit, resulting in the perception that there are many more standards in the course.

Many reviewers mentioned that the large number of standards and several layers made the high school courses appear unmanageable to teach in one year, particularly the Algebra I course (Course 1 Pathway A). Reviewers felt more

favorable about the Geometry course standards (Course 2 Pathway A).

Pathway A courses (Traditional) were viewed more positively in MA than the Pathway B courses (Integrated). The reviewers found the courses in Pathway A better articulated and more coherent. They described the Pathway B standards as less clear and not manageable.

In Massachusetts the high school standards are currently listed for both grade spans (9-10 and 11-12) and also by traditional courses; each course identifies the standards students are expected to know and be able to do. Each course is not presented as a syllabus or a series of units. It is unclear what the rationale and purpose was for the current presentation of the model courses in the March 10th that mixes standards and curriculum.
Recommendation
Present the standards for each course as outcomes and include the model courses in the main document. Examples of course syllabi along with model units for the course should be presented as supplementary resources *after* the standards are clearly defined and agreed upon.

Review the conceptual categories. Occasionally standards imply learning that has not been explicitly included in previous standards. For example: *"F.TF.4 STEM Revisit trigonometric functions and their graphs in terms of radians"* implies that the graphs of trigonometric functions have been explored. However, there is no standard that explores the graphs explicitly.

Standards for literacy in mathematics. We suggest that in the future mathematics educators review standards for reading, writing, speaking, and listening and decide if any should be adapted for mathematics; similar to the literacy standards in science.

The Massachusetts team would like to thank you for the opportunity to summarize and provide feedback on the March 10th Public Comment draft and we look forward to continuing to work with you on this important initiative.

Appendix I: Examples that relate Common Core ELA Standards to text exemplars

Grade 1

Foundational skills

2 a. Demonstrate understanding of spoken words, syllables, and phonemes: Aurally distinguish long from short vowel sounds in spoken single syllable words

Literature

3. Describe characters, settings, and key events in a story.

One of many poems first graders learn by heart is the traditional rhyme, "As I Was Going to St. Ives." With their teacher they read the poem slowly together to identify all the long "i" sounds in the poem (*I, Ives, I, wives, wife, wives, Ives*) and the short "a" sounds (*as, man, sacks, sack, cats, cat, cats, sacks*) and talk about how the repetition of these sounds gives structure to the poem. In small groups, they come up with answers to the question in the last line, "How many were there going to Saint Ives?" and explain the reasoning behind their answer.

Grade 2

Informational Text

1. Ask and answer such questions as who, what where, when, why, and how to *demonstrate understanding of key information and events in a text.*

7. Explain how images and illustrations contribute to and clarify a text

When they are reading about kings, queens, lords, and ladies in fairy tales, students also read the nonfiction text, Aliki's *A Medieval Feast*, and examine the illustrations to find out about what life was like in the Middle Ages. They come up with some questions that this book and others may help them answer: *Who was invited to the feast? What did they wear? What did they eat? Who made the food? Was life the same for everyone in the medieval period?*

Grade 3

Literature (Reading Aloud)

5. Demonstrate understanding of common features of legends, myths, and folk- and fairy tales (e.g., heroes and villains, quests or challenges) when writing or speaking about classic stories from around the world.

Students listen to the description of the Duke from James Thurber's modern fairy tale, *The Thirteen Clocks,* and list the characteristics that let readers know that he is a villain. As the reading of the tale proceeds, they identify the quest in this tale and what the hero must do to win the hand of the beautiful Saralinda.

Grade 4

Literature

4. Understand words and phrases in a text that allude to significant characters found in mythology (e.g., Herculean*), drawing on a wide reading of classic myths from a variety of cultures and periods.*

Students studying immigration to America and the Statue of Liberty read the poem, "The New Colossus," and conduct research to determine the meaning of Emma Lazarus' reference to "the brazen giant of Greek fame with conquering limbs astride from land to land" and then explain why the meaning of the "new" Colosssus is different from the meaning of its predecessor.

Grade 5

Informational Text

8. Explain how an author uses evidence to support his or her claims in a text, identifying which evidence supports

which claims.

"Baseball was just a hobby for [the Negro League owners], a way to make their illegal money look good." Students reading this sentence in Nelson Kadir's *We Are the Ship: The Story of Negro League Baseball* look for evidence to support the claim that owners of the Negro Leagues paid and treated players of color differently from the way owners of the major leagues paid and treated white players. They research the racial composition, salaries, and working conditions of major league baseball teams today and write a composition in which they make an argument supporting or rejecting the claim that progress has been made in treating players equally since the 1940s.

Grade 6

Literature

2. Analyze how a theme or central idea develops over the course of a text, drawing on key details.

As they read Mark Twain's *Tom Sawyer*, students look for observations which Tom makes about the world based on his experiences growing up in the fictional antebellum small town of "St. Petersburg, Missouri." From these observations, they write about how Twain uses the characters of Tom and Huck Finn to present the conflict between "civilization" and individual responsibility.

Grade 7

Literature

7. Compare and contrast a text to its filmed, staged, or multimedia version, including examining some techniques unique to each medium (e.g., lighting, sound, color, camera focus, and angles).

Students read Henry Wadsworth Longfellow's "Midnight Ride of Paul Revere" and note how Longfellow creates a sense of urgency and suspense with rhythmic phrases such as "A hurry of hoofs in a village street, a shape in the moonlight, a bulk in the dark...". They compare Longfellow's dramatic poem with the factual interactive map of the ride on the website of the Paul Revere House in Boston, http://www.paulreverehouse.org/ride/ and debate whether the poem or the website is the more engaging presentation of an historical event for teenagers.

Grade 8

Informational Text

6. Describe an author's point of view or purpose in a text and analyze how the author distinguishes his or her point of view from the others.

10. Read informational text independently, proficiently, and fluently in the grades 6-8 text complexity band; engage in sustained practice with "stretch" texts in the 9-10 text complexity band with scaffolding as needed.

Students read an excerpt from the *Narrative of the Life of Frederick Douglass* from the Grades 6-8 band and Abraham Lincoln's Second Inaugural speech from the grades 9-10 band and compare the content of the text and the point of view of each author.

Grades 9-10

Informational Text

5. Evaluate how an author's use of language, including formality and type of diction, shapes meaning and tone in a text.

Students reading "Classifying the Stars" in *The Universe of Stars* note how author Annie Cannon uses the repeated image of the rainbow to help readers understand the importance of the scientific discovery that light is composed of many colors.

Grades 9-10

Literature

3. Analyze how complex characters, including those with conflicting motivations or divided loyalties, develop over the course of a text, interact with other characters, and advance the plot or develop the theme.

Students studying *The Odyssey* gather evidence from the text to write an essay on Odysseus, described in the Robert Fagles' translation as a "man of twists and turns driven time and again off course." In their essays they explain how specific images and instances in Odysseus' long and complicated journey home from the Trojan War reveal facets of his character.

Grades 11-12

Informational Text

9. Synthesize explanations and arguments from diverse sources to provide a coherent account of events or ideas, including resolving conflicting information.

Students read the chapters on American slang in H. L. Mencken's *American Language* and George Orwell's essay, "Politics and the English Language." They summarize the main points of each author's argument about how and why language changes, take a position on the importance of maintaining "standard" formal English, using examples from contemporary political discourse and popular media.

Grades 11-12

Literature

6. Analyze an author's use of satire, sarcasm, irony, understatement, or other means that requires a reader to understand various layers of meaning in a text.

Two students read aloud the rapid-fire exchanges of dialogue of the characters Gwendolen and Cecily in Oscar Wilde's satiric comedy, the *Importance of Being Earnest* while the rest of the class listens for examples of sarcasm, irony, and implicit or explicit hostility from these two supposedly well-bred young women during a social visit.

Appendix II: Examples of Reading Charts

Growth in Conceptual Knowledge of English Language Arts, K-5

The following are concepts in the Reading standards that require continued attention in higher grades (after their introduction in the grade listed below) as they are applied to increasingly sophisticated reading, writing, and speaking.

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Literature: stories, characters, settings, events, poems, author, illustrator **Informational Text:** information, main topic, main ideas, cause-and-effect relationships, similarities and differences in texts					
	Literature: words and phrases that suggest feelings or appeal to the senses, lessons or morals of stories, major categories of writing, myth, fable, narrative poem **Informational Text:** main topic, main idea and key details, grouping of information in categories, similarities in and differences between texts on the same topic				
		Literature: theme, conflict, rhythm, regular beat, rhyme, repeated lines, core elements of stories, plays, and myths: character, setting, plot **Informational Text:** paragraph, main focus of a multiparagraph text, connections between historical events or scientific concepts, purpose of an informational text			
			Literature: character traits and motivations, figurative language, legends, heroes, villains, quests, point of view **Informational Text:** connecting devices that pertain to time, sequence, and cause and effect, text features (e.g., bold print, key words, topic sentences, hyperlinks, electronic menus), information from illustrations, maps, photographs, logical connections between paragraphs and between sentences		
				Literature: drama, allusions to mythology, prose, structural elements of poetry (e.g., stanza, verse, rhythm, meter), differences between first- and third-person narration; thematically similar tales, myths, and accounts of events **Informational Text:** main idea and supporting details, summary, evidence, difference between an eyewitness account and a secondhand account; factual information presented graphically (e.g., charts, diagrams, timelines, animations, interactive elements)	
					Literature: quotations from a text as evidence, metaphors, similes, alliteration, major differences between drama and prose stories, structural elements of drama (e.g., casts of characters, setting descriptions, dialogue, stage directions, acts, scenes), narrator's perspective or point of view, the effect of images, sounds, and movements in animated or live-action adaptations of stories, themes, character types,

and patterns of events in myths and traditional literature

Informational Text: quotations from a text as evidence, two or more main ideas in a text, relationships of two or more historical events or scientific concepts, organization of events, ideas and information (e.g., chronology, comparison, cause and effect), use of multiple print and digital sources to locate information or solve a problem

Growth in Conceptual Knowledge of English Language Arts, Grades 4-12

The following are concepts in the Reading standards (including Reading Standards for History/Social Studies and Science) that require continued attention in higher grades (after their introduction in the grade listed below) as they are applied to increasingly sophisticated reading, writing, and speaking.

Grades 4–5	Grade 6	Grade 7	Grade 8	Grades 9–10	Grades 11–12
Literature: structural elements of poetry (e.g., stanza, verse, rhythm, meter), differences between first- and third-person narration; thematically similar tales, myths, and accounts of events, using quotations from a text as evidence, metaphors, similes, alliteration, major differences between drama and prose stories, structural elements of drama (e.g., casts of characters, setting descriptions, dialogue, stage directions, acts, scenes), narrator's perspective or point of view, the effect of images, sounds, and movements in animated or live-action adaptations of stories, themes, character types, and patterns of events in myths and traditional literature **Informational Text:** main idea and supporting details, summary, evidence, difference between an eyewitness account and a secondhand account; factual information presented graphically (e.g., charts, diagrams, timelines, animations, interactive elements), using quotations from a text as evidence, relationships of two or more main ideas, historical events, or scientific concepts, organization of events, ideas and information (e.g., chronology, comparison, cause and effect), use of multiple print and digital sources to locate information or solve a problem	**Literature:** textual evidence, analysis, inferences, episodes, change in characters over the course of a work, resolution, figurative and connotative meanings of words, flashbacks and foreshadowing, development of plot, graphic novel, multimedia presentation, tone, genre **Informational Text:** technical meanings of words, author's point of view, differences among fact, opinion, and reasoned judgment, primary and secondary sources, descriptions of processes and procedures related to history/social studies and science, purpose of experiments in science	**Literature:** the impact of specific word choices on meaning and tone, points of view of different characters, techniques of filmed, staged, and multimedia productions (e.g., lighting, sound, color, camera focus and angles), modern works of fiction that draw on patterns of events or character types found in traditional literature (e.g., the hero, the quest) **Informational Text:** comparison of printed text and video or multimedia presentation, stated and unstated premises of an argument, analysis of conflicting information or interpretations	**Literature:** relationship of recurring images and development of theme or central idea, comparisons by metaphor, allusion, or analogy, sonnet, free verse, dramatic irony, suspense, humor **Informational Text:** objective summary of a text, claims, reasoning, and evidence in an argument	**Literature:** complex characters, conflicting motivations, formality of diction, parallel plots, manipulation of time, works that take a position or stance on a social issue, ideas and themes in nineteenth and early twentieth century American literature **Informational Text:** evaluation of effectiveness of exposition or argument, analysis of documents of historical and literary significance, including foundational U. S. documents, explicit and implicit premises of arguments, causal relationships, explanations of phenomena; integration of quantitative or technical information	**Literature:** multiple themes and meanings, condensed or rich language in poems, narrative, or drama; satire, sarcasm, irony, understatement; multiple interpretations of drama, including a play by Shakespeare and an American playwright; allusions to earlier works of world literature

Informational Text: analysis of different points of view, assumptions, use of evidence, and reasoning in seminal
U.S. documents, evaluation of reasoning and rhetoric, relevance and sufficiency of evidence, identification of false statements or fallacious reasoning, hierarchical or categorical relationships of concepts, evaluation of hypotheses and conclusions

Appendix B9: Legal Regulations for Adoption of State Standards in Massachusetts

MASS. GENERAL LAWS CHAPTER 69, SECTION 1D

STATEWIDE EDUCATIONAL GOALS AND ACADEMIC STANDARDS

Chapter 69: Section 1D. Statewide educational goals; academic standards; vocational training; grant program

Section 1D. The board shall establish a set of statewide educational goals for all public elementary and secondary schools in the commonwealth.

The board shall direct the commissioner to institute a process to develop academic standards for the core subjects of mathematics, science and technology, history and social science, English, foreign languages and the arts. The standards shall cover grades kindergarten through twelve and shall clearly set forth the skills, competencies and knowledge expected to be possessed by all students at the conclusion of individual grades or clusters of grades. The standards shall be formulated so as to set high expectations of student performance and to provide clear and specific examples that embody and reflect these high expectations, and shall be constructed with due regard to the work and recommendations of national organizations, to the best of similar efforts in other states, and to the level of skills, competencies and knowledge possessed by typical students in the most educationally advanced nations. The skills, competencies and knowledge set forth in the standards shall be expressed in terms which lend themselves to objective measurement, define the performance outcomes expected of both students directly entering the workforce and of students pursuing higher education, and facilitate comparisons with students of other states and other nations.

The standards shall provide for instruction in at least the major principles of the Declaration of Independence, the United States Constitution, and the Federalist Papers. They shall be designed to inculcate respect for the cultural, ethnic and racial diversity of the commonwealth and for the contributions made by diverse cultural, ethnic and racial groups to the life of the commonwealth. The standards may provide for instruction in the fundamentals of the history of the commonwealth as well as the history of working people and the labor movement in the United States. The standards may provide for instruction in the issues of nutrition, physical education, AIDS education, violence prevention, and drug, alcohol and tobacco abuse prevention. The board may also include the teaching of family life skills, financial management and consumer skills, and basic career exploration and employability skills. The board may also include in the standards a fundamental knowledge of technology education and computer science and keyboarding skills; the major principles of environmental science and environmental protection; and an awareness of global education and geography. The board may set standards for student community service-learning activities and programs. The board may also institute a process for drawing up additional standards in other areas of education.

Academic standards shall be designed to avoid perpetuating gender, cultural, ethnic or racial stereotypes. The academic standards shall reflect sensitivity to different learning styles and impediments to learning. The board shall develop procedures for updating, improving or refining standards, but shall ensure that the high quality of the standards is maintained. A copy of said standards shall be submitted to the joint committee on education at least sixty days prior to taking effect. The standards shall also include criteria for three determinations or certificates as follows:

(i) The "competency determination" shall be based on the academic standards and curriculum frameworks for tenth graders in the areas of mathematics, science and technology, history and social science, foreign languages, and English, and shall represent a determination that a particular student has demonstrated mastery of a common core of skills, competencies and knowledge in these areas, as measured by the assessment instruments described in section one *I*. Satisfaction of the requirements of the competency determination shall be a condition for high school graduation. If the particular student's assessment results for the tenth grade do not demonstrate the required level of competency, the student shall have the right to participate in the assessment program the following year or years. Students who fail to satisfy the requirements of the competency determination may be eligible to receive an educational assistance plan designed within the confines of the foundation budget to impart the skills, competencies and knowledge required to attain the required level of mastery. The parent, guardian or person acting as parent of the student shall have the opportunity to review the remedial plan with the student's teachers. Nothing in this section shall be construed to provide a parent, guardian, person acting as a parent or student with an entitlement to contest the proposed plan or with a cause of action for educational malpractice if the student fails to obtain a competency determination.

(ii) The "certificate of mastery" shall be based upon a determination that the recipient has demonstrated mastery of a comprehensive body of skills, competencies and knowledge comparable to that possessed by accomplished graduates of high school or equivalent programs in the most advanced education systems in the world. The criteria for a certificate of mastery may incorporate a number of factors which may include, but not be limited to, any of the following: high school graduation standards, superior performance on advanced placement tests administered by the educational testing service, and demonstrated excellence in areas not reflected by the state's assessment instruments, such as artistic or literary achievement. Eligibility for potential receipt of a certificate of mastery shall extend to all secondary students residing in the commonwealth.

(iii) The "certificate of occupational proficiency" shall be awarded to students who successfully complete a comprehensive education and training program in a particular trade or professional skill area and shall reflect a determination that the recipient has demonstrated mastery of a core of skills, competencies and knowledge comparable to that possessed by students of equivalent age entering the particular trade or profession from the most educationally advanced education systems in the world. No student may receive said certificate of occupational proficiency without also having acquired a competency determination.

Nothing in this chapter shall prohibit a student from beginning a program of vocational education before achieving a determination of competency. Such vocational education may begin at grade nine, ten or eleven. No provision of law shall prohibit concurrent pursuit of a competency determination and vocational learning. There shall be no cause of action for a parent, guardian or student who fails to obtain a competency determination, a certificate of mastery or a certificate of occupational proficiency.

Subject to appropriation, the board shall establish a grant program which shall award grants to school districts for the costs associated with establishing advanced placement courses. The board shall promulgate regulations defining the standards of eligibility and other implementation guidelines.

Subject to appropriation, the board shall establish an advanced placement test fee grant program which shall award grants to school districts for the reimbursement of application fees for students based on financial need in order to assist students with paying the fee for advanced placement tests. The board shall promulgate regulations defining the standards of eligibility and other implementation guidelines for this program.

Appendix B10: March 2010 Minutes of the Board of Elementary and Secondary Education's Discussion of Common Core Standards

Minutes of the Regular Meeting
of the Massachusetts Board of Elementary and Secondary Education

March 23, 2010
8:38 a.m. – 12:55 p.m.

Department of Elementary and Secondary Education
75 Pleasant Street
Malden, MA

Members of the Board of Elementary and Secondary Education Present:

Maura Banta, Chair, Melrose
Harneen Chernow, Vice Chair, Jamaica Plain
Gerald Chertavian, Cambridge
Michael D'Ortenzio Jr., Chair, Student Advisory Council, Wellesley
Thomas E. Fortmann, Lexington
Beverly Holmes, Springfield
Jeff Howard, Reading
Ruth Kaplan, Brookline
Dana Mohler-Faria, Bridgewater
Paul Reville, Secretary of Education, Worcester
Sandra L. Stotsky, Brookline

Mitchell D. Chester, Commissioner of Elementary and Secondary Education, Secretary to the Board

Excerpt from the March 23 Meeting Minutes:

Common Core Standards

Chair Banta thanked Board member Sandra Stotsky for her suggestion to invite high school educators and college faculty to address the Board on the Common Core draft standards in English language arts and mathematics. The chair said the Board's special meeting the prior evening featured excellent comments and participation by practitioners. The chair said the draft standards are currently out for public comment, and there is still time to influence changes.

Commissioner Chester said he favors aiming high and looking at the best standards in the world, because political boundaries are less important today to economic opportunity.

The commissioner said he supports getting the Common Core right and that a lot of progress has been made. Commissioner Chester said he was pleased to have Susan Pimentel and Jason Zimba, both of whom serve on the Common Core writing teams, in attendance. The commissioner thanked Dr. Stotsky for her participation in the Validation Committee. Commissioner Chester said he was concerned that there is a campaign going on to condemn the standards before they are completed. The commissioner said this is an effort worth contributing to and worth getting right, and that he would not endorse any slippage from the Commonwealth's high standards.

Deputy Commissioner Jeff Nellhaus said the Department has a close working relationship with Susan Pimentel and Jason Zimba, and they have been very responsive to our comments.

English language arts

Susan Pimentel, who serves on the Common Core's ELA writing team, thanked the Board for the opportunity to address it. Ms. Pimentel said that since last fall, the team has worked closely with the Massachusetts team, and that Dr. Stotsky has provided comments. Ms. Pimentel said Massachusetts is important because it is a leader and it has great standards.

Ms. Pimentel said she was asked to comment on what she heard at last evening's special meeting. She said the major concern was about content, and that there was not the right balance of content and skills. Ms. Pimentel said she heard the concern around literary terms, elements, and foundational works, and that those may not be clear enough. She said she heard a lot of support for Appendix B. She said Massachusetts has delightful and informative exemplars throughout its framework and the team wants to learn from that. Ms. Pimentel said she heard a call for a definitive list of authors, but that is something the team can't get other states to agree to do.

Ms. Pimentel said the hallmark of the Common Core is a focus on informational text. She said the team heard that foundational skills have to go further than grade 3, which will be addressed in the next round of standards. She said she heard a lot of positive comments on text complexity, but also that it's too complicated and may be a burden on teachers. Ms. Pimentel said she agreed and that the language in Appendix A needed to be cleaned up. She said there was a mix of comments on writing.

Secretary Reville arrived at 9:12 a.m.

Ms. Pimentel said she heard about grammar and conventions, and talk about the control of writing versus correct writing. She said that Board member Holmes had asked whether students are engaged and motivated enough. Ms. Pimentel said we know that students are not reading and writing enough, and that maybe the added examples will enliven their learning. For college and career ready standards, Ms. Pimentel said those haven't been clear enough, and that several standards cannot by themselves define what "college and career ready" means.

Commissioner Chester asked Ms. Pimentel where the team goes from here. She said this is a work in progress, and public comment will be collected until early April. More than 2,000 people have already weighed in. Ms. Pimentel said the team will look across the comments in April and see where to go from there, and that a final draft would be developed in April or May.

Mathematics

Mr. Zimba said it is very helpful to hear from practitioners in person. He said there are three writers in math, along with 50-65 experts. Mr. Zimba said that during last night's special meeting, he heard that the team was on the right track in several areas, including: (1) the balance between understanding and doing; (2) a lack of repetition, and bringing things to closure; and (3) number development. Mr. Zimba said that among the areas in which he heard criticism were: (1) identifying priorities at each grade; (2) jargon and language; (3) fluency in math number facts earlier; (4) algebraic thinking, patterns and functions; and (5) a very clear critique of the high school standards.

Mr. Zimba addressed two additional areas, Algebra I in grade 8 and college readiness. Mr. Zimba said it is important to make sure Algebra is "authentic." Mr. Zimba said the intellectual prerequisite for Algebra I has to be in K-7, and that a lot of Algebra I in 8th grade is short of authentic. Mr. Zimba said the standards permit but do not require states to require all students to take Algebra I. Mr. Zimba said the team has worked to make K-7 preparation as solid as possible.

In terms of college readiness, Mr. Zimba said a problem is that there are too many empirical bases for it. One can look at college admission requirements or at high school graduation requirements up through Algebra II. Mr. Zimba said that doesn't suffice, and there is no accepted definition of Algebra II. He said minimally to be college ready a student has to pass Algebra II. Mr. Zimba said we will improve rigor based on what students in the best performing countries are learning He noted that Achieve is doing a comparison with the O-level curriculum in the U.K.

Commissioner Chester thanked the presenters, the educators who spoke at the special meeting, and Department staff who are working on this. Deputy Commissioner Nellhaus said there will be no Board vote until next fall, and the Board would send out the final document for public comment. Dr. Fortmann asked the commissioner to explain what options are available. Commissioner Chester said there are three possibilities: The Board could vote to adopt the Common Core standards verbatim, or the Board could vote to adopt revised Massachusetts standards that are substantially consistent with the Common Core, or the Board could vote to adopt the Common Core standards verbatim with some additional Massachusetts-specific components. The commissioner said it is unclear where the federal government will end up on this as well as the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO). The commissioner said this is a state-led effort. He said an important question, yet to be answered, is what would the U.S. Department of Education consider to be an appropriate notion of adoption.

Ms. Kaplan asked about the nature of national standards. The commissioner said these are not national standards, they are state-developed common standards. The commissioner said to the extent that the federal government would tie funding to the adoption of Common Core standards, that could blur the distinction between state adopted and federally required.

Dr. Stotsky recommended a pathway 3 for Algebra I at grade 8, with a standard that would be internationally benchmarked. She suggested that students who take trigonometry and pre-calculus would be likelier to be college-ready than students who take Algebra II. Dr. Stotsky said patterns are not the same as pre-algebra; a NAEP validity study two or three years ago that looked at test items for states and NAEP noted a lot of bad pattern items on all tests.

Mr. Zimba said the idea of a third pathway is a good one, and could show calculus as one of the pathways. Mr. Zimba said the concept of college readiness is minimal and focuses on non-selective colleges. He agreed with Dr. Stotsky's comment about patterns.

Dr. Stotsky said she had a serious problem with the vocabulary standards, and math and science vocabulary must be taught because the contextual approach does not work. Ms. Pimentel said the team hears the critique and will follow up.

Vice Chair Chernow thanked the panels from last night's special meeting for an excellent and informative dialogue. She said she understands that in ELA, people are looking for more descriptive and imaginative, creative thinking. In math, people are looking for a hierarchy of what's important. Vice Chair Chernow asked if the standards are expected to build upon existing textbooks rather than forcing new purchases of textbooks and technology. Mr. Zimba said the focus is on the ends, not the means. He said technology is used to understand math better and enrich the curriculum but it is an opportunity, not a requirement. Mr. Zimba also said the team would go back and evaluate Appendix A.

Commissioner Chester said that Vice Chair Chernow's comment is a major challenge – how to implement higher quality curriculum and instruction in every classroom, and how to get the implementation right. The commissioner said the state's Race to the Top application would provide curricular and technology supports to help teachers deliver high quality curricula.

Secretary Reville said the state is doing the right thing to participate in this process, and that Massachusetts can learn and can improve on its standards. The secretary said it's not clear yet what adoption means, and that a number of things need to be clarified before final judgment can be made. The secretary said the original objective of defining "fewer, clearer, higher standards" is a challenge. Secretary Reville asked how the team approaches the tension in achieving an objective with fewer standards. Ms. Pimentel said in ELA, there are ten general standards with a progression of what it takes to get a student to the college and career ready standard. She said fewer are the college and career ready standards, and clearer are grade by grade specifics. Mr. Zimba said the high school

standards need more focus and coherence. Secretary Reville said no one here is looking for a national curriculum, and in the end, it is all about whether we can execute the standards and get all students to achieve them.

Dr. Howard said the focus on college ready is the right focus, and there ought to be a statement that these standards and expectations apply to all students.

Dr. Fortmann said the college ready definition could be problematic because in some instances, college algebra is a remedial course or high school algebra and not college level material. He said he is an advocate of getting states together to agree on common standards without federal intervention. Dr. Fortmann said he applauds this effort. He said the K-7 math standards are really quite good, are well written, and in many ways clearer and make more mathematical sense than our own standards. Dr. Fortmann said those standards just need some adjusting and some more detail. He said the properties of arithmetic need to be emphasized. He said the issue of Algebra in grade 8 needs to be addressed. Dr. Fortmann said the 9-12 math standards are not ready for prime time, but he looks forward to the next draft.

Mr. D'Ortenzio Jr. thanked the presenters, said that Appendix A makes sense, and said he would favor a third pathway. Mr. D'Ortenzio Jr. said he heard one speaker say that Massachusetts standards say "understand and demonstrate," while the Common Core standards mostly say "understand." He endorsed Dr. Howard's comments. Ms. Kaplan said the standards should be run by students in high school, college, and vocational settings for a reality check. Ms. Kaplan asked how you create standards that don't hold back some students but are not too rigorous for other students. Mr. Zimba said this is a challenge; grade by grade is the right approach, with multiple pathways at later grades, and individual differences could be addressed through different kinds of assessments.

Mr. Chertavian thanked the writers for their work, which he said holds a lot of promise. Mr. Chertavian said that over 75 percent of all jobs will require more than a high school education. Mr. Chertavian said many of us still think of college in the same way we consumed it – 4 years, fixed terms, attending college between ages 18-22. Mr. Chertavian said only 7 out of 100 adults in America today got their degree between 18–22. Mr. Chertavian asked the writers how they thought through career ready, and whether there is content required as well as skills required. Mr. Zimba said that many organizations have work readiness standards that go far beyond any academic content area. Mr. Zimba said those are excellent ideas but the team only focused on academic content dimensions. He also said the team did not create two notions, one for college and the other career. Ms. Pimentel said that logic, reasoning, the ability to mount an argument, and research are all very important. Ms. Pimentel said the ability to collaborate and work together, grammar conventions, emphasis on informational text, and literature are also important to career readiness.

Commissioner Chester thanked the Board for an excellent discussion. The commissioner said he is committed to sticking with this project, and he hopes the common standards will actually add value to the Massachusetts standards.

Minutes of the Special Meeting
of the Massachusetts Board of Elementary and Secondary Education

March 22, 2010
3:05 p.m. – 6:15 p.m.

Massachusetts Department of Elementary and Secondary Education
75 Pleasant Street
Malden, MA

Members of the Board of Elementary and Secondary Education Present:

Maura Banta, Chair, Melrose
Harneen Chernow, Vice Chair, Jamaica Plain
Gerald Chertavian, Cambridge
Michael D'Ortenzio Jr., Chair, Student Advisory Council, Wellesley
Thomas E. Fortmann, Lexington
Beverly Holmes, Springfield
Paul Reville, Secretary of Education, Worcester
Sandra L. Stotsky, Brookline

Members of the Board of Elementary and Secondary Education Absent:

Jeff Howard, Reading
Ruth Kaplan, Brookline
Dana Mohler-Faria, Bridgewater

Also Absent:
Mitchell D. Chester, Commissioner of Elementary and Secondary Education, Secretary to the Board (Deputy Commissioner Jeff Nellhaus present in his place)

Chair Maura Banta said the Board decided to hold this special meeting to hear directly from educators on the draft Common Core standards. Chair Banta recognized Deputy Commissioner Jeff Nellhaus. Deputy Commissioner Nellhaus said that Commissioner Chester had asked him to convene this meeting today. The deputy commissioner said the Common Core is a state-led effort being led by the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA).

English Language Arts

The Department's Director of Humanities, Susan Wheltle, provided an overview of the draft English Language Arts (ELA) framework. Deputy Commissioner Nellhaus then asked panelists to introduce themselves and provide their overall impressions of the draft document as well as their feedback on strengths and areas for improvement. The ELA panelists were:

- Alexander Dan, Chair, English Department, Mystic Valley Regional Charter School
- Lori DiGrasi, Middle School Reading Teacher, Framingham Public Schools
- Elise Frangos, English Content Director, Mass Math & Science Initiative of Mass Insight Education
- Lorretta Holloway, Associate Professor, English Department, Framingham State College
- Greg Hurray, Principal, Horace Mann School, Newton Public Schools
- Joseph McCleary, Superintendent/Director, Mystic Valley Regional Charter School
- Barbara McLaughlin, Senior Program Director, K-5 English Language Arts, Boston Public Schools
- Thomas O'Toole, English Language Arts Director, Grades 6-12, Waltham Public Schools
- Bruce Penniman, English Department Adjunct Professor, UMass Amherst (written comment only)
- George Viglirolo, Former High School ELA Teacher, Brookline Public Schools (written comment only)

Mr. McCleary said the draft Common Core standards do not have the same level of coherence as Massachusetts standards. He said the state's ELA frameworks are more effectively organized and provide a more detailed list in terms of content. Mr. McCleary said there could be more input from people with direct study of literature. He said he sees very serious drawbacks in the current draft.

Mr. O'Toole said that the overlapping grades and grade spans are very helpful in the draft documents. He said he needs to see definitive texts in Appendix B, and especially writers from earlier centuries. Mr. O'Toole said that in Appendix C, the grade 8 expository was a better sample than grade 10. Mr. O'Toole said that in Massachusetts, by simply naming the parts of speech, the emphasis gets placed on correctness rather than control. He said there should have been a lesson in control. He said rather than naming things, there should be direction to deep grammatical structure at the sentence level. Mr. O'Toole said there should be a focus on writing with more power.

Ms. DiGisi said she appreciated the progression of standards and vertical and horizontal descriptions of standards. She said collaboration and comprehension are important discussion points. Ms. DiGisi said she liked including history and science. She said there are inexperienced writers and readers, and not all come to the middle school at a grade 6 level. She said those students need simpler text to practice.

Mr. Hurray said the standards are moving in the right direction. He said the foundations of reading section needs to be expanded, and is concerned that this document stops at K-3. He said he was concerned that writing places such an emphasis on persuasive writing, and he was looking for more descriptive and imaginative writing. Mr. Hurray said he had trouble with the artiface of the format, he did not find the range and complexity of texts

to be helpful, and he was disappointed in the lack of emphasis on creative and critical thinking.

Mr. Dan said he applauded the emphasis on research, and that the college and career ready standards, although clear and concisely written, seem to lead to vague standards in ELA. Mr. Dan said the Common Core doesn't seem to define the roles of vocabulary as explicitly as the Massachusetts standards. He said that Appendix C is a valuable resource for teachers, and the annotations are clearly helpful.

Ms. Frangos said the Common Core draft standards are comprehensive and the writers deserve praise. She said she was pleased to see the mention of certain terms – construct arguments, integrate, qualify, shifts, incorporation of visuals. She said there is a need to say that syntax is important. Ms. Frangos said that in history, it is important to launch an argument, but also to give time to the counter-argument. She said the integration of media should be done with care, and there needs to be mention of how to cite one's electronic sources properly.

Ms. Holloway said the document is lucid and pleasant to read. She said she appreciated the section on the special place of argument, and liked the acknowledgement of the need to understand discipline specific writing. Ms. Holloway said she was concerned there was not enough professional development across the levels. She said the idea of independent reading is important.

Ms. McLaughlin liked the organization, and said it was easy to see across K-5 what is needed. She said the incorporation of 21st century skills makes sense. Ms. McLaughlin said the appendices are helpful but she would like to see core texts. She liked that the standards are grade specific, liked the standards for history and science, and liked the mention of English language learners and students with disabilities, and would like to see more of that. Ms. McLaughlin said she found the reading standards to be stronger, and that the writing standards were unclear. She said pre-K standards would be useful.

Chair Banta said two individuals, Bruce Penniman and George Viglirolo, were not able to attend but would provide written comments. Ms. Wheltle said that a major issue for Mr. Penniman was that he was glad to see there is room for narrative and description at high school.

Mr. Chertavian said there seemed to be some consistency around content versus skills, and that there were a lot of good suggestions. Mr. Chertavian asked if compared to any public opinion or recent media, whether any of the panelists felt the draft standards would represent a real backsliding for Massachusetts. Mr. McCleary said the draft standards have a fatal lack of coherence, and that the standards have a lot of "how" but not as much "what." Ms. Holloway said the real issue is whether students are attaining these standards. Mr. Dan said the draft standards would be a regression from what Massachusetts has, that in his opinion there is not a balance between content and skills, and that more content is needed.

Ms. Holmes asked if the draft standards go far enough to promote student motivation and engagement. Mr. McCleary said that it is specific content that provides the possibility for harnessing the love of learning. Ms. Frangos said it would be helpful to have a list of what reading strategies teachers could use. Ms. McLaughlin said these standards expect students to read, write, and talk and will motive them.

Vice Chair Chernow asked what buzz the panelists were hearing about the Common Core standards. Ms. Holloway said education majors are wondering when this will be adopted, and what about professional development. Mr. Hurray said teachers and curriculum planners are concerned how to translate these to classroom practices. Mr. Dan said teachers are concerned on behalf of students, but there is not trepidation for teachers. Ms. Frangos wondered whether the standards recognize cultural history. Ms. DiGisi said teachers are eager and excited, and appreciate the range of literature in this document. Mr. McCleary said the work of Nancy Atwell brings people into reading through their own interests.

Chair Banta said she has heard on a number of occasions how helpful Massachusetts has been to this process. She thanked the panelists for their time and expertise.

Mathematics

Director of Math, Science, Technology, Engineering Barbara Libby provided an overview of the draft mathematics standards. The mathematics panelists were:

- Anne Marie Belanger, Mathematics High School Teacher, Greater New Bedford Regional Vocational Technical High School
- Richard Bisk, Chair, Mathematics Department, Worcester State College
- Kathleen Bodie, Interim Superintendent, Arlington Public Schools
- Octavia Brauner, High School Mathematics Teacher, Arlington Public Schools
- Charlotte Carlisle, Mathematics Content Director, Mass Mathematics & Science Initiative of Mass Insight Education
- Anne Marie Condike, K-5 Mathematics Coordinator, Westford Public Schools
- Carol Hay, Chair, Mathematics Department, Middlesex Community College
- Diane Kelly, K-12 Director of Mathematics; 9-12 Director of Science and Technology/Engineering, Revere Public Schools
- Joanna Krainski, Middle School Mathematics Coordinator & Teacher, Tewksbury Public Schools
- Peter Mili, High School Mathematics Teacher, Cambridge Rindge and Latin
- Kimberly Steadman, Elementary Principal, Edward Brooke Charter School

Ms. Carlisle said she appreciated the effort and specificity, and found the standards to be more conceptual and less formulaic. She said implementation could be overwhelming for new teachers. Ms. Carlisle said there is no hierarchy of criteria, and this is not a good framework if you need to make decisions. She said there is no emphasis on which standards are critical, there is a question about technology funding, and there is no mention of how a student gets to take advanced coursework.

Ms. Belanger said the framework is daunting to look at, and there is no clear view without the appendix and pathways. She said this will determine how math textbooks are written. She noted that her district just bought an entire set of textbooks. Ms. Belanger said age appropriate math vocabulary is missing. She commended the focus on function and modeling.

Mr. Mili said he looked mostly at the high school standards, and liked what was in the new document. He said there should be a better balance between understanding and doing. Mr. Mili said the way the standards are listed, they are not differentiated, and they list understanding standards before skill standards. He said he favors the attempt at differentiation, and liked using technology to understand mathematics implementation. Mr. Mili expressed concern about resources for implementation, and suggested looking at how to use what we have. He said this might also be a good time to look at assessment and ask whether the MCAS standard is high enough.

Ms. Steadman said she was slightly concerned about the rigor overall. She said within Number Sense, place value and the focus on properties were strong. Ms. Steadman said she was concerned that there was not much attention to estimation or rounding until 4th grade, and percentiles not until 5th grade. She said her greatest concern was there was no algebraic thinking up through the 5th grade. Ms. Steadman said math facts need more emphasis with more rigor. She said that probability and central tendency were not in any elementary grades, and that geometry was not as rigorous as in the Massachusetts framework. Ms. Steadman said she appreciated the focus on line graphs, but that no other graphs were introduced, such as circle graphs.

Ms. Condike said she was pleased with the overall format, and that the document was well written. She said the layout and the descriptors are clear. Ms. Condike said there is a strong emphasis on number development at the K-5 level, which is where it should be. She liked the emphasis on precision, the use of structure, and the fluency verbiage around math facts and algorithms. Ms. Condike said there was a solid balance between fluency and understanding of concepts, and she was pleased to see properties well explained in a way that is easy and clear for elementary teachers. Ms. Condike said she would like to see algebraic reasoning at lower grades. She said she is pleased how much more conceptual the document is, but that rounding and estimation are not there. Ms. Condike said the most important issue for her is how accessible the document is for elementary teachers.

Ms. Hay said she was overwhelmed with the number of high school standards, and that Singapore's standards are much better organized. She applauded the use of spreadsheets but is concerned that they take up time. Ms. Hay said she is not sure the standards address a more focused curriculum, and that these changes would require professional development. Ms. Hay said the Massachusetts standards align well to what is in the Common Core standards, but the language in Massachusetts's document is stronger.

Ms. Brauner said the 9-12 standards are very detailed, but there are two to three times as many standards as we currently have and many schools will find this challenging. Ms. Brauner said she liked the STEM standards but they will be challenging to incorporate into the classroom. She said there are implementation questions around textbooks, technology, and teacher support.

Ms. Bodie said she sees strengths and weaknesses in the draft standards. She said in general, the Massachusetts standards are more concise and easier to follow than this draft document. She spoke about the elementary standards, and students' inability to work well with fractions. Ms. Bodie said the writers were clearer in the elementary standards than the middle and high school levels. She said it is not clear what students should know by the end of 10th grade.

Ms. Kelly said common standards are a great idea. She found the K-8 document cohesive, readable, and well organized. Ms. Kelly said she liked the expectation of mastery at every grade level. She expressed concern that some standards have a STEM designation while others do not.

Ms. Krainski said the strength of the Common Core is the general descriptions at each grade level. She said the document is cohesive, focused, and builds on important mathematical content and connections. She said she was concerned that actual classroom practices are not there, and was concerned also with 8th graders and their pathways. Ms. Krainski said terminology was a strength but it must be uniform. She suggested including a parent section to address study skills and parent training, and a section on gifted and talented students. Ms. Krainski said training and staff development need to be considered.

Dr. Bisk said this is a very important initiative and the standards are well written. He said he likes the "understand, solve, calculate, apply" language, and the emphasis on modeling and applications. Dr. Bisk said it would be helpful to state what is needed for college readiness as opposed to job readiness. He said he likes the Common Core's emphasis on place value. Dr. Bisk said it would be helpful to provide an overview as to when a concept is introduced and when it should be mastered. He said his biggest concern was computational fluency, and that multiplication was not mentioned until 3rd grade, when it should be 1st grade. Dr. Bisk said the K-6 core standards are pretty good, but that computational fluency, including fluency with whole numbers and fractions, needs strengthening and should be placed at the same grade levels as in Massachusetts.

Dr. Stotsky asked whether a third pathway could be created showing an authentic Algebra I class at grade 8 and then allowing four years of high school for advanced courses. Dr. Stotsky said there should be a recognition that there are faster and slower learners, and there needs to be an adjustment for that by 8th grade. Dr. Stotsky also asked about the college readiness line in the Appendix for mathematics.

On a motion duly made and seconded, it was:

VOTED: that the Board of Elementary and Secondary Education adjourn the meeting at 6:15 p.m., subject to the call of the chair.

The vote was unanimous.

Respectfully submitted,

Jeffrey Nellhaus
Deputy Commissioner of Elementary and Secondary Education

Addendum to the Minutes

To: Maura Banta, Chair, and Mitchell Chester, Commissioner of Education
From: Sandra Stotsky, Member, Board of Elementary and Secondary Education
Date: March 23, 2010
About: A Critique of Common Core's March 2010 Draft of English Language Arts Standards

I. Purpose

Many Americans support the idea of common, or national, standards in order to ensure that all students, no matter where they live and what school they attend, are taught a body of common national and world knowledge and acquire a mature understanding and use of the English language. There are many reasons why a set of national standards would be especially valuable for the English language arts, the central subject in the school curriculum. I have consistently supported the goal of national standards for the English language arts *but only if these standards are at least as good as, if not better than, those in Massachusetts.*

The purpose of this critique is to suggest major areas needing improvement in the public comment drafts for ELA that the Council of Chief State School Officers and the National Governors Association jointly released in March 2010. If the "college- and career-readiness" standards and the grade-level standards they propose for ELA are to make all this nation's K-12 students college-ready readers by grade 12, considerably more work is needed on these drafts to make them at least as good as the current ELA standards in Massachusetts and those in its November 2009 draft. Fortunately, there is time for this work to be done. It is in that spirit that I offer this critique and begin with a detailed analysis of the serious deficiencies in the March draft. The many recommendations in the final section of this document are designed with this constructive goal in mind—to make our national standards at least as good as those in the state that not only has been judged to have the best standards in the English language arts but also has indirect empirical evidence that they are. The release by NAEP on Wednesday March 24, 2010, showing that the Bay State continues to lead the country on the grade 4 and grade 8 assessments in reading is further confirmation.

II. Major Issues in Common Core's March 2010 Draft of English Language Arts Standards

1. Use of ten culture-free and content-empty College- and Career-Readiness Standards for Reading (henceforth CCRS, listed on p. 6 and p. 31 of the March draft) that are incapable of serving as the definition of college readiness in reading and as the framework for generating grade-level academic literature and reading standards

We are told that the grade-level literature and reading standards "define what students should understand and be able to do in each grade and build toward the ten College and Career Readiness Standards." But why grade-level literature and reading standards should build toward ten content-empty and culture-free skills purporting to define college readiness is not clear, not only because no body of empirical evidence or international benchmarks to justify them has been (or can be) offered, but also because they seem to have an intellectually negative effect on the grade-level standards they directly spawn. Moreover, and this is the most worrisome aspect of these ten "standards," despite the lack of supporting research evidence or international benchmarking, the U.S. Department of Education explicitly wants these CCRS, not grade-level standards, used as the basis for the common high school exit tests now being developed.

What is the likely source for having generic, content-empty and culture-free skills as the intellectual goal of grade-level standards in the English language arts and as the basis for grade 10 common tests (possibly leading to a "grade 10 diploma")? One major source seems to be the skills-oriented standards in David Conley's report *Understanding University Success* (2003), which proposed the notion of "college readiness standards" and presented them for each major subject in the arts and sciences. Yet, the complete list of English standards in his report provide counter-evidence to the use of an exclusive list of culture-free and content-empty skills as the definition of college readiness in English or reading. After three skills-oriented

standards, the fourth standard in Conley's list of English standards, generated from a survey of college English faculty, is standard D, presented below.

"*D. Successful students are familiar with a range of world literature.* They:
D.1. demonstrate familiarity with major literary periods of English and American literature and their characteristic forms, subjects and authors.
D.2. demonstrate familiarity with authors from literary traditions beyond the English-speaking world.
D.3. demonstrate familiarity with major works of literature produced by American and British authors."
The overarching importance of this standard can be seen in the Appendix, the testimony on Common Core's March draft provided to the New Jersey Board of Education on March 17, 2010, by Susan Wolfson, an English professor at Princeton University. Yet, D is not included as a Common Core college- and career-readiness standard, and its subsidiary objectives do not appear in its grade level standards.

To understand the crippling limitations of these ten content-empty and culture-free "readiness" skills for generating academic grade-level literature and reading standards, we need to look at exactly what they have spawned as grade-level standards and their intellectual progressions from grades 6 to 12. Do these CCRS lead to academically substantive standards that enable teachers to see exactly how intellectual demands increase from grade to grade? Do they provide a clear guide on curriculum content to teachers? Here are the first two of the ten standards for Literature and Reading in each grade from grades 6 to 12. The introduction claims they "offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks…"

For Literature:
Grade 6: 1. Cite specific textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
Grade 7: 1. Cite several sources of textual evidence when useful to support analysis of what the text says explicitly as well as inferences drawn from the text.
Grade 8: 1. Cite a wide range of evidence throughout the text when useful to support analysis of what the text says explicitly as well as inferences drawn from the text.
Grades 9 and 10: 1. Cite the evidence in the text that most strongly supports a specific analysis of what the text
says explicitly as well as inferences drawn from the text.
Grades 11 and 12: 1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly
as well as inferences drawn from the text, including determining where the text leaves things uncertain.

For Reading:
Grade 6: 1. Cite specific textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
Grade 7: 1. Cite several sources of textual evidence when useful to support analysis of what the text says explicitly as well as inferences drawn from the text.
Grade 8: 1. Cite a wide range of evidence throughout the text when useful to support analysis of what the text says explicitly as well as inferences drawn from the text.
Grades 9 and 10: 1. Cite evidence in the text that most strongly supports a specific analysis of what the text says explicitly as well as inferences drawn from the text.
Grades 11 and 12: 1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves things uncertain.

Except for the final clause in grades 11-12, these standards are all (poorly written) paraphrases of the *first* CCRS for Reading ("Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text"). They show no increase in intellectual demand at all. Nor do they show any differences between a literary and a non-literary text. How can they? They are generic skills--"can do" kinds of statements--which can be applied at any grade level to any text but in themselves entail no body of literary or world knowledge to give them intellectual heft. What would give them power would be a sequence of specific

texts through the grades that show increasingly difficult or complex ideational content and other features specific to non-literary texts, or increasingly complex themes and features specific to literary texts. Moreover, these texts would have to have categorical, formal, and substantive connections to what had previously been read and to what will be read at a later date to provide the basis for an authentic curriculum or course of studies. But the guideline to such texts (i.e., to a curriculum) clearly does not (and cannot) come from a content-empty and culture-free skill.

Here is #2 in the Standards for Literature and Reading 6-12, lest readers think this particular criticism is based on the selection of the only bad apple in the barrel.

For Literature:
Grade 6: 2. Analyze how a theme or central idea develops over the course of a text, drawing on key details.
Grade 7: 2. Analyze how two or more themes or central ideas in a text relate to one another, drawing on key details.
Grade 8: 2. Analyze how recurring images or events contribute to the development of a theme or central idea in a text.
Grades 9 and 10: 2. Analyze in detail the development and refinement of a theme or central idea in a text, including how it emerges and how it is shaped and refined by specific details.
Grades 11 and 12: 2. Analyze how multiple themes or central ideas in a text interact, build on, and, in some cases, conflict with one another.

For Reading:
Grade 6: 2. Analyze how a central idea develops over the course of a text, drawing on key details.
Grade 7: 2. Analyze how two or more central ideas in a text relate to one another, drawing on key details.
Grade 8: 2. Provide an objective summary of a text, accurately conveying an author's view and specific points.
Grades 9 and 10: 2. Analyze in detail the development and refinement of a central idea in a text, including how
it emerges and is shaped and refined by specific details.
Grades 11 and 12: 2. Analyze how multiple ideas in a text interact, build on, and, in some cases, conflict with one another.

Again, with just a few exceptions on details, almost all of these standards are paraphrases of the *second* CCRS for Reading ("Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas"). They, too, show almost no increase in intellectual demand through the grades. And except for the statements at grade 8 and the use of "theme" in the Literature standards, they show no real difference between literary and non-literary texts. Nor is their meaning very clear: e.g., how would sixth graders respond to a request to analyze how a theme "develops over the course of a text"? Teachers need an example showing exactly what each generic statement means when applied to a specific text at a specific grade level. (One wonders if these generic statements were written by experienced high school English teachers.) The point is that it is not possible for a culture-free and content-empty skill set to generate authentic academic standards across the grades. A content-empty and culture-free skill set cannot serve as a curriculum framework.

A tacit admission that the CCRS are incapable of generating a substantive curriculum framework is the placement of a sidebar on p. 31, the page where the CCRS are listed, on the importance of reading such high-quality texts as "the founding U.S. documents, the classics of American literature, and the timeless dramas of Shakespeare" and gaining a "reservoir of literary and cultural knowledge." If reading such texts was that important, why wasn't the content of the sidebar incorporated into the CCRS? Nor are there any links between the CCRS and the list of "illustrative" titles (a very fine list) in Appendix B. This Appendix simply indicates a range of complexity across grade levels and major genres. In no way does it suggest to teachers how these works could be used to address the CCRS in the classroom, that is, how they are related to any of the CCRS and, more important, to each other for the purpose of crafting a classroom or school curriculum. *Although many media commentators on this draft seem to have misunderstood this list of titles in Appendix B, not one of these works is required reading at any grade.* By putting most of the little content

that is mentioned (see Section 6 below) into peripheral machinery (i.e., a sidebar and an appendix), Common Core clearly implies the inadequacy of its CCRS--and that their inadequacy was intended.

Because of a seeming unwillingness to provide the substantive contours for a coherent and progressively more challenging literature curriculum in the secondary grades, Common Core has had to resort to an artificial mechanical device to link literary and non-literary texts to the standards generated by this content-empty and culture-free skill set. The device is a complexity formula, and the huge list of titles in Appendix B is presented as simply "illustrative" of different levels of complexity. The central problem for an English curriculum remains, however. A complexity formula cannot indicate (1) what makes a text the richest literary or non-literary text to study at a particular grade level or at a particular time in the school year, (2) a text's relationship to other literary and non-literary texts, historical or contemporary, or (3) how to understand a text's historical or cultural significance (i.e., the issues in developing a coherent curriculum). Moreover, there is nothing in Common Core's descriptive or explanatory material to indicate that the grade-level standards or the illustrative titles provided in Appendix B will serve as the basis for common assessments. So far as we know, the basis for the common assessments will be the CCRS--the content-empty and culture-free skill set governing the grade-level ELA standards. What is not at all clear is why this formula was developed and who will use it, given its many limitations.

2. Emphasis on a useless "complexity" formula for English teachers to use to determine the complexity of the literature they teach

To guide teachers in the choice of texts for the classroom curriculum, Common Core provides a new readability formula. However, the formula developed by a University of Memphis group for Common Core ("Coh-Metrix" or CM) is unusable by the average teacher, and it is unlikely to be used by the able teacher for several reasons.

First, CM provides no easy-to-understand grade-level placement as its "score," a major virtue of the Dale-Chall Readability Formula and others. CM has been constructed to show differences between easy and hard texts on five "key factors." So far, it provides teachers only with percentile numbers on these factors ranging from 0% to 100%. However, these factors do not have consistent meanings. Texts high in "narrativity" and "cohesion" will have low percentiles, meaning they are easy. Texts low in "syntax" and "word abstractness," meaning they are easy, will also have low percentiles. The chart in Appendix A on p. 10 eventually makes sense but not at first blush because the formula developers did not use category names with parallel neutral values.

Second, CM is not a substitute for a properly trained English teacher's judgment. In one of several applications of CM in Appendix A to show its supposed usefulness, readers are given the percentiles for its five factors for an excerpt from *The Grapes of Wrath*. We are also given the results of applying two well-known formulas (Flesch-Kincaid and Lexile) to the excerpt, both of which place it at grades 2-3 in reading level. After describing the excerpt as "extremely easy" on the basis of most quantitative measures, Common Core correctly notes that "qualitative measures" (i.e., professional judgment) place it appropriately at grades 9-10. Clearly, that is all that was needed to begin with.

Third, CM's percentiles are not necessarily readily interpretable. It is not at all clear what differences in the percentiles for these five key factors actually tell us. To show its usefulness for Steinbeck's novel, Common Core claims that its recommended grade-level placement at grades 9-10 is reflected in the high percentiles on "sentence-level cohesion" and "overall text cohesion," which it believes results from the "fact that Steinbeck makes relatively few explicit links among words, sentences, and ideas--something that will likely pose a challenge to student readers." However, no evidence is presented showing that a paucity of explicit textual links in this novel or in others Steinbeck has written actually poses a challenge to high school students. In fact, a reading of the excerpt, which consists chiefly of dialogue, suggests what the text-level difficulty, if any, may be--the characters' spoken dialect, which Steinbeck captured orthographically. This frequent feature of a novel--the spoken dialect used by its characters--which *can* pose a reading challenge

(as any English teacher can tell us with respect to Zora Neale Thurston's *Their Eyes Are Watching God*), does not appear to be captured by any of the five factors in C-M.

No "complexity" formula can tell an English teacher a text's literary context and literary history--what links it to earlier and contemporary texts. The nation's English teachers do not need a "complexity" formula to judge the complexity of a literary text. Its very presence implies a negative view of their competence.

It has always been clear to educators, parents, and others in any country that a progressively more challenging curriculum should include texts of greater and greater difficulty and complexity. Common Core's explanation (in Appendix A) of why complexity matters and why the school curriculum has failed our students on this issue diagnose the problem correctly; textbooks have been continuously dumbed down for decades. But the solution is not to expect English teachers to use a complexity formula to help them judge what texts to teach at each grade level. They know how (or should know how) to determine complexity better than any mechanical formula can. If they can't, we need to find out more about their academic and professional education.

The problem of dumbed-down textbooks lies to a great extent with the advice educators gave teachers and publishers many years ago to address teachers' inability to teach struggling students how to read grade-level materials. The fault does not lie with the publishers themselves. They were asked to reduce the reading level of their textbooks and to narrativize what had been expository texts on the grounds that narratives were easier to read (true), would engage struggling readers better (possibly), and would teach them what they couldn't learn from expository texts (not true). After publishers and teachers followed their advice and regularly lowered the reading level of their textbooks, struggling readers still didn't read better. Worse yet, all the other students were also learning less. Now educators have disingenuously concluded that students can't read complex texts by grade 12 because their textbooks declined in complexity.

What remains unsolved--the original problem in the 1950s and 1960s--is how to help students who don't like to read or who haven't learned how to read very quickly to read "complex" texts. Nothing in these standards addresses the basic issue. We have simply moved in a full circle back to where we were in the 1950s and 1960s when readability formulas were openly used to gauge the level of what should be in school textbooks--and their use regularly denounced by advocates of "authentic" literary texts for elementary schoolchildren. The curriculum issues also remain unsolved: a formula can't tell a poorly educated teacher the literary context and literary history of a text, as well as the common world knowledge embedded in it, to help students make the right links to what will help them understand it.

3. Pedagogically useless vocabulary standards in grades 6-12

Given that vocabulary and concept knowledge is the critical component in reading comprehension, the deficiencies in this "strand" have the most serious implications. The "standards" presented in the most crucial years (grades 6-12) imply only a contextual approach to vocabulary learning even though the research is clear about the benefits of some explicit vocabulary teaching. The pedagogical uselessness of what the March draft offers in this strand is a recipe for reading failure at the high school level, especially for students whose families are not highly literate in English. A major strength of all the versions of the Massachusetts English language arts curriculum framework is the spelling out of the different categories of words/concepts that teachers could explicitly teach through the grades, especially in high school (but not how to teach them). Even the use of dialect by a literary writer is an explicit standard to be taught in a strand on formal/informal English, which doesn't exist in Common Core's March draft.

Here is all that the empty College and Career Readiness Standards provide on p. 47:
"Determine the meaning of words and phrases encountered through conversations, reading, and media use."
"Understand the nuances of and relationships among words."
"Use grade-appropriate general academic vocabulary and domain-specific words and phrases purposefully acquired as well as gained through conversation and reading and responding to texts."

There is not even a CCRS requiring the teaching and learning of dictionary skills (and there are many that need to be taught and learned, as spelled out in the Bay State's own 2001 ELA curriculum framework for ELA). All we find on pp. 49 and 50, where "vocabulary acquisition and use" has been relegated and

smothered by an anti-teaching approach is "verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary)."

Among other pedagogically useless standards are:

"Trace the network of uses and meanings that different words have and the interrelationships among those meanings and uses." (One wonders how many teachers can interpret this "standard" at all, never mind translate it into meaningful pedagogy.)

"Distinguish a word from other words with similar denotations but different connotations." It is not surprising that no examples were given to illuminate the meaning of this "standard" since it is pretentious gibberish.

We do not know if these vocabulary "standards" were actually approved by the vocabulary experts listed by Common Core as reviewers or consultants. If they were, some hard questions need to be asked. Shouldn't we expect American students to learn, for example, the meaning of foreign words used frequently in written English, idioms, literary allusions, proverbs, and adages, among other categories of words that need to be brought explicitly to students' attention? Or, is the expectation to be: if you don't know what a word means, guess or look it up, if you can figure out how to do that. There isn't even a hint that discipline-specific technical vocabulary should be looked up in a glossary because the meaning of technical terms (especially in science and mathematics) usually cannot and should not be determined contextually. The low quality of these vocabulary standards raises questions about the editorial functions provided by Common Core.

4. Unnecessary and therefore misleading reference to NAEP's percentages for passage distribution on reading assessments

The introduction to the K-12 standards seems to want to justify a stress on reading "informational texts" by referring to the "Distribution of Literary and Informational Passages in the 2009 NAEP Reading Framework" (p. 3). However, these percentages (70% for informational passages in high school; 30% for literary passages) are for NAEP's *reading assessments*, not the ELA *curriculum*. NAEP's percentages were not intended to guide the allotment of class time for the high school literature curriculum. NAEP's reading tests were intended by Congress to assess reading skills developed outside of school and in the other subjects taught in high school as well as the English class. Moreover, they do not assess drama at all because, NAEP claims, a coherent excerpt from a play would be too long for a test item (even though Massachusetts has regularly assessed excerpts from plays by recognized authors such as Shakespeare and Moliere on its ELA tests). Further, a report by Achieve noted very clearly that "literary text should remain the reading centerpiece of the English classroom," that the "NAEP reading assessment is not an 'English' test in the traditional sense," and that "if NAEP were an end-of-course English test, they would recommend a 50 percent or higher representation of literature" (Achieve, 2005, p. 21).

The introduction to the March draft ELA standards acknowledges the limitations of NAEP's percentages for guiding the allotment of time for literary study in the high school curriculum.

> The NAEP framework also makes clear that significant reading of informational texts should take place outside of the ELA classroom in order for students to be ready for college and careers. The NAEP framework applies the sum of all the reading students do in a grade, not just their reading in the ELA context. The percentages do not imply, for example, that high school ELA teachers must teach 70 percent informational text; they demand instead that a great deal of reading should occur in other disciplines" (p. 3, also see p. 2 and elsewhere).

Nevertheless, Common Core has chosen to include standards for "literacy in history/social studies and science" in the title and documents for its English language arts standards, in a separate section for grades 6-12. And it explicitly notes that its grades 6-12 standards will require "much greater attention to literary nonfiction than has been traditional." Why did Common Core's March draft mention NAEP's percentages at all if it did not intend to place more stress on both literary non-fiction and informational reading than it

thinks English teachers now give it? In other words, a reference to these percentages was unnecessary if English teachers are not to be expected to spend more time teaching informational reading. We do not yet know if and how the 70 percent figure for NAEP's reading assessments that Common Core is using to justify a stress on the reading of literary non-fiction and informational texts in the high school English curriculum will influence test specifications for the common assessments to be developed in the English language arts. Will the high school exit test in ELA be just for English teachers? Or will all high school teachers be held accountable for the results of the non-literary items on ELA tests?

It remains to be seen what distribution of literary and informational passages the USED requires in grants to test developers for the common assessments to be based on Common Core standards. If we are to believe the March draft that NAEP's percentages "do not imply that high school ELA teachers must teach 70 percent informational text," then we should not see a 60%/40% distribution or even a 50%/50% distribution. In fact, we should expect to see NAEP's percentages almost reversed at the high school level for ELA tests-- close to 70% for literary passages and 30% for informational passages—or a distribution that is much closer to what English teachers in Massachusetts recommended in 1997 for the state's ELA tests. In 1997, they recommended about 60% literary and 40% informational passages at all grade levels, with 60% of the literary passages based on authors in Appendix A (a recommended list reflecting this nation's civic and literary heritage) and 40% of the literary passages based on authors in Appendix B (a recommended list reflecting contemporary authors in this country and elsewhere).

5. No international benchmarking

If there is any doubt that the ELA College- and Career-Readiness Standards and the grade-level standards have not been benchmarked internationally, readers need to look at British Columbia's high school exit test and required readings (Common Core, *Why We're Behind: What Top Nations Teach Their Students But We Don't.* 2009, pp. 25-33) and the Appendix on what Finland requires in the upper secondary school, in the Pioneer Institute's White Paper "Why Race to the Middle?" by Ze'ev Wurman and Sandra Stotsky (February 2010).

6. Too few content-rich literature and reading standards in grades 6-12 to provide the intellectual framework needed for these grades

The number of such standards for grades 6-12 is appallingly low, and here they all are:

1. Grade 9-10: Analyze a wide range of nineteenth- and early-twentieth-century foundational works of American literature, comparing and contrasting approaches to similar ideas or themes in two or more texts from the same period.

2. Grades 11-12: Compare and contrast multiple interpretations of a drama or story (e.g., recorded or live productions), distinguishing how each version interprets the source text. (This includes at least one play by Shakespeare as well as one play by an American dramatist.)

3. Grades 9-10: Analyze documents of historical and literary significance, including foundational U.S. documents (e.g., the Declaration of Independence, the Preamble to the Constitution, the Bill of Rights) for their premises, purposes, and structure.

4. Grades 11-12: Analyze how various authors express different points of view on similar events or issues, assessing the authors' assumptions, use of evidence, and reasoning, including analyzing seminal U.S. documents (e.g., *The Federalist*, landmark U.S. Supreme Court majority opinions and dissents).

These standards are based mainly on two standards in the fine set of high school exit standards for the English language arts set forth in Achieve's American Diploma Project. Unfortunately, these content-rich standards are not placed among the ten CCRS that guide all of Common Core's ELA standards, where one might have expected them to appear. The pitifully small number of content-rich standards in Common Core's grade-level standards is a direct reflection of the crippling effects of these ten content-empty and culture-free "College- and Career-Readiness Standards."

III. Recommendations

1. Remove the ten culture-free and content-empty College- and Career-Readiness Standards for Reading (now listed on p. 6 and p. 31 of the March draft). They serve no academically constructive role. They should be replaced by Standard D and its subsidiary standards in Conley's 2003 list and by the first two standards in Achieve's American Diploma Project's high school exit test for ELA. These standards can serve to generate many academically substantive grade-level standards from grades 6 to 12.

2. Removal of material on the "complexity" formula, both in the grade-level standards and in the appendix. This formula cannot easily be used by elementary teachers, won't be used by appropriately educated English teachers, and is inappropriate to include in a standards document.

3. Completely revise the vocabulary strand in grades 6-12 and remove the pedagogically useless standards. Common Core should ask its ELA draft writers to study carefully the vocabulary strand in the California 1998 standards or the vocabulary strand in Massachusetts's 2001 English language arts curriculum framework in order to understand better the kinds of vocabulary standards Massachusetts teachers have found useful in their classroom instruction. The Bay State's Department of Education staff worked out an even better sequence of academic standards for vocabulary teaching/learning in the November 2009 draft revision, and there is no reason why the nation as a whole should not have such standards as well.

4. Remove all the "literacy standards for history/social studies and science" from future drafts for ELA unless the context for using the many fine titles of historical documents is made clear in the English language arts material. If they are to be included in ELA documents, English teachers must be given both clear direction on their historical and political significance and sufficient historical context for teaching students how to understand these documents.

Appendix A

PRINCETON UNIVERSITY

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08544-1016

Written Testimony sent to the New Jersey Board of Education
Read at the March 17, 2010 meeting

I and my colleagues at the Association of Literary Scholars, Critics, and Writers have read through the March 2010 public comment draft of the proposed English language arts standards. We are pleased to see literary and cultural knowledge specified in several grade-level standards at the high-school level, and we note with appreciation the strong statements, in the sidebar on p. 31, about the importance of this knowledge. A study of the literary history and literary context for the many culturally significant "illustrative" titles in Appendix B is vital for future generations of American students.

At the same time, we are disappointed to see nothing in the "college-and career-readiness standards" (p. 31) that serves to frame cumulative, graduated learning in literary history, traditions, forms, styles, and significant writers. These standards, not the sidebar, will be the basis for common assessments, and we question the indication of the draft-writers that "college readiness" can be achieved by content-free standards. The contingent content for exercising elementary interpretive and paraphrasing skills in these standards is not adequate. Any other subject would have graduated content, but the drafters of these standards imagine that "college readiness" can be content-free when it comes to "literature."

We cannot endorse the absence of content-rich *literary* standards in "college readiness" any more than we can endorse just a sporadic and infrequent inclusion in the grade-level standards. This absence in this public-comment draft reflects what seems to us to have been a nearly systematic exclusion of those with expertise in literary study in the development of the standards. No one with expertise in the study of literature as a subject in itself was appointed to the standards-development committees, and those who attended the open forum last December, and then again in February, reported that they were given no way to argue a case that had seemed to have been pre-decided. We are surprised and concerned that the media have failed to note the exclusion of literary study from what are deemed "college readiness" standards. Without graduated, substantive content, adequate preparation for college study in any subject would be seriously compromised. Although there is nothing positive to object to in the statement of standards, we lament the absence of literary study in a necessary, valuable, and vital distinction from "language arts."

Yours sincerely,

Susan J. Wolfson
Professor of English
Princeton University

President, Association of Literary Scholars, Critics, and Writers

Appendix B11: May 2010 Memo on Timeline for Adoption of the Common Core Standards from the Commissioner to the Board of Elementary and Secondary Education

Massachusetts Department of Elementary and Secondary Education

75 Pleasant Street, Malden, Massachusetts 02148-4906

Telephone: (781) 338-3000
TTY: N.E.T. Relay 1-800-439-2370

Mitchell D. Chester, Ed.D.
Commissioner

MEMORANDUM

To: Members of the Board of Elementary and Secondary Education
From: Mitchell D. Chester, Ed.D., Commissioner
Date: May 14, 2010
Subject: Common Core English Language Arts and Mathematics Standards: Next Steps

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The purpose of this memorandum is to provide you with a revised process and schedule for reviewing and potentially adopting the K-12 Common Core Standards in English language arts (ELA) and mathematics. The revised process and schedule replaces the one I presented to you this past January, and is designed to ensure a rigorous and transparent review of the standards prior to asking the Board to consider adopting them this summer. The federal rules for our Race to the Top proposal require that we specify a date by which the Board will vote on the standards. In order to receive the full number of points for this section of our proposal, the Board must take a vote by August 2, 2010.

Assuming that a final draft of the Common Core Standards is released by the end of this month, I propose that the Board adopt the following timeline and process for voting on adoption of the Common Core Standards.

June 1, 2010:

- I will invite public comment on the Common Core Standards by posting them on the Department of Elementary and Secondary Education's website. For both ELA and mathematics, there will be a link to an online survey that asks respondents to make a holistic assessment whether the Common Core Standards for that subject are: (a) equivalent to, (b) more rigorous than or (c) less rigorous than our current Massachusetts standards for ELA and mathematics (2001 and 2000, respectively). This survey will also have space for respondents to provide written reasons for their judgments.

By June 15, 2010:

- I will appoint two independent expert panels, one for ELA and one for mathematics, composed of PreK-12 educators and representatives from higher education and the business community, to review the Common Core Standards and report back to the Board whether they find that they are: (a) equivalent to, (b) more rigorous than, or (c) less rigorous than our draft revised Massachusetts standards for ELA and mathematics (2009 and 2010, respectively) and the reasons for their judgments.

- In addition to the panels, I will secure one or more experts from outside of Massachusetts to compare the Common Core Standards to the Massachusetts draft revised standards in ELA and mathematics and report their findings.

Board meeting on June 22, 2010:

- The Department will compile the results of the public comment/online survey and report the results to the Board.
- The expert panels will report their findings to the Board.
- The Board will discuss the Common Core Standards and the reports.

Special Board meeting on or before August 2, 2010

- The Board will vote on adopting the Common Core Standards.

July – September 2010:

- I will reconvene the Curriculum Framework review panels for ELA and mathematics that created the 2009 and 2010 drafts to discuss the Common Core Standards and make recommendations on adding unique Massachusetts standards or other sections, as needed, to the Common Core Standards. The Memorandum of Agreement that the Governor and I signed with the Council of Chief State School Officers and the National Governors Association specified that unique state standards could comprise up to 15% of the full complement of standards the Board ultimately adopts.

September 2010 Board meeting:

- I will present the Curriculum Framework review panels' recommendations for any additional standards to the Board for discussion and ask that the Board release these recommendations for public comment.

September – October 2010:

- We will solicit public comment on the recommendations through an online survey and the Board will review comments at the October Board meeting.

November 2010 Board meeting:

- The Board will vote on adding the recommended standards to the Common Core. The resulting documents will be the new *Massachusetts Curriculum Frameworks for English Language Arts* and *Mathematics.*

January 2011 – June 2012**:**

- We will post the newly adopted standards on our website, publicize them statewide, and conduct regional statewide professional development sessions about them at the District and School Assistance Centers and other venues. Department staff and our assessment contractor, Measured Progress, will review item banks to evaluate the alignment of existing items to the Common Core Standards, and will align any newly developed items for English language arts and mathematics MCAS tests to these standards. By the end of

the 2011-2012 school year, we will expect all districts to have aligned their curricula to these new standards.

PARTNERSHIP FOR ASSESSMENT OF READINESS FOR COLLEGE AND CAREERS
MEMORANDUM OF UNDERSTANDING

Purpose. This document commits states to participate in the Partnership for Assessment of Readiness for College and Career, a state-led consortium that will collaborate on the development of common, high-quality assessments aligned to the Common Core State Standards (CCSS) in English language arts and mathematics for grades 3-8 and high school. The primary goal of the Partnership's work is to measure and document students' college and career readiness against common academic standards and to measure students' progress toward this target throughout the rest of the system.

While participating in the Partnership demonstrates the state's commitment to pursue a common assessment system that enables comparisons against the CCSS across all Partnership states, it does not commit the state to a specific assessment design at this point. Partnership states are still considering several options for the design of a common assessment system in pursuit of the Race to the Top (RTTT) Comprehensive Assessments Grant and will not be asked to commit to the Partnership's application until a later date. Until that time, all participating states will have the opportunity to contribute to and shape the Partnership's proposal.

Preliminary Design Principles. Partnership states have identified the following major purposes and uses for the assessment system. As the Partnership collaborates to develop its application for the RTTT assessment competition, these purposes will guide its work.

- The primary purpose is to measure and document students' **college and career readiness** and to measure students' progress toward this target throughout the rest of the system. Students meeting the college and career readiness standards will be eligible for placement into entry-level credit-bearing, rather than remedial, courses in public 2- and 4-year postsecondary institutions in participating states.

- Additionally, the partnership is committed to ensuring that the assessment results:
  - Are **comparable across states** at the student level;
  - Meet **internationally rigorous benchmarks**;
  - Support valid assessment of **student longitudinal growth**; and
  - Serve as a **signal for good instructional practices**.

- The results must be able to support multiple levels and forms of accountability including:
  - Decisions about **promotion and graduation for individual students**,
  - **Teacher and leader evaluations**, and
  - **School accountability** determinations.

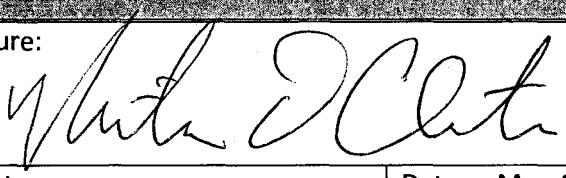
Roles and Responsibilities of Partnership States. The Partnership will employ a multi-level governance and management structure designed to guide the partnership through the submission of the proposal.

- The **Governing States** are comprised of a representative group of leaders from Partnership states that are committed to implementing the assessment system developed by the partnership, should it win a grant from the Race to the Top Comprehensive Assessment System competition, and are responsible for guiding the proposal development process. Each Governing State will commit a team comprised of the chief, assessment director, and other key officials from the SEA, Governor's office, and higher education as appropriate.
- The **Proposal Design Team** will include officials from partnership states who will work with an advisory group of national and international experts to create an assessment system design for the Partnership's proposal. The design team will include as many states as are interested in and capable of contributing to and shaping the design of the proposed next generation assessment system.

- **Participating States** will include other partnership states that are unable to provide staff time to the design team but will provide rapid feedback on drafts of the proposal through the development phase.

State Commitment. This memorandum of understanding is voluntary and non-binding for states. States signing this MOU should do so with the intent of continuing in the Partnership through the proposal development, assessment development, and implementation phases. However, there will be an opportunity for states re-assess their participation in the Partnership before it submits its application for a Race to the Top Comprehensive Assessment Systems Grant by June 23, 2010.

Agreement. The undersigned state leader agrees to the process and structure as described above and attests accordingly by his/her signature below.

Signature(s) for the State of:	
Authorized State Signature: 	
Name: Mitchell D. Chester	Date: May 4, 2010
Title: Commissioner of Elementary & Secondary Education	

Appendix B13: List of Partnership for Assessment of Readiness for College and Careers (PARCC) States, May 2010

1. Alabama
2. Arizona
3. Arkansas
4. California
5. Colorado
6. Delaware
7. District of Columbia
8. Florida
9. Georgia
10. Hawaii
11. Illinois
12. Indiana
13. Kentucky
14. Louisiana
15. Maryland
16. Massachusetts
17. Mississippi
18. New Hampshire
19. New Jersey
20. New York
21. North Dakota
22. Ohio
23. Oklahoma
24. Pennsylvania
25. Rhode Island
26. South Carolina
27. Tennessee

Designing Common State Assessment Systems
April 2010

Earlier this month, the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) released draft Common Core State Standards, the result of a state-led collaborative process to develop common standards in English-language arts and mathematics. **The nation's governors and chief state school officers believe these new standards offer an unprecedented opportunity for states to work together to dramatically improve the quality, cost-effectiveness, and comparability of state assessments.** Adoption of common standards and assessments remains a state decision. During their annual Winter Meeting, governors expressed a strong preference for having only one or two summative assessments that could be administered in all states adopting the Common Core.

In addition, the U.S. Department of Education has announced a Race to the Top Assessment Program that will make up to $350 million available for consortia of states to develop a "next generation" of higher-quality assessments. The upgrade is necessary. Not only are definitions of proficiency inconsistent from state to state, but today's tests are also not always well-aligned with standards and tend to be focused on low-level multiple-choice questions that cannot measure the full breadth and depth of learning the Common Core State Standards expect. Moreover, current tests were not designed to provide a rich variety of timely information useful to decision-makers at all levels, including classroom teachers.

States have a historic opportunity to use Race to the Top funds to create next-generation assessment systems that can better fulfill the many purposes we have for assessment, providing rich summative data that can inform decision-making while also informing and inspiring high-quality instruction in classrooms. The next generation of state assessments can make the Common Core State Standards concrete and meaningful to educators, students, and parents and provide a critical vehicle for ensuring that all students master essential knowledge and skills.

Recognizing this opportunity, CCSSO and the NGA Center convened in February for a series of conversations with leaders of the six overlapping state consortia that already had formed to seek Race to the Top funds. Participants explored key priorities driving each consortium and identified areas of agreement that would provide a basis for common action. Those conversations yielded important agreements that will greatly facilitate collaboration to improve the quality, cost-effectiveness, and comparability of state assessments. Leaders of the consortia:

- embraced a common vision for assessment;
- developed a list of shared priorities for leveraging Race to the Top funds to design next-generation assessment systems;
- merged their efforts considerably to reduce the number of consortia moving forward; and
- agreed to participate in a joint NGA-CCSSO project to ensure comparability of summative assessment results across consortia and to reduce costs by collaborating on other activities.

A Common Vision

Participants reached a strong consensus on a powerful vision for next-generation assessments, based on the following overarching principles:

1. *Assessments should be fully aligned with the new Common Core State Standards and measure the full breadth and depth of knowledge and skills described in those standards.*

2. *Assessments should produce a range of sophisticated data necessary to support decision-making at all levels, including indicators as to whether students are ready or "on track" to be ready for college and careers; measures of student growth over time in addition to annual performance against standards; and information on how students perform compared with their peers internationally.*

3. *States must create coherent assessment systems comprised of multiple integrated components, including a variety of formative assessments that inform, support, and improve classroom instruction, rather than continuing to rely on one annual test to accomplish too many purposes.*

Shared Priorities

Moving beyond that broad vision, participants also agreed on a more detailed set of "shared priorities" for the design and development of next-generation assessment systems, including the following:

- Leverage cross-state collaboration to ensure comparability of summative assessment results and to promote cost-efficiency by exploiting economies of scale for research, development, and administration.

- Employ a robust mix of test questions and performance assessments* necessary to measure the full breadth and depth of the Common Core State Standards. Although decisions about item types should be based on an analysis of how best to measure the standards, new summative assessments will likely need to incorporate a larger proportion of more sophisticated multiple-choice questions, constructed-response (or "fill-in-the-space") questions, on-demand performance tasks, and—to the extent feasible—classroom-based performance assessments.

- Aggressively pursue technology-based solutions for more efficient delivery and scoring of state assessments and to report test results more rapidly, clearly, and in various formats that are useful both for accountability and for improving classroom instruction.

- Employ "universal design principles," strategies for developing new assessments in ways that allow the widest possible range of students to participate fully from the outset, along with appropriate accommodations to ensure maximum participation of students with special educational needs.

* Performance assessments are ways to measure students' knowledge and skills that go beyond asking them to answer multiple-choice or fill-in-the-space questions. Typically, students are asked to complete a hands-on task that can take 40 minutes or can be completed over several class periods. For example, students might be asked to research and write a magazine article or to conduct and explain the results of a scientific experiment.

- Support and involve classroom teachers in efforts to improve assessment at all levels by:
    - Providing teachers support materials and tools (curriculum frameworks, syllabi, banks of curriculum-embedded performance tasks) which help teachers to become "assessment literate"; and
    - Offering teachers opportunities to participate in the development and implementation of new state assessments, including the design of constructed-response items and performance tasks for summative assessments.
- Ensure that the design process works for states rather than against them. States should own the processes and products of assessment development. Consortia should negotiate streamlined peer review of state assessment programs by the federal government so that peer reviews are conducted at the *consortium level* rather than for each individual state.

Similarities and Differences between the Consortia

Based on the consensus reached on the vision and priorities, the original six consortia agreed to substantially merge their efforts, resulting in only two major assessment consortia moving forward. Although the two consortia share a similar set of long-term priorities for the next generation of state assessment systems, they have chosen to emphasize a different set of priorities over the short term, during which Race to the Top funds will support major investments in research and development. (The appendix includes detailed descriptions provided by leaders of each consortium and its design plans as of March 2010.)

The **SMARTER BALANCED** consortium plans to move very aggressively toward full implementation of online testing using "computer-adaptive" software that selects new test questions based on each student's own in-test performance and provides immediate results to teachers. This approach allows for a very precise understanding of where students are in relation to grade level expectations. In addition to summative tests, the consortium will develop computer-adaptive mid-year "benchmark" tests and formative assessments that can be administered throughout the year to guide instruction. The consortium plans to seek additional funds in addition to a Race to the Top grant so that it can meet these ambitious goals. Finally, SMARTER BALANCED plans to emphasize teacher involvement in all aspects of assessment design and implementation, from creating and selecting test questions to scoring students' responses on performance tasks, and to invest heavily in other professional development activities so teachers become more adept at applying a range of assessment strategies in their own classrooms.

Recognizing the fiscal costs of research and development plus ongoing administration, the **Partnership for Assessment of Readiness for College and Career** has chosen to adopt a prudent set of short-term design goals. The Partnership will focus primarily on developing a set of high-quality summative assessments, including grades 3-8 tests and end-of-course high school tests, which can provide rich information on students' annual progress toward meeting evidence-based benchmarks for college- and career-readiness. The intent is to ensure high-quality data that can be used for a range of planning and accountability purposes. For example, several leaders of the Partnership have a particular interest in using the results to generate student growth measures that can be used to evaluate teacher and principal effectiveness. To help teachers and others better

understand and plan for the assessments, the Partnership will release a significant proportion of test items and interpretive information every year, and it will develop model curriculum frameworks and course syllabi that illustrate specific instructional options.

Like the SMARTER BALANCED consortium, the Partnership plans to develop a bank of classroom-based performance tasks, the results of which eventually could be incorporated into summative scores, and it intends to move to computer-based testing by 2016. However, the Partnership currently does not plan to invest in computer-adaptive software, extensive teacher development activities, or mid-year benchmark and formative assessments (though its system architecture will allow states to add such components later).

Moving Forward: Ensuring Comparability in Summative Assessments

CCSSO and the NGA Center will lead a joint effort to enable test scores to be compared across the summative assessments being created by the two consortia. Governors and chief state school officers view this as a top-priority goal and consider the effort to be the natural successor to the state-led effort to develop Common Core State Standards. High-quality assessments make standards concrete and meaningful to educators, students, and parents and provide a critical vehicle for ensuring that all students master important knowledge and skills. The assessment work will engage any consortium and all states that adopt the Common Core State Standards.

In the April 6 notice for applications, the U.S. Department of Education announced two competitions. A Comprehensive Assessment System grant would be for grades 3-8 and at a designated point in high school, and would be used for instructional improvement and accountability. They anticipate funding one or two consortia at approximately $160 million each, with the requirement that at least 15 states be in a consortium. An additional $30 million will fund a second grant for High School Course Assessments, which would be used to create more consistent levels of rigor in high school courses. In advance of submitting their assessment proposals to the U.S. Department of Education on June 23, CCSSO and the NGA Center will ask all consortia to sign a memorandum of understanding that commits them to participating in the effort to compare scores across assessments.

The NGA Center and CCSSO will engage testing experts who can help participants understand the many possible methods for promoting comparability, as well as the tradeoffs among different strategies. Certain approaches, such as embedding a set of common questions across the tests, would enable results to be compared among schools and districts across most, if not all, of the nation, something that never before has been possible in the United States. For example, even if West Virginia and Florida joined separate assessment consortia, it would be possible to say, "Byrd Elementary School's 85 in West Virginia is higher than Hurston Elementary School's 80 in Florida." Other approaches would require a smaller up-front investment but would not produce reliably comparable scores at the school level or district level.

In addition to ensuring a level of comparability across summative assessments, the effort will encourage consortia to explore other ways they can pool their efforts and leverage greater economies of scale. Additional cost savings might come from cross-state collaboration to develop curriculum-embedded tasks and materials based on the Common Core State Standards, or ways to evaluate and meet states' differing technological infrastructure needs.

The full power of the Common Core State Standards will be realized when states align them to new, high-quality assessments that are internationally benchmarked and build toward college and career readiness. However, the discussion about developing common state assessments is

relatively new and lacks agreement on the one best design. While a single testing consortium would allow states and families to compare achievement at the student level, a capability that is lost with multiple consortia, there are philosophical and practical differences across states that make a single consortium difficult to create at this time. The overarching goal is to create next-generation assessment systems that are more comparable across the nation and more cost-efficient than ever before.

Appendix: Detailed Descriptions Provided by Assessment Consortia

The following descriptions were provided by leaders of the two assessment consortia.

The SMARTER BALANCED Consortium

Overarching Vision and Goals

The "Smarter Balanced Assessment Consortium" was formed from a merger of three consortia that emerged in January 2010 in response to the Race to the Top competition: the Balanced Assessment, MOSAIC, and SMARTER Consortiums, comprising a total of 45 states.

The Consortium's priorities for a new generation assessment system are rooted in a concern for the valid, reliable, and fair assessment of the deep disciplinary understanding and higher-order thinking skills that are increasingly demanded by a knowledge-based economy. These priorities are also rooted in a belief that assessment must support ongoing improvements in instruction and learning, and must be useful for all members of the educational enterprise: students, parents, teachers, school administrators, members of the public, and policymakers.

The Consortium recognizes the need for a system of formative and summative assessments, organized around the Common Core State Standards, that support high-quality learning and the demands of accountability, and that balance concerns for innovative assessment with the need for a fiscally sustainable system that is feasible to implement. The efforts of the Consortium will be organized to accomplish these goals.

The Consortium is committed to the development of a system that is state-led and will provide:

- **Common summative tests in English language arts and mathematics** that assess student progress and mastery of core concepts and critical transferable skills using a range of formats: selected-response and constructed-response items, and performance tasks, designed together to assess the full range of standards.

- **Formative assessment tools and supports** that are shaped around curriculum guidance which includes learning progressions, and that link evidence of student competencies to the summative system.

- Focused **professional development** around curriculum and lesson development, as well as scoring and examination of student work

- **Reporting systems** that provide first-hand evidence of student performances, as well as aggregated scores by dimensions of learning, student characteristics, classrooms, schools, and districts.

- A **governance structure** that ensures a strong voice for state administrators, policy makers, school practitioners, and technical advisors to ensure an optimum balance of assessment quality, efficiency, costs, and time.

Design Principles

As described below, the Consortium members have agreed to a set of principles that are consistent with those used by educational systems of high-achieving nations and states. These include the following:

1) **Assessments are grounded in a thoughtfully integrated learning system** of standards, curriculum, assessment, instruction, and teacher development. Teachers and other instructional experts are involved in the process of developing formative and summative assessments grounded in the learning standards. These guide professional learning about curriculum, teaching, and assessment. Instructional supports are provided to enable thoughtful teaching. Thus, assessments are provided to schools as part of a well-aligned system that guides and supports a coherent approach to students' and teachers' learning.

2) **Assessments include evidence of actual student performance** on challenging tasks that evaluate standards of 21st Century learning. The assessments will be strategically used to evaluate a broad array of skills and competencies and inform progress toward and acquisition of readiness for higher education and multiple work domains. They emphasize deep knowledge of core concepts within and across the disciplines, problem solving, analysis, synthesis, and critical thinking.

3) **Teachers are integrally involved in the design, development and scoring of assessment items and tasks.** Teachers will participate in the alignment and unpacking of the Common Core State Standards and the identification of the standards in the local curriculum. The Consortium will involve teachers in formative and summative assessment development. It will support moderation of scoring processes to ensure consistency, to enable teachers to deeply understand the standards, and to develop stronger curriculum, instruction, and classroom assessment. Assessment literate teachers 1) who have gotten "inside" the Common Core State Standards, 2) who have taught to the standards, 3) who have learned how to appropriately measure the standards, and 4) who have learned strategies to intervene if students have not measured the standards, will be teachers whose students are learning. Teachers' roles include the construction and review of items/tasks, the definition of scoring guides, selection of student work exemplars, and scoring.

4) **Technology is designed to support assessment and learning systems.** Technology is used to enhance these assessments in a number of ways by: delivering the assessments; enabling adaptive technologies to better measure student abilities across the full spectrum of student performance and evaluate growth in learning; supporting online simulation tasks that test higher-order abilities, allowing students to search for information or manipulate variables, and tracking information about the students' problem-solving processes; and, in some cases, scoring the results or delivering the responses to trained scorers / teachers to access from an electronic platform. Such a platform can support training and calibration of scorers and moderation of scores, as well as the efficient aggregation of results in ways that support reporting and research about the responses.

5) Assessments are structured to continuously **improve teaching and learning**.
Assessment, *as*, *of*, and *for* learning, is designed to develop understanding of what learning standards are, what high-quality work looks like, and what is needed for student learning. It is also designed to foster instruction that supports transferable knowledge and skills. These outcomes are enabled by several features of the assessment system:

- The use of school-based, curriculum-embedded assessments provides teachers with models of good curriculum and assessment practice, enhances curriculum equity within and across schools, and allows teachers to see and evaluate student learning in ways that can feed back into instructional and curriculum decisions.

- Close examination of student work and moderated teacher scoring are sources of ongoing professional development that improve teaching.

- Developing both on-demand and curriculum-embedded assessments around learning progressions allows teachers to see where students are on multiple dimensions of learning and to strategically support their progress.

Anticipated Uses of the Assessment System

The Consortium will develop a common summative assessment that will provide comparable results across all of the participating states. This comparability will be achieved by applying psychometrically sound scaling and equating procedures to items and a modest number of performance tasks of limited scope (e.g. no more than a few days to complete) that will be used in common across consortium states. Consortium states will use commonly determined performance standards that are internationally benchmarked.

In addition, some states will work on pushing the envelope with respect to more ambitious performance assessments – which may be used in common by one or more sub-consortia of states – and, in the same way, others will undertake more ambitious work with respect to computer-adaptive testing and simulations. This design allows the Consortium to create, at one time, a new summative assessment used by a large number of states within the five-year horizon of the federal grant, and to create even more leading-edge assessment components used by sub-consortia of states who decide to offer augmented assessments. Common use of these augmented assessments across subsets of states would result in comparable results across the states, without disrupting the existence of a leaner, common summative assessment across all the states in the Consortium.

Current understandings about the nature of the assessment items, tasks, and strategies are noted below:

Objective Machine-Scored Items

- Movement toward more analytic types of selected-response and constructed-response items that are easily scored, including computer simulations.

Open-Ended Constructed Response

Artificial intelligence (AI) scored items.

- Work to establish efficient means of developing items and reliable scoring processes for complex responses scored by computer.

- Build and maintain the confidence teachers have in the system by incorporating a systematic read-behind by teachers.

Human scored constructed response

- Develop training and moderated scoring processes for teacher scoring of items that cannot be scored by AI and for additional scoring of AI items.

- A strategic mix of teacher and machine scoring should be created to take advantage of efficiencies and reduce burden, while also ensuring teacher participation and learning.

Curriculum-Embedded Performance Assessments

- The common summative assessment would incorporate performance events of modest scope (1-5 days) to evaluate the standards more fully.

- Some states will form a workgroup to go further with rich performance tasks that can make advances in performance assessments on behalf of the Consortium.

- These more ambitious performance assessments could be included for individual state accountability systems (and for comparisons across a subset of states, if desired) until a greater proportion of states has capacity for implementation.

Advanced Computer-Based Simulations

- Some states will form a workgroup to make advances in computer based simulations on behalf of the Consortium.

- These simulations could be included in individual state accountability systems until a greater proportion of states has capacity for implementation.

The Partnership for Assessment of Readiness for College and Career

In January 2010, twenty-eight states signed an agreement to participate in the Common Assessment Partnership and seventeen states signed with the Florida-led Common Assessment Consortium.[†] Since then, many leaders and assessment experts from these states have engaged in work, facilitated by Achieve, to develop a shared vision and set of design principles for a multi-state assessment system. During this period, leading states in both consortia—Florida, Massachusetts and Louisiana—worked to align the visions of the two consortia. This document represents their collective vision and a summary of current agreements and understandings.

The Race to the Top Assessment Competition presents states with an unprecedented opportunity to move from the state-led development of common standards in mathematics and English language arts to a common measurement for student performance and growth. The Common Core State Standards will require students to demonstrate knowledge and skills in deep and meaningful ways, as well as to reason, synthesize, think critically, and solve problems. A compelling vision for common assessments demands fully measuring the depth and breadth of the concepts and skills represented in the Common Core State Standards. However, states recognize the tension between their desire for innovative, forward-looking assessments and the realities of limited resources available to them for ongoing test administration. States in this partnership have agreed to strike a balance between pushing ahead towards next-generation assessment systems and acknowledging the design and fiscal tradeoffs, including the ability to sustain these assessments over the long term.

The state leaders recognize that trying to project costs more than five years in the future is filled with many uncertainties, such as the potential cost savings from technologies that have not yet been invented. Therefore, these state leaders have agreed that they will be adamant about researching and designing an affordable and practical system without sacrificing innovative assessments that can drive instruction. Partnership states will bring forth the best intellectual resources to tackle this challenge and develop solutions that will allow states to maximize the value of innovative assessment features while minimizing cost and turnaround time for results.

In the near term, the partnership expects that the substantial costs for developing the assessment system outlined below will be paid for by the Race to the Top assessment grant award. However, the partnership members recognize that the costs of implementing and sustaining an innovative assessment system could require more resources than many states are currently budgeting for assessment, even with new technological developments. The states are committed to building a sustainable system and it is their hope that the federal government will continue to provide funding to help support the ongoing administration costs for innovative assessment systems.

Purposes and Uses

The initial state members have identified the following major purposes and uses for the assessment system results.

- The primary purpose is to measure and document students' **college and career readiness** at the end of high school and to measure students' progress toward this target throughout

[†] The combined list of states: Alabama, Arizona, Arkansas, California, Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, and Wisconsin.

the rest of the system. Students meeting the college- and career-readiness standards will be eligible to be placed into credit-bearing, rather than remedial, courses in all public 2- and 4-year postsecondary institutions in all participating states.

- Additionally, the partnership is committed to ensuring that the assessment results:
  - Are **comparable across states** at the student level;
  - Meet **internationally rigorous benchmarks**;
  - Support valid assessment of **student longitudinal growth**; and
  - Serve as a **signal for good instructional practices**.

- The results must be able to support multiple levels and forms of accountability including:
  - Decisions about **promotion and graduation for individual students**,
  - **Teacher and leader evaluations**, and
  - **School accountability** determinations.

Cross-Cutting Design Considerations

While there are many design issues unique to either the grades 3-8 or high school assessment systems, the following issues cut across the design of all of the assessments in the system.

- ***Comprehensive and Coherent System.*** A comprehensive assessment system design will be used to ensure coherence among summative, interim, and formative assessments, even if the partnership focuses development efforts on the summative measures.
- ***Operational Use.*** The partnership's summative assessment system will be available for the first operational use by the spring of 2014.
- ***Migration to Computer-Based Testing.*** The initial operational assessment will be available in both computer and paper formats, but by the spring of 2016, paper formats will be available for specific testing accommodations only.
- ***Common Performance Levels.*** All partnership states will use common performance level descriptors and standard-setting processes, and will cut scores to define common achievement levels.
- ***Student-Level Growth.*** The summative assessments will provide valid inferences regarding individual student growth and progress toward college and career readiness. Partnership members are committed to exploring the use of a common student growth model in order to facilitate comparisons of growth across member states.
- ***International Benchmarking.*** The assessments will be designed to ensure that students are being held to internationally competitive expectations via:
  - tight alignment with the internationally-benchmarked Common Core State Standards;
  - benchmarking the actual assessments against assessments from high-performing countries; and
  - pursuing empirically-based international comparisons at target grade levels.
- ***Item Types.*** The partnership will ensure that the assessments measure the depth and breadth of the Common Core State Standards and signal effective instruction. In consideration of cost, scoring time, and test administration time, the partnership will pursue innovations in item types that require higher-order thinking skills but that can be

scored via computer. There is also recognition that a target of college and career readiness requires expectations for complex performances. As such, assessments will include open-response tasks.

- ***Testing Conditions.*** The partnership is committed to using the most uniform test administration policies and practices possible to enable meaningful comparisons of results across states.
- ***Special Populations.*** The assessments will be as inclusive as possible, particularly for students with disabilities and English language learners. The partnership will also require—to the fullest extent possible—the use of uniform accommodation policies and practices in all member states.
- ***Robust Writing Assessments.*** The partnership will create robust (i.e., not just single prompts) direct writing assessments for every grade 3-11. All states will administer these at key grades and will be free to administer them (or allow Local Education Authorities to do so) at the other grades.
- ***Classroom-Embedded Performance Tasks.*** The partnership will develop classroom-embedded performance tasks, starting first with writing as described above. Partnership states will participate in a pilot administration of these embedded tasks. The results from these tasks will not be included in summative judgments until the validity of such judgments can be assured.
- ***Released Items and Item Analysis.*** The partnership will release operational items along with relevant student performance information (e.g., released-item reports).
- ***Model Instructional Supports.*** The partnership will develop model curriculum frameworks in grades K-8 and model course syllabi for high school that illustrate specific instructional options for educators targeting the Common Core State Standards, the common assessments, and embedded performance tasks.
- ***Assessments in Grades K-2.*** The partnership is interested in collaborating on some form of a K-2 assessment system.

Assessment Design Considerations

Grades 3-8. The assessment system for grades 3-8 will provide students, parents, and educators with clear signals about whether students are on track to acquire the knowledge and skills foundational for success in and after high school. These assessments will include the following unique design considerations, as well as the cross-cutting features described above:

- Reading and mathematics assessments will be administered at the end of each school year in all grades.
- Writing will be assessed separately at specific, as yet to be determined, grades.

High School. The major focus of the high school assessment system will be to determine whether students can demonstrate the knowledge and skills necessary for success in college and careers.

- The partnership states are committed to involving higher education in the design of the assessments and associated performance standards.
- The partnership is committed to developing at least two approaches to high school assessment.

- **End-of-course exams** will be developed for a limited set of mathematics and English courses.
- **End-of-domain assessments** will be created to assess students at key points during their high school experience.

- The partnership is committed to college/career-ready determinations such that students meeting the standards will be eligible to be placed into credit-bearing, rather than remedial, courses in all public 2- and 4-year postsecondary institutions in all participating states.

Governance

The partnership will employ a multi-level governance and management structure designed to guide the partnership through the submission of the proposal.

- The **Governing Board** will be comprised of a representative group of leaders from partnership states and will be responsible for major policy decisions such as the overall direction of the partnership, major purposes and uses of the assessment system, fiscal authority, and rules for state engagement. Each governing state will commit a team comprised of the state chief, assessment director, other officials from the SEA, the governor's office, and higher education as appropriate. The state chief's ongoing involvement and commitment to development of the proposal is a critical distinguishing feature from the commitment required of design team states.
- The **Design Team** will include officials from partnership states with expertise in assessment design and development and will work with an advisory group of national and international experts to create the design. The design team will include as many states as are interested in and capable of contributing to and shaping the design of a next generation system.
- **Participating States** will include other partnership states that are unable to provide staff time to the design team, but will provide rapid feedback on drafts of the proposal through the development phase.
- Achieve will serve as the coordinating **management partner** with the National Center for the Improvement of Educational Assessment (Center for Assessment) serving as a technical support partner.

Appendix B15: List of Accolades for Massachusetts State Standards

Editorial Projects in Education. 2006. "Quality Counts at 10, Massachusetts: A Decade of Standards-Based Education."

On their State Policy Report Card, EPE gives MA an A for Standards and Accountability. They also comment, "The state ranks near the top of the nation in standards and accountability. Its academic standards for all four core subject areas at every grade span have been rated as clear, specific, and grounded in content by the American Federation of Teachers."

Finn, Chester E., Liam Julian and Michael J. Petrilli. 2006. "The State of State Standards." Thomas B. Fordham Foundation.

The Massachusetts Report Card (2006) gives the state an A for its standards in all subjects: English, U.S. History, Geography (World History for 2006), Math and Science, for an overall score of A. The 2006 grade reflects a substantial improvement from 2005, when the overall grade was a B-.

Klein, David. 2005. "The State of State Math Standards." Thomas B. Fordham Foundation.

Massachusetts was one of only three top scoring states; the other two were California and Indiana. Massachusetts is given an A for Clarity, an A for Content, a C for Reason and an A for Negative Qualities, for a final grade of A.

Stotsky, Sandra. 2005. "The State of State English Standards." Thomas B. Fordham Foundation.

The review of the 2001 English Language Arts Curriculum Frameworks gives Massachusetts an A overall. The paper comments: "The standards address all areas in the English language arts and reading coherently, contain clear expectations for explicit and systematic phonics instruction in the primary grades, and provide for a strong vocabulary strand through the grades. Regulations for teacher training programs and licensure are aligned to the state's K-12 standards, as are the subject matter knowledge tests for teachers."

Achieve, Inc. 2001. "Measuring Up: A Report on Educational Standards and Assessments for Massachusetts."

Achieve's evaluation of the state's mathematics standards and grade 10 MCAS tests in English language arts and mathematics resulted in the following major findings (quoted from document):

1. Overall, Massachusetts' standards and high school tests are of high quality and are aligned, providing a solid foundation on which to build state education policy.
2. The grade 10 tests are rigorous yet reasonable – and are, in fact, the most challenging of the exit-level tests Achieve has reviewed.
3. The mathematics standards generally are well organized, jargon-free, clear and precise.

Appendix B16: Description of the Public Media Digital Library and Social Media Platform

Massachusetts Teachers' Domain:
Supporting Massachusetts Race to the Top Activities with a Public Media Digital Library and Social Media Platform Providing Resources for Student Learning and Teacher Professional Development

The Massachusetts Department of Elementary and Secondary Education has collaborated with WGBH Educational Foundation (which manages the state's two public media organizations, WGBH Boston and WGBY Springfield) to present a custom edition of WGBH's public media educational digital library, Teachers' Domain (www.teachersdomain.org). Massachusetts Teachers' Domain currently presents over 2500 media learning objects to educators and students, accompanied by background essays and discussion questions or teaching strategies. Resources are also presented in the context of lesson plans and self-paced online activities. They are organized according to the Massachusetts frameworks, and are correlated to the standards from the frameworks. Later this year, the resources will also be searchable by standard.

As of May 1, 2010, 26,452 teachers in the state have registered for the service, and during the current school year, there have been as many as 5600 monthly logins by registered users. There is now a single sign-in protocol for teachers to move seamlessly from the state education portal, MassONE, to Massachusetts Teachers' Domain to access media to support teaching.

In addition to these classroom support materials, Teachers' Domain also has begun to provide professional development resources for improvement of teaching practices. These range from short videos demonstrating promising practices to self-paced online activities to for-credit courses offered in collaboration with the MassONE or with other educational organizations.

Teachers' Domain has also begun to provide a social media environment for educators, focusing on the media the site provides and how it can best be used for improvement of learning and teaching. This environment includes the ability for teachers to create public profiles, to create managed student accounts, to upload media and support materials they've created, to rate and comment on resources, and to recommend resources to colleagues. The self-paced activity format is also being upgraded, to allow a student or teacher using it to save his or her work in an online portfolio that can be shared with a teacher or an evaluation. This makes the format highly useful for student formative assessment or for documentation of a teacher's work in order to support issuing of professional development points.

WGBH will focus on two roles as a collaborator in the Massachusetts RTTT initiative:

- WGBH will continue to maintain and further develop Massachusetts Teachers Domain as the official digital library for MassONE. In addition to our presenting

existing resources, we will also develop new resources aligned to state frameworks (funded from sources other than this grant). We will update standards correlations as the frameworks in various subject areas are revised and move toward the Common Core. We will also develop a metadata exchange, cataloguing, and integrated search process that will allow teachers to use Teachers' Domain as their primary portal for discovery of additional teaching resources coming from other state partners and collaborators, such as Thinkfinity and Massachusetts museums.

- To support teacher improvement, we will greatly expand the existing professional development "Teacher Corner" in order to create an online community of practice for Massachusetts educators. Central to this will be a Teacher TV library of brief best-practice videos that illustrate effective teaching practices. Most of these will be created by educators themselves, with a few professionally produced by WGBH to highlight specific practices identified as key to teacher improvement. To create the library, WGBH will run an open call to educators to create these videos, using a training tutorial provided online through Teachers' Domain.

This activity will follow this sequence of tasks:

- Write the online tutorial (teacher activity) on how to effectively document classroom best practice on video
- Establish the open call to Massachusetts educators to contribute videos of best practices aligned to the Frameworks
- Present the open call through a variety of marketing and in-person workshops around the state
- Gather submissions of teacher-produced videos through Teachers' Domain's built-in social media tools
- Review and annotate submissions by WGBH, Mass DESE, and community through social media
- Produce professional videos of most effective teachers and practices (identified from the submissions)
- Develop 5 online teacher professional development activities built around these videos (focused according to subject area or specific types of interventions).

Throughout the process, WGBH will maintain and upgrade the Massachusetts Teachers' Domain service through these tasks:

- Update standards correlations as needed
- Upgrade technical content and social media platform to accommodate project activities
- Develop integrated search protocol with Thinkfinity
- Catalogue and develop integrated search with Massachusetts museum collaborators
- Deliver in-person, train-the-trainer workshops
- Market and promote the service, online and in-person at local and regional conferences
- Report on project activities at a relevant national conference

Note that because Massachusetts Teachers' Domain is an "edition" of the national Teachers' Domain service, the infrastructure improvements applied under this grant will also benefit other states where Teachers' Domain is in use. At present, there are custom state editions serving New York and Kentucky, and WGBH has been in discussion with other public television organizations that collaborate with their state departments of education. At present, WGBH also has active partnerships around Teachers' Domain with stations in Wisconsin, Iowa, California, Ohio, Colorado, North Carolina, Nevada, Pennsylvania, Florida, Mississippi, North Dakota, Wyoming, New Hampshire, New Mexico, Tennessee, and Minnesota. Metadata on content from Teachers' Domain will also be shared with other public media portals through PBS's Digital Learning Library if that service goes live in the future, but can also be shared directly with other digital libraries.

Appendix B17: Design for Phase I of the Massachusetts Curriculum-Embedded Performance Task (CEPT) System

Symbols Used in this Document

The working draft of this document includes symbols in the margins.

⚠ indicates an issue on which the Department might seek advice from the Advisory Committee

⊘ indicates issues that may be "off the table" for discussion during Advisory Committee meetings

Overview

Massachusetts intends to expand its state assessment system to include performance tasks designed to accomplish several goals. Among these are to:

- connect external measures such as MCAS and internal measures such as end-of-course test results and student grades more directly;
- support instruction of all content standards to counter pressures on schools to narrow the curriculum;
- expand models for the integration of instruction and assessment; and
- engage students and provide opportunities for their self-evaluation.

The initial phase of the CEPT system will be experimental and explorative. The specifications for tasks will be very general and tasks will be published for teachers to use as they wish. Initially, results will be for local purposes only. The Department will collect feedback from schools to improve the utility and measurement quality of tasks. Later, MCAS individual reports might indicate whether a student completed one or more tasks during the year. Eventually, CEPT scores will be integrated into MCAS results.

Tasks will be designed to measure the Massachusetts curriculum frameworks. The system will be designed to maximize opportunities for teachers to embed the tasks into local curricula. The following list of key design features includes references to pages where further discussion is provided in this document.

Tasks will:

- be developed by Massachusetts educators. (page 5)
- assess standards within a single content area specified by the Massachusetts curriculum frameworks. (page 4)
- assess content and skills contained in the Massachusetts curriculum frameworks.
- result in multiple, individually-produced, scorable products. (page 3)
- include both formative and summative components. (page 2)

- sometimes require group work. (Products of group work will not be scored for individual accountability.) (page 3)
- be assigned varying numbers of points, depending on the nature of the products. (page 4)
- vary in length from a few days to several months. (page 4)
- be published at the end of the school year for teachers to embed the following year. (page 6)
- be administered and scored locally, with professional development opportunities provided by the Department. (page 6)
- be administered during a wide and flexible window. (page 5)

Introduction

What does it mean for an assessment task to be "curriculum-embedded?"

Curriculum-embedded assessment occurs simultaneously with learning. For example, if a science performance task involves designing investigations to study the behaviors of certain microorganisms, the task should be administered while students are learning about microorganisms. Curriculum-embedded assessment should be directly related and relevant to the instructional activities delivered to the students. From the student's perspective, the line between instruction and assessment is blurred. However, curriculum-embedded assessment is distinctly different from project-based learning in that the assessment is administered after some instruction on the topic has already occurred. The expectation is that students receive instruction on the standards measured by the assessment immediately prior to administration.

To be considered embedded, assessment tasks must be packaged and delivered as part of a complete instructional unit or thoughtfully inserted into existing curriculum. It is also reasonable to build instructional units around carefully crafted performance tasks that measure the standards.

Both assessment and curriculum must be driven by the same academic standards. Performance tasks will engage students with the content and skills specified by the Massachusetts curriculum frameworks. While tasks may include some instructional activities, the intent is to allow teachers to embed the tasks into local curricula.

Will the tasks be used for formative or summative assessment purposes?

The purpose of formative assessment is to provide teachers and students feedback to adjust teaching and learning activities. Summative assessment is used to determine grades or for other accountability purposes. Initially, teachers may use performance tasks exclusively for formative

purposes or for a combination of summative and formative purposes. Initially, students may complete tasks as part of the teaching and learning process (formative assessment) or teachers may score some or all student products from a task and count those scores towards grades (summative assessment). Occasionally, summative use of results will also provide some formative benefits. For example, if a teacher finds that students were confused as to which variables were most important to control during a scientific investigation, the teacher can reinforce this concept during the next laboratory exercise.

At first, scores from the performance tasks will not be aggregated into MCAS accountability reports. During the first few years, individual student reports for MCAS might indicate whether the student completed one or more tasks during the year. Later, student reports might include the scores for each completed performance task. Eventually, performance task scores will be integrated into MCAS scores reported at the student, school, and district levels. Therefore, all tasks will elicit student products that can be scored and appropriately used for summative purposes.

Design of the Performance Tasks

Which content areas and grades will be addressed by the Phase I tasks?

Initially, tasks will target the following grades and content areas.

Grade x: History and Social Science
Grade x: English Language Arts
Grade x: Science and Technology
Grade x: Mathematics

Will tasks involve group work?

Some tasks will require group work. Allowing students to work in groups increases the feasibility of tasks requiring specialized equipment such as microscopes. If the new frameworks include skills such as interacting effectively and working collaboratively with diverse teams, measurement of the skills will require observation of students working together in groups.

Assigning scores based on group work is sometimes problematic. If the intent is to measure group process skills, teachers can employ a checklist or rubric to evaluate the appropriateness and effectiveness of each individual's interactions and contributions. If the intent is to measure content knowledge and skills, group scores may reflect the abilities of the strongest group member. To ensure that scores used for summative purposes reflect the knowledge and skills of

individual students, students will be expected to produce individual products (e.g., a lab report, a multi-media presentation).

How long will it take for students to complete a task?

The length of time required to complete a task will be driven by the nature of the content and skills being measured. Some critical skills cannot be adequately measured by short tasks. For example, to thoroughly research a topic or to prepare and deliver a multi-media presentation, a student may need days or weeks to produce the final product. Other skills, such as predicting and testing the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a die) could be measured with a single task administered over two or three class periods.

Task length will be classified as short (one week or less) or extended (more than a week). Some tasks will be continuous in that students will work on the task for a period of time every day until the task is completed. Continuous tasks will require one week or less for most students to complete. Longer tasks, such as writing a research paper, will be non-continuous and may stretch over several weeks or months.

How many points will each task be worth?

Individual tasks will be worth varying numbers of points, depending on the number and nature of the scorable products. Scoring criteria must include enough points to capture the full range of student responses but not so many points that it is difficult to distinguish between score points. Most tasks will likely be worth 15 to 30 points when the scores for all products are aggregated. The relative contribution of CEPT scores to MCAS scores has not been determined.

Will tasks be interdisciplinary[1]?

No, the intent is to create subject-specific tasks that measure content and skills more deeply and more directly than standardized paper-and-pencil assessment. The only exception will be English language arts (ELA) tasks that involve writing across the curriculum and tasks for other content areas that require communication or presentation skills. All ELA tasks, including those involving communication about content from other disciplines will contribute only to a student's ELA score. If the new curriculum frameworks for mathematics, science, and social studies include communication and presentation skills, any scores associated with those skills will be included in the total score for the task. For example, a mathematics task might require an oral presentation to explain a mathematical concept. Any points associated with communication and presentation skills will be part of the mathematics score.

[1] For discussion purposes, a discipline, content area, or subject refers to the body of knowledge and skills defined by each of the Massachusetts Curriculum Frameworks (e.g., History and Social Science, Mathematics, English Language Arts, and Science and Technology/Engineering.

Processes for Developing Tasks

What is the system for collecting tasks from Massachusetts educators?

The Department will extend the utility of the Education Data Warehouse to collect tasks and sample work electronically and invite teachers to submit tasks or ideas for tasks. Submission of the surrounding curriculum/instructional activities, scoring criteria, and sample student work will be encouraged, but not required. Assembling all components of a CEPT will require a significant time investment that might discourage busy educators from sharing their ideas. The Department may contact teachers to gather more details and samples of student work for the most promising tasks. The intent is to showcase exemplary practices, not to put additional burden on teachers.

Who will be involved in selecting and refining tasks?

The Department will identify and refine the most promising tasks. Once refined, the tasks will be presented to a content advisory committee of Massachusetts educators for review.

How will the Department maximize accessibility without sacrificing higher order thinking skills?

By applying principals of Universal Design and allowing flexibility, CEPTs should be more accessible for all students than traditional paper and pencil tasks. Flexible administration time will provide students additional processing time and opportunities to understand the requirements of the tasks. Tasks may include preliminary activities intended to provide scaffolding as well as formative information that teachers can use to ensure that all students have the background knowledge and skills required to complete the task. Group work that allows lower-achieving students opportunities to interact with higher-achieving peers will help all students gain deeper understanding. Providing choices for task-related projects will allow students to capitalize on strengths while demonstrating their knowledge and skills. Factors that maximize accessibility and principles of Universal Design must be thoughtfully built into every task to ensure that the tasks are less limiting than traditional paper-and-pencil tests.

Pilot and/or field testing should include more than just collecting and processing scorable products. Interviews with students and teachers, questionnaires, and direct observations should be used to provide insight into the appropriateness and accessibility of tasks. Incorporating such activities into the early development and piloting phase of the CEPT project should prove valuable.

Administration and Scoring of Performance Tasks

When will the tasks be administered?

When to administer a task will be a local decision. Tasks will be published at the end of the school year and teachers will select and administer tasks the following year. This maximizes the opportunity for teachers to ensure that tasks are appropriately embedded into the curriculum. When participation in the CEPT program becomes mandatory, districts will be asked to submit scores for a specified number of tasks by specified dates throughout the year (e.g., submit scores for first task by December 1). Tasks may be administered any time before the specified dates for submitting scores.

Will the tasks be matrix-sampled?

Tasks may be matrix-sampled in that teachers select from a list of tasks or topics. Some tasks will also include topic or project choices within the task.

Who will provide the materials/equipment required to administer the tasks?

Schools will provide or collect the materials required for the tasks. All necessary materials must be readily available at school, home, or online.

How will teachers learn to score the various aspects and products of a task?

Scoring guides and annotated samples of student work illustrating each score point will accompany each published task. During the first two years of the project, there will be little additional guidance and teachers may apply the scoring guides as they see fit. The scoring guides and accompanying materials will help teachers apply the scoring criteria consistently across students but will not ensure consistency across teachers and schools. Schools may volunteer to participate in an informal auditing system designed to provide feedback to improve consistency across teachers and schools. After administering a task, participating schools will identify and submit one low-scoring product, one middle-scoring product, and one high-scoring product for each scoring guide associated with the task. The submissions will be scored in a central location and the results will be provided to the schools.

During the third year of the project, multiple professional development opportunities on the scoring of CEPTs will be available to Massachusetts educators. Schools will be required to administer a specified task and submit low-, middle-, and high-scoring work samples for each

scoring guide associated with the task. Each school will receive the official scores for the student work submitted.

Field Testing

How will the tasks be field tested?

The CEPTs are tied to the Massachusetts curriculum frameworks and should be embedded in the curricula used by Massachusetts educators to teach the content and skills described in the frameworks. To collect accurate field test data, the tasks must be field tested in Massachusetts schools. The administration windows for field testing must be wide and flexible to ensure that students receive the appropriate instruction before completing a field test task.

In years one and two, tasks will be released for schools to use as they see fit. There will be no formal field testing of tasks; however, informal piloting will occur in selected classrooms. The purpose of the pilot testing will be to collect student work samples to accompany scoring guides, information about the feasibility and accessibility of tasks, and feedback on the utility and effectiveness of scoring guides and training materials. Members of the advisory committees may be a source of candidates to conduct pilot testing.

In year three, all students in the targeted grades will complete one common task (for auditing of scoring) and two matrix-sampled field-test tasks. For ease of administration, each school will administer the same two field-test tasks.

What is the best method for field testing the process?

In year three, there will be a large-scale field test of tasks and administration procedures, including the system that allows schools to download tasks, submit scores electronically, and submit sample student work for auditing. During the early years, the electronic submission system will be tested on a small scale by schools that opt to participate in the informal audit. In year three, the electronic system will be tested across the state when schools submit scores for the common task and samples of student work for auditing.

How will security be addressed during field testing?

Since the field test tasks will not be matrix-sampled within a school, a school's exposure will be limited to two tasks. Schools will not have access to the other tasks in the electronic retrieval system during field testing.

What are the requirements for selecting the field test sample?

All schools with students in the targeted grades will participate in field testing. Since tasks will not be matrix-sampled at the school level, tasks will be assigned to ensure a stratified random sample of students completes each task. It will be especially important to collect information on the feasibility and accessibility of tasks across various types of communities.

What are the products of field testing?

- Refined scoring guides
- Student work
- Preliminary statistics
- Data on electronic systems (questionnaires)
- Feasibility of each task (questionnaires, interviews)
- Accessibility of each task (questionnaires, interviews)

Beyond Phase I: Design Considerations for Integrating Performance Tasks into MCAS

When the scores are used for MCAS, how many tasks will an individual student complete during a year?

Students in the grade or grade span assessed for a particular content area likely will complete three tasks. Completing multiple tasks will lessen the effect of any bias created by student-task interactions. Also, the generalizability of the total CEPT score (combined across tasks) will increase with the number of tasks. Ideally, each student would complete four or five tasks in the content area assessed. The tasks will be embedded into the curriculum and therefore less intrusive to instructional activities than traditional paper-and-pencil assessment. However, requiring four tasks might seem overly burdensome. Administering three tasks per year is a reasonable compromise.

When CEPT scores contribute to MCAS, what is the system for auditing local scoring?

After administration of an MCAS CEPT, schools will conduct a range-finding exercise to identify one low-, middle-, and high-scoring student product for each scoring guide associated with the task. Schools will use a simplified electronic portfolio system to submit the student products and preliminary scores. The student products will be scored by trained readers and feedback will be provided to schools. The intent is for schools to use the feedback and make any necessary adjustments to their scoring approach.

Will scores be adjusted based on the results of an audit?

No, the audit is intended to provide feedback to help schools apply the scoring criteria more accurately and consistently. Accurate and consistent scoring ensures fairness to all students. Fairness is the incentive for schools to apply the feedback.

How will the Department develop some equivalence among tasks?

Task specifications and post-equating will help develop some equivalence among tasks. During the early development phase of the project, the specifications will be somewhat loose to maximize flexibility. As our understanding of psychometric and feasibility issues associated with CEPTs increases, the specifications will be tightened to increase equivalence.

Processes for aggregating and integrating CEPT scores with other MCAS results will be facilitated if there is a common metric across tasks. This can be accomplished by collapsing scores to correspond to generic scoring guides and/or to performance level definitions. As part of the task development process, score ranges will be linked to generic scoring guides or to performance level definitions.

Will the reporting model be compensatory or conjunctive?

With a compensatory model, low performance on the traditional paper-and-pencil test may be offset by higher performance on the performance tasks or the reverse. A conjunctive model would require minimal scores on both assessment components for a student to reach a particular performance level. The reporting system may also combine features of both models. One approach suggested by members of the Technical Advisory Committee is to produce three scores/performance levels for each content area: 1) an MCAS score; 2) a CEPT score; and 3) a combined score.

Will the MCAS paper-and-pencil summative assessment include questions related to the tasks?

This depends on several factors. If the tasks are matrix sampled or if a wide range of choices are incorporated into the tasks, it might be unfair to include questions related to the tasks on the MCAS on-demand assessment. If the purpose of CEPTs is to measure skills that are not effectively measured by the paper-and-pencil assessment, it would seem illogical to attempt measure those skills on the MCAS on-demand assessment. Conversely, including some task-related questions on MCAS might be useful for research purposes.

APPENDIX A

Task Specifications

General Specifications

Tasks will:

- assess standards within a single content area specified by the Massachusetts curriculum frameworks.
- assess content and skills contained in the Massachusetts curriculum frameworks.
- include assessment of communication skills (e.g., research papers, lab reports, oral presentations) in all content areas, not just English Language Arts.
- target standards not assessed by the paper-and-pencil MCAS or those that require supplemental assessment to ensure adequate measurement.
- result in multiple, individually-produced, scorable products.
- include both formative and summative components.
- sometimes require group work. (Products of group work will not be scored for individual accountability.)
- be assigned varying numbers of points, depending on the nature of the products.
- vary in length from a few days to several months.

Specifications by Content Area

<u>English Language Arts</u>

1. ELA tasks will assess multiple standards.
2. Priority standards are a subset of the standards that are not measured extensively by MCAS. The priority standards are 3, 18, 19-23, 24, and 26-27.

English Language Arts Priority Standards

Standard(s)	Focal Area
3	Oral presentations
18	Drama
19-23	Writing
24	Research
26-27	Media

3. Task content is not limited to the priority standards.
4. Every task will include an activity that measures one or more priority standards.
5. Most tasks will measure standards in at least two of the focal areas.

History and Social Sciences

1. Each task will be organized around one of the themes described on pages 9-11 of the *Massachusetts History and Social Science Curriculum Framework.*

Science and Technology/Engineering

1. Science tasks will assess content learning standards and inquiry process skills described in the *Massachusetts Science and Technology/Engineering Curriculum Framework.* Inquiry process skills are described in the curriculum framework on pages 9-12 for grades Pre-K through 8 and on pages 36-37, 57-58, 72-73, and 76-77 for high school.
2. Science tasks will include at least one investigation.
3. Technology/engineering tasks will assess the content learning standards and the engineering design process skills described in the *Massachusetts Science and Technology/Engineering Curriculum Framework.* The engineering design process skills are described on page 84 of the curriculum framework.
4. Technology tasks will include at least one engineering design project.
5. A task will assess related content standards within a strand or related standards across strands. Related content standards are logically connected and are typically covered in the same instructional unit.

Mathematics

1. Tasks typically will assess related content standards within a strand and/or related standards across strands.
   - Related content standards are logically connected and are typically covered in the same instructional unit. For example, a fifth grade geometry task on properties of two-dimensional shapes might also address the measurement standards that require students to draw and measure angles.
2. Priority standards are those that cannot be fully measured by the paper-and-pencil MCAS test. The Department is particularly interested in ideas for activities that address the priority standards. (Note: Publish only the priority standards for the targeted grade.)
3. Task content is not limited to the priority standards.

Mathematics Priority Standards

Row #	Grade	Strand	Learning Standard(s)	Rationale
1	3	Number Sense and Operations	3.N.12 Understand and use the strategies of rounding and regrouping to estimate quantities, measures, and the results of whole-number computations (addition, subtraction, and multiplication) up to two-digit whole numbers and amounts of money to $100, and to judge the reasonableness of the answer.	Estimation is difficult to assess effectively with a paper-and-pencil item since there are so many valid avenues of estimation. Discussion and explanation are needed to determine what the student knows.
2	3	Number Sense and Operations	3.N.13Use concrete objects and visual models to add and subtract (only when the answer is greater than or equal to zero) common fractions (halves, thirds, fourths, sixths, and eighths) with like denominators.	This is tested to some extent on MCAS, but students do not have opportunities to work with concrete models.
3	3	Geometry	3.G.2 Describe, model, draw, compare, and classify two-dimensional shapes, e.g., circles, triangles, and quadrilaterals. Identify and describe simple three-dimensional shapes, e.g., cubes, spheres, and pyramids.	Standards about 3-dimensional figures would be better assessed in a CEPT. Students could make nets, fold nets, draw or match perspective representations, count vertices and faces, etc.
4	3	Data Analysis, Statistics, and Probability	3.D.1 Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.	Not fully assessed by MCAS; requires an extended period of time
5	4	Number Sense and Operations	4.N.14 Demonstrate in the classroom an understanding of and the ability to use the conventional algorithms for addition and subtraction (up to five-digit numbers), and multiplication (up to three digits by two digits).	
6	4	Number Sense and Operations	4.N.15 Demonstrate in the classroom an understanding of and the ability to use the conventional algorithm for division of up to a three-digit whole number with a	

Mathematics Priority Standards

Row #	Grade	Strand	Learning Standard(s)	Rationale
			single-digit divisor (with or without remainders).	
7	4	Number Sense and Operations	4.N.18 Use concrete objects and visual models to add and subtract common fractions.	This is tested to some extent on MCAS, but students do not have opportunities to work with concrete models.
8	4	Geometry	4.G.2 Describe, model, draw, compare, and classify two- and three-dimensional shapes, e.g., circles, polygons—especially triangles and quadrilaterals—cubes, spheres, and pyramids.	Standards about 3-dimensional figures would be better assessed in a CEPT. Students could make nets, fold nets, draw or match perspective representations, count vertices and faces, etc.
10	4	Data Analysis, Statistics, and Probability	4.D.1 Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.	Not fully assessed by MCAS; requires an extended period of time
11	5	Geometry	5.G.2 Identify, describe, and compare special types of three-dimensional shapes (cubes, prisms, spheres, pyramids) based on their properties, such as edges and faces.	Standards about 3-dimensional figures would be better assessed in a CEPT. Students could make nets, fold nets, draw or match perspective representations, count vertices and faces, etc.
12	5	Geometry	5.G.7 Determine if two triangles or two quadrilaterals are congruent by measuring sides or a combination of sides and angles, as necessary; or by motions or series of motions, e.g., translations, rotations, and reflections.	Not fully assessed by MCAS; students do not actually use manipulatives to perform translations
13	5	Measurement	5.M.2 Identify, measure, describe, classify, and draw various angles. Draw triangles given two sides and the angle between them, or given two angles and the side between them, e.g., draw a triangle with one right angle and two sides congruent.	
14	5	Measurement	5.M.5 Find the sum of the measures of the interior angles in triangles by measuring the angles, and without measuring the angles.	

Mathematics Priority Standards

Row #	Grade	Strand	Learning Standard(s)	Rationale
15	6	Geometry	6.G.2 Identify three-dimensional shapes (e.g., cubes, prisms, spheres, cones, and pyramids) based on their properties, such as edges and faces.	Standards about 3-dimensional figures would be better assessed in a CEPT. Students could make nets, fold nets, draw or match perspective representations, count vertices and faces, etc.
16	6	Geometry	6.G.9 Match three-dimensional objects and their two-dimensional representations, e.g., nets, projections, and perspective drawings.	Standards about 3-dimensional figures would be better assessed in a CEPT. Students could make nets, fold nets, draw or match perspective representations, count vertices and faces, etc.
16	6	Measurement	6.M.2 Identify, measure, describe, classify, and construct various angles, triangles, and quadrilaterals.	
18	6	Measurement	6.M.7 Find the sum of the angles in simple polygons (up to eight sides) with and without measuring the angles,	
19	6	Data Analysis, Statistics, and Probability	6.D.2 Construct and interpret stem-and-leaf plots, line plots, and circle graphs.	The ability to create circle graphs cannot be effectively measured on MCAS.
20	7	Geometry	7.G.7 Identify three-dimensional figures (e.g., prisms, pyramids) by their physical appearance, distinguishing attributes, and spatial relationships such as parallel faces.	Standards about 3-dimensional figures would be better assessed in a CEPT. Students could make nets, fold nets, draw or match perspective representations, count vertices and faces, etc.
21	7	Patterns, Relations, and Algebra	7.P.9 Use linear equations to model and analyze problems involving proportional relationships. Use technology as appropriate.	Not fully assessed by MCAS; other than calculators, students do not use technology
22	7	Geometry	7.G.5 Use a ruler, protractor, and compass to draw polygons and circles.	Students do not have access to protractors or compasses when MCAS is administered.
23	7	Data Analysis, Statistics,	7.D.1 Select, create, interpret, and utilize the following tabular and graphical representations of data:	The ability to create circle graphs cannot be effectively measured on MCAS.

Mathematics Priority Standards

Row #	Grade	Strand	Learning Standard(s)	Rationale
		and Probability	circle graphs, Venn diagrams, stem-and-leaf plots, tables, and charts.	
24	8	Patterns, Relations and Algebra	8.P.9 Use linear equations to model and analyze problems involving proportional relationships. Use technology as appropriate.	Not fully assessed by MCAS; other than calculators, students do not use technology
25	8	Geometry	8.G.5 Use a straightedge, compass, or other tools to formulate and test conjectures, and to draw geometric figures.	Except for rulers, students do not have access to tools when MCAS is administered.
26	8	Geometry	8.G.6 Predict the results of transformations on unmarked or coordinate planes and draw the transformed figure, e.g., predict how tessellations transform under translations, reflections, and rotations	
27	8	Geometry	8.G.7 Identify three-dimensional figures (e.g., prisms, pyramids) by their physical appearance, distinguishing attributes, and spatial relationships such as parallel faces.	Standards about 3-dimensional figures would be better assessed in a CEPT. Students could make nets, fold nets, draw or match perspective representations, count vertices and faces, etc.
28	8	Geometry	8.G.8 Recognize and draw two-dimensional representations of three-dimensional objects, e.g., nets, projections, and perspective drawings.	
29	8	Data Analysis, Statistics, and Probability	Describe the characteristics and limitations of a data sample. Identify different ways of selecting a sample, e.g., convenience sampling, responses to a survey, random sampling.	
30	8	Data Analysis, Statistics, and Probability	8.D.2 Select, create, interpret, and utilize various tabular and graphical representations of data, e.g., circle graphs, Venn diagrams, scatterplots, stem-and-leaf plots, box-and-whisker plots, histograms, tables, and charts. Differentiate between continuous and discrete data and ways to represent them.	The ability to create circle graphs cannot be effectively measured on MCAS.

APPENDIX B

Implementation Schedule

School Year 2010-2011

- Solicit and review tasks for targeted grades
- Advisory Committee Meetings to review tasks
- Pilot testing in selected classrooms
- Publish tasks with student work samples

School Year 2011-2012

- Schools use published tasks for local purposes
- Solicit and review tasks for targeted grades
- Advisory Committee Meetings to review tasks
- Pilot testing in selected classrooms
- Professional development on scoring
- Voluntary auditing of scores
- Pilot electronic submission of student work and scores
- Publish tasks with student work samples

School Year 2012-2013

- School use published tasks for local purposes
- Solicit and review tasks for targeted grades
- Advisory Committee Meetings to review tasks
- Professional development on scoring
- Statewide field test at targeted grades
    - common task (to audit scoring and pilot systems)
    - matrix-sampled tasks (for future use)
- Schools conduct range-finding for common task
- Auditing of scores from range-finding
- Schools score common task
- Publish required task(s) or list of topics for 2013-2014

School Year 2013-2014

- Require administration of task(s) at targeted grades
- Teachers select and administer required task(s)
- Schools score student work (range-finding, auditing, scoring)
- Solicit and review tasks for targeted grades

- Advisory Committee Meetings to review tasks
- Professional development on scoring
- Publish required tasks or list of topics for 2014-2015

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COMMENTARY

Early-College High School: Modest Experiment or National Movement?

By Nancy Hoffman and Michael Webb

In 2002, the first early-college high schools opened their doors amid fanfare from funders and the eight organizations initially chosen to develop the initiative.

Matching the fanfare was a very healthy skepticism from educators and policymakers, because the primary funder, the Bill & Melinda Gates Foundation, had set a seemingly impossible goal for success: Students entering these new small high schools—young people chosen precisely because they were academically underprepared and often several years behind grade level—would graduate from high school four years later with two years of college credit or an associate degree in hand.

In May, Jobs for the Future, the now 13 organizations responsible for supporting the schools, and the schools themselves held the first-ever Early College High School Week—a nationwide event celebrating students who are beating the odds, successfully juggling high school and college coursework, together with jobs and family responsibilities.

As the Obama administration gears up to spend unprecedented amounts of money to strengthen the U.S. education system, one key objective will be to increase the number of young people who complete at least one year of college. This is a good moment to ask: What can early college contribute to the president's plan?

Altering the Landscape

The idea of early college was—and still is—to prove that low-income students, students of color, and first-generation college-goers not only can do college-level work, but can also do

it early and earn substantial transferable college credits, just like suburban and private school kids with access to Advanced Placement and dual-enrollment programs.

Beyond proving a point, however, was a more significant aim: to get these schools to scale. The initiative would seek to alter the algorithm that characterizes so much of U.S. education: Family income equals academic destiny. In one formulation, early colleges were established to help double the number of low-income young people who earn a postsecondary credential. Success was not about a few exceptional young people showing they could get college credit in high school, but about creating secure and sustainable pathways from high school to postsecondary completion.

Today, there are more than 200 early-college high schools serving 42,000 students in 24 states. Early colleges are grounded in a simple proposition: Academic rigor combined with the opportunity to save time and money acts as a powerful motivator for students to work hard and meet the serious intellectual challenge of completing substantial college-level work along with a high school diploma.

Each school is developed in partnership with a postsecondary institution, whose courses make up the college portion of the students' education. Students earn those college credits tuition-free, and many early-college high school graduates go on to complete their degrees at these partner institutions.

Promising Results

With data in from the first substantial class to have completed four years at early colleges—2,258 graduates this past year—it's a good time to assess the impact of the Early College High School Initiative. Is early college just one more worthy experiment powerless to change high school outcomes for more than a handful of young people? Or are the early-college high schools surviving and inspiring a broader strategy for increasing college success for low-income students?

Today, we are focusing on three questions that matter most:

1. *Are early-college high schools serving the target population—those who are underrepresented in higher education?* Yes. Seventy-four percent of early-college high school students are of color, 56 percent of the students receive free and reduced-price

lunch, and nearly a third of all early-college high schools receive funding from Title I, the federal aid program for disadvantaged students.

We can put to rest the skeptics who challenge: "You must be taking only the most gifted kids." Not true. In fact, one school, Georgia College Early College, in Milledgeville, Ga., has an admissions policy emblematic of the initiative's commitment to reach out to students who do not appear to be college-bound. Students entering GCEC in the 6th grade must fall below the 50th percentile in their previous year's state test. No high achievers need apply.

2. *Are early-college high school students achieving at the level hoped?* Yes. Unlike many schools targeting low-income students, the 92 percent graduation rate (calculated using the U.S. Department of Education's methodology) for the first sizable early-college high school cohort suggests that the schools significantly reduce typical dropout rates for underserved youths, by more than 70 percent on average.

Of the 2,258 graduates of early colleges open for four or more years, 40 percent graduated with more than a year of college credit, and 11 percent graduated with a high school diploma and an associate degree. The expectation is that as early-college high schools mature and work out their startup kinks, the number of college credits and associate degrees earned surely will rise. Moreover, early-college high school students continue their education in substantial numbers: Eighty-one percent of this graduating cohort enrolled immediately in two-year and four-year colleges.

3. *Given the ambitious goals of early-college high school proponents, are these outcomes good enough?* The answer, again, is yes. Numerous studies show that earning substantial credit in the first year of college is a good predictor of college completion. While early-college students aren't technically in their first year of college, many enter college with the knowledge that they have successfully completed a year of college work, and it appears likely that many of these students will go on to earn a B.A. degree. Michael Nakkula, a researcher following cohorts of early-college students, concludes: "When anticipating their college experience, students at [the schools] *shifted from hope to belief in their capacity to succeed, and finally from belief to knowing that they can succeed*."

Building the Movement

A number of states have either started early colleges without foundation funding or have increased the number of schools on their own, including Georgia, Michigan, North Carolina,

Pennsylvania, and Texas. North Carolina now has 60 schools; Texas has 29 open and another five on the drawing board. Other small-school networks, such as Big Picture and Aspire (influenced we believe by the early-college proposition), are adding college courses to their curricula, sometimes as graduation requirements.

We are also encouraged to see changes in state dual-enrollment policies that allow a wider range of students to benefit from free college courses in high school. At least seven states have instituted dual-enrollment policies that reflect the early-college philosophy: Motivate students to become college-ready by enabling them to prepare for and take college courses for free. At the national level, the Fast Track to College Act and other bills pending in Congress would do that by providing funding for early colleges and dual-enrollment options that come with intensive academic support.

There are many questions still to answer, but we can be sure that this radical experiment of early college has caused some adult skeptics to change their minds about what low-income students can accomplish and what opportunities should be put before them.

But most important, beneath the quantitative data is a change in student self-knowledge. Again and again, researchers, teachers, school leaders, and visitors hear the same refrain: Students say that passing college courses on a college campus while in high school builds their confidence and commitment, not just to complete high school, but also to get a college degree. Said Jessica Davis, a University of California, Los Angeles, student and 2007 graduate of the early-college Harbor Teacher Preparatory Academy: "It's kind of like, wow: I can do this for myself now. I can sign up for my classes, and I can pass them, and I can take good notes, college-level notes. I can pass college exams."

Ultimately, 250 early-college high schools will serve more than 100,000 students each year—students who possess the same potential and promise as Jessica Davis. Without question, the Early College High School Initiative is responding to the hopes of our young people, the needs of our country, and the call of our president.

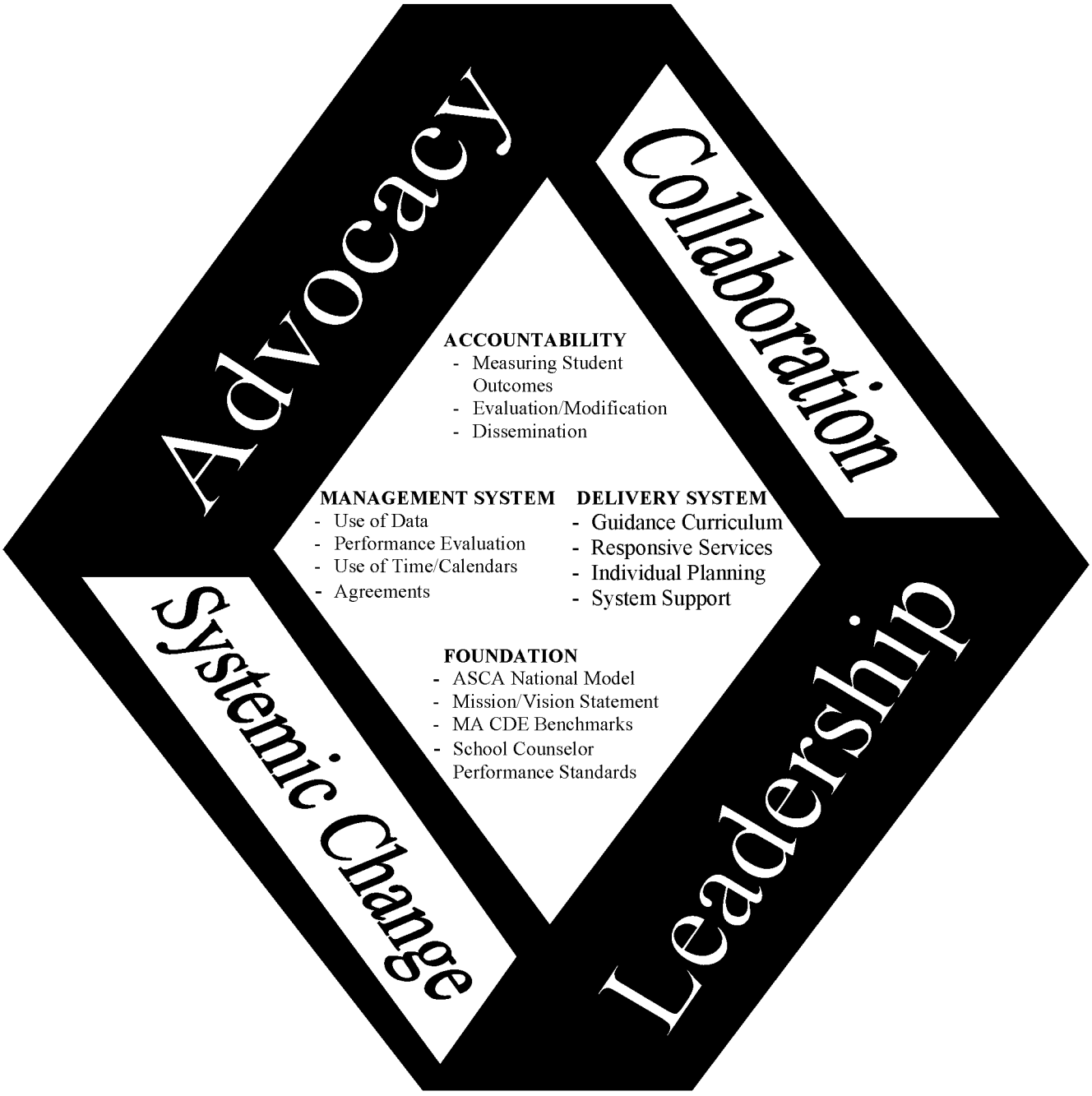
Nancy Hoffman is the vice president for youth transitions at Jobs for the Future and the director of the Early College High School Initiative. Michael Webb is an associate vice president of Jobs for the Future. More details on the early-college high school program are available at www.earlycolleges.org.

Appendix 19: Current Massachusetts Statewide Graduation Requirements, MassCore Recommended High School Course Sequence, and Admissions Requirements to Massachusetts' Four-Year Public Colleges and Universities (June 2010)

	Current Mass.	MassCore	Four-Year Public Admissions
English		4 credits	4 credits
Math		4 credits with at least Algebra II and Math in senior year	3 credits, including Algebra II or comparable coursework
Social Studies/ US History	1	3 credits including US History and World History	2 credits including one course in US History
Science		3 credits of lab sciences	3 credits (2 with lab)
Foreign Language		2 credits in a single language	2 credits in a single language
Health/PE	1		
The Arts		1 unit	
Other	MCAS	5 credits of electives	2 credits from above or Arts & Humanities or Computer Sciences
Total		22 credits	16 credits

MASSACHUSETTS MODEL FOR COMPREHENSIVE SCHOOL COUNSELING PROGRAMS

October 10, 2006



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The Massachusetts School Counselors Association (MASCA) has used *The ASCA National Model: A Framework for School Counseling Programs* as a guide in designing and developing a comprehensive school counseling model for Massachusetts.

The Massachusetts Model Task Force wishes first and foremost to thank Commissioner David P. Driscoll for his educational leadership, support and participation in the development of this Model. Such interest and commitment to supporting and strengthening the school counseling profession is unprecedented in Massachusetts. Commissioner Driscoll's comments and handwritten edits have strengthened the Model in immeasurable ways, above all, by providing the momentum and inspiration to stay the course.

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The answer lies in preventing […] failures not in looking for better ways to fix the people who are failing.

William Glasser, Choice Theory

Table of Contents

(Note: The Massachusetts Model is also available at http://www.masca.org via a homepage link.)

There is the danger, probably the most common one, that throughout the long years of going to school a child will never acquire the enjoyment of work and pride in doing at least one kind of thing really well.

Erik H. Erikson, Identity Youth and Crisis

Introduction

Massachusetts Needs a Standards-Based Model for School Counseling

- Historical Perspective
- Standards-Based School Counseling

Quality school counseling programs can have a powerful impact on student achievement and contribute significantly to state and national education reform initiatives. Yet, in Massachusetts many school counseling and counselor preparation programs are not designed to these ends. The Massachusetts Model for Comprehensive School Counseling can serve as a catalyst for change by outlining how school counseling programs can support student achievement and education reform objectives.

Historical Perspective

Since the early fifties, most school counseling programs have been organized around a student service model designed to provide remedial interventions, largely targeting the most needy students. While this model, still prevalent in many Massachusetts schools, benefits some students, it leaves far too many to fend for themselves.

In the 1970's, Comprehensive Developmental Guidance (CDG) [Gysbers & Henderson, 2000] emerged as a best practice model for the organization and administration of school counseling programs by emphasizing that the school counseling program: (1) be a core educational program, not a set of ancillary services; (2) promote development and prevent problems; (3) work from a formal curriculum; and (4) be organized to serve all students well. In the CDG model, the school counseling curriculum focuses on student competencies grouped by developmental domains and specified by grade level, preK-12. It outlines program content, components and methods for systemic coordination. The program is planned for, delivered and made available to all students. In addition, school counselors work closely with principals and teachers to ensure that students have equitable access to school counseling curricula, services and interventions.

Research findings have documented the effectiveness of the Comprehensive Developmental Model, [Borders & Drury, 1992; Lapan, Gysbers & Petroski, 2001; Lapan, Gysbers & Sun, 1997; Sink & Stroh, 2003] including positive outcomes such as: (1) student gains in academic achievement; (2) increased parent and student satisfaction with schools; (3) improved school climate including better student relationships with adults; and (4) increased access to career information by students for career planning and decision making.

The American School Counselor Association (ASCA) incorporated the best features of the Comprehensive Developmental Guidance (CDG) Model into its National Model, further illustrating the value of CDG for the profession. According to ASCA, thirty states have adopted Comprehensive Developmental Guidance as their state model. In many of these states, the school counseling association, higher education representatives and Department of Education staff worked together to adopt and advance a CDG model, providing technical assistance and support to school districts for implementation. In Massachusetts, representatives from MASCA, the Department of Education and higher education are currently poised to do the same.

Standards-Based School Counseling

The Massachusetts School Counselor Association, in collaboration with the Massachusetts Department of Education and the National Center for School Counseling Outcome Research at the University of Massachusetts, Amherst used the ASCA National Model as a template for developing a model for Massachusetts. The MASCA governing board endorsed the initial draft of the Massachusetts Model on April 27, 2004. On April 4, 2005, Massachusetts Commissioner of Education David Driscoll endorsed the Model draft that was released for public comment at the annual MASCA conference in May 2005. The Model Task Force reviewed all feedback and comments and an executive summary of the Task Force response is included at the end of this edition. An Implementation Guide (draft is scheduled for release in 2007.

The Massachusetts Model for Comprehensive School Counseling Programs is intended to: (1) guide school administrators and counselors in the development of measurably effective school counseling programs; and (2) help counselor education programs to align their curriculum with basic tenets of the Model. The Model will benefit students and educational stakeholders by illustrating how school counseling programs are central to the school mission while defining the responsibilities and standards for school counseling delivery and evaluation. The benefits include, but are not limited to:

- **Programs that assist in identifying and removing barriers to student success, thus closing the achievement gap**
- **Increased equity in access to school counseling services and interventions**
- **Increased student motivation to enroll in and complete rigorous coursework**
- **Support and training for teachers in school counseling principles and strategies to address learning and behavioral problems in the classroom**
- **Programs and services that develop essential attitudes, knowledge and skills for student achievement and successful post-secondary transition to adulthood**
- **Programs and services that assist students with education and career planning and decision making**
- **Organized program coordination with staff, parents/caregivers and community resources**
- **Data analysis of school counseling outcomes and variables for school improvement planning**
- **Partnerships with business and industry to design programs that ensure students' workplace readiness**
- **Well defined roles and responsibilities for school counselors distinct from other student support service personnel**
- **Student learning benchmarks and school counselor performance standards that guide the preparation and professional development of counselors, including a model for field placements and practice**

> All this will not be finished in the first one hundred days. Nor will it be finished in the first thousand days […] But let us begin.
>
> *John F. Kennedy, Inaugural Address, 1961*

Section 1

Program Foundation

- Mission Statement
- Vision Statement
- MA Career Development Benchmarks with Crosswalk to MA Curriculum Frameworks
- Professional Ethics
- School Counselor Professional Standards

Representatives from the Massachusetts School Counselor Association, the Massachusetts Department of Education, and the National Center for School Counseling Outcome Research at the University of Massachusetts, Amherst, collaborated in drafting the following mission and vision statements that have been endorsed by Massachusetts Commissioner of Education, David P. Driscoll:

Massachusetts Model Mission Statement

Massachusetts school counselors will develop and deliver counseling programs and services that provide all students with the requisite knowledge and skills for success in the academic/technical, workplace readiness, and personal/social domains.

Goal 1: Academic/Technical Achievement: *In order to improve student achievement and promote a commitment to lifelong learning for all students, school counselors will provide programs, classroom-based interventions and group and/or individual counseling that:*

Objective 1: focus on the development of attitudes, knowledge and skills necessary for success in higher education, the workplace and other post-secondary options.

Objective 2: use district/school data to design and deliver counseling programs and services.

Objective 3: are informed by participation on school improvement teams and the development of school improvement plans.

Goal 2: Workplace Readiness/Career Planning: *To promote in all students a sense of purpose and an understanding of their unique interests, strengths and limitations, school counselors will provide programs, classroom-based interventions and group and/ or individual counseling that:*

Objective 1: assist students in making well-informed postsecondary decisions and plans.

Objective 2: focus on integrating academic, technical and employability skill development.

Goal 3: Personal and Social Development: *To promote the positive personal and social development of all students within a safe learning environment, school counselors will provide programs, classroom-based interventions and group and/or individual counseling that allow students to:*

Objective 1: feel supported and safe at school.

Objective 2: develop interpersonal skills for positive social interactions.

Objective 3: understand their personal strengths and challenges.

Massachusetts Model Vision Statement:

To implement standards-based school counseling programs statewide in order to ensure that every student has the necessary *academic/technical*, *workplace readiness* and *personal/social* knowledge and skills for school and future success. Specifically, the Model envisions school counseling programs that:

- **Advance each school's mission** by operating from a recommended student to counselor ratio of 250:1 with school counselors also acting as leaders and coordinators of program delivery.
- **Support high standards for all students as a means of eliminating the achievement gap** by having counselors attend to students' developmental needs in ways that enable them to achieve success in their endeavors in education, the workplace and society.
- **Implement school counseling interventions in accordance with the Massachusetts Career Development Education (CDE) Benchmarks** by having counselors evaluate, modify, and develop their programs for alignment with the CDE Benchmarks.
- **Are data-driven and accountable** by having counselors implement evidence-based interventions, measure student outcomes, and document results regularly.

MA Career Development Education (CDE) Benchmarks Aligned with the Massachusetts Curriculum Framework Guiding Principles and Core Concepts

The Massachusetts Model, inspired and guided by both the ASCA National Model and the Massachusetts Career Development Benchmarks, calls for the development and implementation of school counseling programs that promote student success in the *academic/ technical, workplace readiness*, and *personal social* domains. **The following crosswalk illustrates broad alignment of the CDE Benchmarks with the Frameworks and is intended to stimulate discussion and further alignment with learning standards from the Massachusetts Curriculum Frameworks.**

It is important to note that the CDE Benchmarks are based upon a broad conception of career development that defines career as "the sequence of occupations and other **life roles that combine to express one's commitment to work** […] including **work-related roles such as student**" [Super, 1976]. This conception highlights the critical importance of career development education beginning at the elementary level.

The school counseling program can positively impact students' career development thus building the foundation for success in school and beyond. Under the Massachusetts Model, school counselors design and coordinate the delivery of curriculum and interventions, from kindergarten to twelfth grade, to promote optimal career development. For example, an elementary school counselor might foster students' "organizational skills" (competency A2-3) by delivering curriculum that promotes students' management of their school supplies (e.g., organizing desks and backpacks) as well as their time management (e.g., using agenda mates). At the high school level, the counselor may coordinate efforts to ensure that students develop and manage their career plans. **At all levels, the school counseling program is designed and carried out in collaboration with parents, teachers and educational partners.** (For more developmental examples of CDE benchmarks, visit: www.doe.mass.edu/cd/resources.)

The MA Career Development Education* Benchmarks Crosswalk with the Massachusetts Curriculum Frameworks			
MA Career Development Education Benchmarks	**Competencies**	**Domain Area**	**Excerpts from Massachusetts Curriculum Frameworks aligned with MA Career Development Benchmark competencies (e.g. A1-2)**
Learners will develop and demonstrate: A1: 21st century academic, technical and employability skills for **success in school and in the workplace;**	A1-1: Flexible, higher order thinking skills (*e.g., project management, leadership, problem solving)*	**Academic-Technical Development**	***English Language Arts (ELA) Guiding Principles:*** Literacy in all forms of media. (A 1-2) ***ELA General Standard:*** Gather information from a variety of sources, analyze and evaluate the quality of the information obtained, and use it to answer [one's] own questions. (A1-3) ***Mathematics Guiding Principle:*** Technology is an essential tool in a mathematics education (A1-2). ***Mathematics Core Concept:*** (1) Analyzing change in various contexts; (2) using visualization and spatial reasoning to solve problems. (A1-1) ***Science and Technology Engineering Broad Concepts***: (1) Engineering design requires creative thinking and strategies to solve practical problems generated by needs and wants (2) Appropriate materials, tools, and machines extend our ability to solve problems and invent. (A1-1; A1-2)
	A1-2: Technical and technological skills (e.g., *blueprint reading and computer software management)*		
	A1-3: Skills in locating and using information resources for research (*e.g., libraries, Internet*)		
A2: strong academic, technical and employability skills for **career and life management.**	A2-1: Communication and literacy skills for self-advocacy and presentation *(e.g., college and job interviews)*		***Arts Guiding Principle***: Skills and understanding of creating, performing, and responding. (A2-1, A2-3) ***Arts Core Concept***: Understanding the value of reflection and critical judgment in creative work. (A2-4) ***ELA Guiding Principles:*** (1) Writing as an essential way to develop, clarify, and communicate ideas in a persuasive, expository, narrative, and expressive discourse (A2-1) ***ELA General Standard:*** Students will organize ideas in writing in a way that makes sense for their purpose. (A2-3) ***Foreign Language Communication Strand:*** Recognize three "communicative modes" (interpersonal, interpretive, presentational) that place primary emphasis on the context and purpose of the communication. (A2-1) ***Mathematics Guiding Philosophy***: Achieving mathematical competence through […] emphases on problem solving, communicating, reasoning and proof, making connections, and using representations. (A2-2, A2-4) ***Mathematics Core Concepts***: (1) Compute fluently and make reasonable estimates; (2) apply appropriate techniques, tools and formulas to determine measurements; (3) understand and apply basic concepts of probability. (A2-2, A2-3) ***Science and Technology Engineering Guiding Principle***: Addressing prior knowledge and misconceptions (i.e., challenging inaccurate beliefs and redirecting student learning along more productive routes.) (A2-4) ***Science and Technology Engineering Broad Concept***: Ideas can be communicated through engineering drawing, written reports and pictures. (A2-1)
	A2-2: Mathematical life skills for time and money management		
	A2-3: Organizational skills for career and life management		
	A2-4: Critical thinking skills to use and evaluate information *(e.g., evaluating credit card offers)*		
	A2-5: Technical literacy for career and life management (*e.g., online banking, managing FAFSA online)*		

***CAREER DEVELOPMENT EDUCATION: the array of educational assistance that students receive toward career development** including formal and informal knowledge and information about educational and occupational demand, appropriate workplace behavior, necessary skills, education, experience, and aptitudes needed for specific industries and/or jobs.

CAREER: the sequence of occupations and other life roles that combine to express one's commitment to work in the total pattern of self-development, including paid and unpaid positions and **work-related roles such as student**, family member and citizen.

The MA Career Development Education Benchmarks* Crosswalk with the Massachusetts Curriculum Frameworks			
MA Career Development Education Benchmarks	**Competencies**	**Domain Area**	**Excerpts from Massachusetts Curriculum Frameworks aligned with MA Career Development Benchmark competencies (e.g. A1-2)**
Learners will develop and demonstrate: A3: knowledge of how **education and work are interrelated and contribute to the economy and society**	A3-1: Knowledge of how educational and workplace demands relate to economic and societal needs and functions (*e.g., outsourcing, medical research)*	**Academic-Technical Development**	***Arts Guiding Principle***: Making connections among the arts and with arts resources in the community. (A3-1) ***ELA General Standard:*** Deepen [one's] understanding of a literary or non-literary work by relating it to its contemporary context or historical background. (A3-1) ***History and Social Studies Theme***: The development of scientific reasoning, technology, and formal education over time and their effects on people's health, standards of living, economic growth, government, religious beliefs, communal life, and the environment. (A3-1) ***Mathematics Core Concept***: Formulating questions that can be addressed with data; collect, organize, display relevant data to answer them. (A3-2) ***Science and Technology/Engineering Core Concept***: Drawing on skills, habits, and subject matter knowledge for informed participation in the intellectual and civic life of American society and for further education in these areas if they seek it. (A3-2)
	A3-2: Skills in researching and evaluating economic and societal information for career planning and career management		
A4: an appreciation for the **relevance of education** in their lives (*i.e., answering, "Why do I need to know this?"*)	A4-1: Knowledge of the benefits of education for career and life management		***Arts Core Concept***: Understand the value of reflection and critical judgment in creative work. (A4-1, A4-2) ***ELA Guiding Principles***: Attaining independence in learning (students articulate their own learning strategies, evaluate their effectiveness, and use those that work best for them.) (A4-3) ***Foreign Language Core Concept:*** The invaluable acquisition of another language [and] educational benefits [… influencing] our perception of the world around us and permanently enriching and enlarging or appreciation and understanding of ourselves and others. (A4-2) ***History and Social Studies Theme*:** The evolution of the concepts of personal freedom, individual responsibility, and respect for human dignity. (A4-2) ***Mathematics Core Concept***: Formulating questions that can be addressed with data and collect, organize, and display relevant data to answer them. (A4-3) ***Science and Technology/Engineering's Purpose***: Drawing on these skills, habits, and subject matter knowledge for the informed participation in the intellectual and civic life of American society and for further education in these areas if they seek it. (A4-2, A4-3)
	A4-2: Knowledge of the benefits of education for personal and professional satisfaction		
	A4-3: Skills in maximizing educational and workplace achievement for employability, work satisfaction, and optimal earning potential		

The MA Career Development Education Benchmarks* Crosswalk with the Massachusetts Curriculum Frameworks			
MA Career Development Education Benchmarks	**Competencies**	**Domain Area**	**Excerpts from Massachusetts Curriculum Frameworks aligned with MA Career Development Benchmark competencies (e.g. A1-2)**
Learners will develop and demonstrate: W-1: knowledge and skills in the **planning and decision-making** process	W1-1: Skills in the planning process (*focusing on the importance of preparation and future orientation*)	**Workplace Readiness Development**	***ELA Guiding Principles:*** Strategies necessary for acquiring academic knowledge, achieving common academic standards, and attaining independence in learning. (W1-1, W1-3) ***Health Guiding Principle***: Use fundamental health concepts to assess risks, to consider potential consequences, and to make health-enhancing decisions. (W1-3) ***History and Social Studies General Economics Skill*:** Explain how people or communities examine and weigh the benefits of each alternative when making a choice and that opportunity costs are those benefits that are given up once one alternative is chosen. (W1-2; W1-4) ***Mathematics Core Concepts*:** (1) Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them; (2) develop and evaluate inferences and predictions based on data. (W1-3, W1-6) ***Science and Technology Engineering Guiding Principle***: Address students' prior knowledge and misconceptions (i.e., to challenge inaccurate beliefs and redirect student learning along more productive routes.) (W1-3)
	W1-2: Knowledge of decision-making as a complex process		
	W1-3: Skills and strategies for effective decision-making (*including rational, intuitive and consultative styles*)		
	W1-4: Skills in evaluating career plans and decisions in relation to aptitudes, values and interests		
	W1-5: Skills in establishing and modifying career management tools (e.g., resume, portfolio)		
	W1-6: Skills to plan and navigate career transitions		
W2: an **exploratory attitude** toward self, life and the world of work;	W2-1: Skills and attitudes for developing and maintaining the identity of a learner, for life		***ELA Composition General Standard:*** Gather information from a variety of sources, analyze and evaluate the quality of the information obtained, and use it to answer their own questions. (W2-1, W2-2) ***Mathematics Guiding Principle:*** Mathematical ideas should be explored in ways that stimulate curiosity, create enjoyment of mathematics, and develop depth of understanding. (W2-1) ***Science and Technology Engineering Guiding Principle***: Investigation, experimentation, and problem-solving are central to science and technology/engineering education. (W2-1, W2-3)
	W2-2: Knowledge of how and where to access career and labor market information		
	W2-3: Skills to both utilize and evaluate career information, resources, and experts in career planning		
W3: **workplace specific knowledge and skills** for employability and career advancement.	W3-1: Knowledge of how performance assessments measure learning and productivity		***Arts Guiding Principle*:** Making connections among the arts and with other disciplines within the core curriculum (W3-5) ***History and Social Studies General Economics Skills:*** (1) Describe how the earnings of workers are affected by the market value of the product produced and worker skills; (2) identify the causes of inflation and explain who benefits from inflation and who suffers from inflation. (W3-2, W3-3) ***Mathematics and Science and Technology Engineering Guiding Principles:*** Assessment of student learning takes many forms and serves to inform learning, guide instruction, and evaluate progress. (W3-1) ***Science and Technology Engineering Core Concept***: Drawing on skills, habits, and subject matter knowledge for the informed participation in the intellectual and civic life of American society and for further education in these areas if they seek it. (W3-4)
	W3-2: Knowledge of the concepts of career pathway development, labor market demand and job retention		
	W3-3: Knowledge of risks and rewards of various careers		
	W3-4: Knowledge and skills necessary for employment, retention and advancement		
	W3-5: Knowledge of the transferability skills and its value		

The MA Career Development Education Benchmarks* Crosswalk with the Massachusetts Curriculum Frameworks			
MA Career Development Education Benchmarks	**Competencies**	**Domain Area**	**Excerpts from Massachusetts Curriculum Frameworks aligned with MA Career Development Benchmark competencies (e.g. A1-2)**
Learners will develop and demonstrate: W4: awareness of social and cultural **conditions that affect career decision-making** and workplace success;	W4-1: Knowledge of the interrelationship of life roles W4-2: Skills in managing competing life roles at home, school, work and in the community W4-3: Knowledge of the impact of cultural stereotyping and gender-based roles in relation to career decisions and occupational success	**Workplace Readiness Development**	***ELA Guiding Principle:*** Respect for differences in home backgrounds [and] nurtur[ing] students' sense of their common ground as present or future American citizens in order to prepare them for responsible participation in our schools and in civic life. (W4-1, W4-3) ***Health Guiding Principles***: Work in a positive manner with families, school staff, peers, and community members to […] create a safe and supportive environment where individual similarities and differences are acknowledged. (W4-2) ***History and Social Studies Theme***: The influence of economic, political, religious, and cultural ideas as human societies move beyond regional, national, or geographic boundaries. (W4-1, W4-3)
W5: knowledge of all **aspects of an industry**, service, trade or occupation.	W5-1: Knowledge of the structures, dynamics and opportunities within industries and organizations W5-2: Knowledge of industry's role in local, national and global arenas W5-3: Skills to locate, understand, evaluate and use safety information		***Arts Guiding Principles***: Making connections among the arts […] and with arts resources in the community. (W5-2) ***Health Guiding Principles***: Uses fundamental health concepts to assess risk, to consider potential consequences, and to make health-enhanced decisions. (W5-3) ***History and Social Studies Theme***: The growth and spread of free markets and industrial economies. (W5-2)

The MA Career Development Education Benchmarks* Crosswalk with the Massachusetts Curriculum Frameworks			
MA Career Development Education Benchmarks	**Competencies**	**Domain Area**	**Excerpts from Massachusetts Curriculum Frameworks aligned with MA Career Development Benchmark competencies (e.g. A1-2)**
Learners will develop and demonstrate: PS1: attitudes, behaviors, knowledge and skills that **promote identity formation, personal responsibility and self-direction**	PS1-1: Skills in developing and maintaining a clear and positive self-concept (*with an increasingly more differentiated and affirmative view of oneself*) PS1-2: Skills in relating individual learning style, interests, values and aptitudes to one's concept of self PS1-3: Attitudes and skills, personal responsibility and self-determination PS1-4: Skills in applying personal ethics in all settings	**Personal/Social Development**	***Arts Core Concept*:** Expressing ideas and emotions that [one] cannot express in language along. In order to understand the range and depth of the human imagination, one must have knowledge of the arts. (PS1-1) ***ELA Guiding Principles***: (1) Building on the language, experiences, and interests that students bring to school; (2) developing each student's distinctive writing or speaking voice; (3) Attaining independence in learning (students articulate their own learning strategies, evaluate their effectiveness, and use those that work best for them.) (PS1-1, PS1-2) ***Health Guiding Principles*:** (1) Healthy habits and behaviors for the individual and others; (2) Skills that assist students in understanding and communicating health information clearly for self-management and health promotion. (PS 1-1. PS1-3) ***Foreign Language Technology Competencies:*** (1) Identify ethical and legal behaviors when using technology and describe personal consequences of inappropriate use; (2) Practice responsible use of technology systems and software (3) Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society (PS1-4) ***Mathematics Guiding Principles:*** Mathematical ideas should be explored in ways that stimulate curiosity, create enjoyment of mathematics, and develop depth of understanding. (PS1-2)

The MA Career Development Education Benchmarks* Crosswalk with the Massachusetts Curriculum Frameworks			
MA Career Development Education Benchmarks	**Competencies**	**Domain Area**	**Excerpts from Massachusetts Curriculum Frameworks aligned with MA Career Development Benchmark competencies (e.g. A1-2)**
PS2: **Learners will develop and demonstrate:** attitudes, behaviors and interpersonal skills to **work and relate effectively with others**;	PS2-1: Skills in interacting positively with others at home, at school, at work and in the community	**Personal/Social Development**	***ELA Guiding Principles:*** Drawing on literature from many genres, time periods, and cultures; Encouraging respect for differences in home backgrounds [and] nurtur[ing] students' sense of their common ground as present or future American citizens in order to prepare them for responsible participation in our schools and in civic life. (PS2-3) ***Foreign Language Core Concept***: Influencing our perception of the world around us and permanently enriching and enlarging our appreciation and understanding of ourselves and others. (PS2-3, PS2-4) ***Health Guiding Principle*:** Habits and conduct that enhance health and wellness, and guides efforts to build healthy families, relationships, schools, and communities. (PS2-1, PS 2-2) ***History and Social Studies Theme***: The evolution of the concepts of personal freedom, individual responsibility, and respect for human dignity. (PS 2-3, PS2-4) ***Science and Technology Guiding Principles***: Collaboration in scientific and technological endeavors and communicating ideas. (PS2-1)
	PS2-2: Skills in problem-solving and conflict resolution at home, at school, at work and in the community		
	PS2-3: Knowledge of and respect for individual differences		
	PS2-4: Knowledge of how positive behaviors and attitudes contribute to educational achievement and workplace success		
PS3: attitudes, behaviors and skills necessary for **managing personal and environmental variables** that impact career development;	PS3-1: Knowledge and skills for maintaining personal and psychological well-being *(e.g., locating information, services, support; stress management skills)*		***Health Guiding Principles***: (1) Using fundamental health concepts to assess risk, to consider potential consequences, and to make health-enhanced decisions; (2) Understand and communicate health information clearly for self-management and health promotion. (PS3-1) ***History and Social Studies Concepts:*** Distinguishing between long-term and short-term cause and effect relationships; distinguishing intended from unintended consequences. (PS3-1, PS3-2) ***Mathematics Core Concepts:*** Developing and evaluating inferences and predictions based on data. (PS3-2)
	PS3-2: Knowledge and skills for evaluating and responding to social and economic influences at home, school, work and in the community *(e.g., postsecondary planning based on financial need; exploring transportation options for summer employment)*		
PS4: attitudes, behaviors, and skills that foster **respect for diversity** and work to eliminate stereotyping (at home, school, work and in the community).	PS4-1: Knowledge and skills that promote participation, positive behavior and regard within diverse groups *(e.g., Gay Straight Alliance)*		***ELA Guiding Principle:*** Respect for differences in home backgrounds [and] nurtur[ing] students' sense of their common ground as present or future American citizens in order to prepare them for responsible participation in our schools and in civic life. (PS4-1) ***History and Social Studies Theme*:** Recognize each person as an individual, encourage respect for human and civil rights of all people, emphasize student's shared heritage as citizens, residents, and future citizens of the U.S. (PS4-1) ***Health Guiding Principles***: Work in a positive manner with families, school staff, peers, and community members to […] create a safe and supportive environment where individual similarities and differences are acknowledged. (PS4-2)
	PS4-2: Knowledge and skills for communicating and working positively in diverse settings (e.g., *speaking a second language; seeking balanced representation on group projects)*		

Professional Ethics

The field of school counseling is predicated on knowledge about and conscious use of professional ethical standards. The American School Counselor Association's ethical standards are available at www.schoolcounselor.org.

School Counselor Performance Standards

The following school counselor performance standards, aligned with the ASCA National Model, reflect school counselors' training, expertise and responsibilities. Under the Massachusetts Model, licensed school counselors are evaluated annually against these professional expectations that include standards for program implementation and evaluation. These standards can also be used by school counselors in the design and implementation of professional development plans and for self-evaluation. School counselors should work with administrators and other colleagues to design appropriate evaluation instruments that will address these standards, in compliance with district policies.

The professional school counselor is expected to:

Standard 1: Plan, organize and deliver the school counseling curriculum to:

- address the developmental needs of students while supporting the school mission
- support learning and close the student achievement gap
- foster a safe and supportive school climate by demonstrating and promoting positive interpersonal relationships with students, staff, parents/guardians, and community partners

Standard 2: Implement individual planning interventions in collaboration with partners (e.g., teachers, parents, mentors) to:

- develop students' planning and decision making skills
- develop educational/career plans for students, individually and in groups
- promote accurate and appropriate interpretation of assessment data and relevant information

Standard 3: Provide responsive services in consultation with administrators, teachers and student support services and through referrals to external organizations/agencies to:

- address students' identified needs and concerns individually and/or in small-group counseling
- involve parents/guardians, teachers, administrators and support services staff as needed
- use school and community agencies and organizations for providing long-term responsive and support services

Standard 4: Monitor student progress on a regular basis to:

- ensure equity in access and delivery
- modify or develop curriculum and interventions as needed
- track students' progress with their education/career planning

Standard 5: Manage and use time effectively in order to:

- ensure adherence to a master calendar for program implementation
- distribute and post a calendar of events and services for timely access by students, parent/guardians, administrators and teachers

Standard 6: Collect and analyze school counseling data to:

- establish goals and activities that work to close the student achievement gap
- ensure that students are taking appropriate yet rigorous courses
- guide counseling program direction and emphases

- maximize use of counselors' time
- measure results and disseminate outcome information
- plan for and improve program evaluation

Standard 7: Encourage and provide system support to:

- ensure that the school counseling program is meeting the needs of students and the school community
- support student achievement through collaboration with educational and community based programs
- obtain input from school administrators and staff in developing the counseling management system
- gain assistance and cooperation in carrying out program evaluations

Standard 8: Communicate regularly with the school council and other school advisory committees to:

- learn of the needs and concerns of constituent groups
- gain support for school counseling goals while learning how counselors can support the goals of other groups
- inform the council and other advisory committees of program features and services
- review the school improvement plan and provide input

Standard 9: Conduct a yearly program audit to:

- determine the degree to which the school counseling program is being implemented
- inform appropriate stakeholders of program results
- inform counseling staff of the need for modifications in the program and/or calendar

Standard 10: Act as a student advocate, leader, collaborator and systems change agent to:

- ensure support for all students achieving at the highest levels
- ensure equity in the delivery and access of the program
- advance the school's and counseling department's mission and goals

> [T]he child explains the man as well as and often better than the man explains the child.
>
> *Jean Piaget*

Section 2

Delivery System

Quality school counseling programs are based on research findings and data analysis. They are organized so that all students benefit from the curriculum, services, interventions and support. Delivery of the four key program components (i.e., Guidance Curriculum; Individual Planning; Responsive Services and System Support) is viewed as integral to the school's mission.

Support and involvement of the school community, including parent and community partners, is critical for successful program delivery. Such collaboration enhances equitable access to the program and fosters the supportive and safe school climate essential for learning. The following sample delivery chart outlines how a school counseling program might be organized and delivered:

GUIDANCE CURRICULUM: Standards-based lessons and activities	**RESPONSIVE SERVICES** Services that address immediate crisis needs of students	**INDIVIDUAL PLANNING** Advising interventions focused on planning and decision making	**SYSTEM SUPPORT** Activities to establish, maintain, and enhance the program
Suggested Times Elementary 35%-45% Middle/Jr. High 25%-35% High School 15%-25%	**Suggested Times** Elementary 30%-40% Middle/Jr. High 30%-40% High School 25%-35%	**Suggested Times** Elementary 5%-10% Middle/Jr. High 15%-25% High School 25%-35%	**Suggested Times** Elementary 10%-15% Middle/Jr. High 10%-15% High School 10%-15%
Purpose: Student acquisition and application of specific knowledge, attitudes and skills (e.g., MACDE Benchmarks)	**Purpose:** Short term interventions to stabilize school-specific situations that disrupt student learning.	**Purpose:** Guidance and assistance to all students with educational and career planning.	**Purpose:** Ongoing school and community support for program delivery, management, enhancement and evaluation.
Academic/technical **Sample Goal:** Students acquire necessary attitudes, knowledge and skills to be self directed **Workplace readiness** **Sample Goal:** Students acquire attitude, knowledge and skills to investigate the world of work **Personal/Social** **Sample Goal:** Students acquire necessary attitudes, knowledge, and skills to work and relate to others	**Academic/technical** **Sample Goal:** Counselors assist a student facing obstacles to learning (e.g. test anxiety, behavior management) **Workplace readiness** **Sample Goal:** Counselors assist a student in balancing school and/or family and workplace demands **Personal/Social** **Sample Goal:** Counselors assist a student in managing family or peer conflict, advocating for themselves	**Academic/technical** **Sample Goal:** Students create and manage an educational/career plan tied to post-secondary goals **Workplace readiness** **Sample Goal:** Students identify interests, skills and values and apply them to school and postsecondary decision making **Personal/Social** **Sample Goal:** Students use information and consultation in making transitions between grades, schools and postsecondary options	**Sample Goal:** Counselors coordinate and collaborate with teachers, parents and business/industry partners as advisors in students career planning **Sample Goal:** Counselors collect and analyze data for planning professional development **Sample Goal:** Counselors complete an audit of program components (i.e., curriculum/responsive services/individual planning)
Counselor Strategies: ▪ Interdisciplinary curriculum planning/instruction ▪ Large and small group instruction/interventions ▪ Parent/guardian information and meetings	**Counselor Strategies:** ▪ Individual and/or small group counseling ▪ Consultation and community referrals ▪ Student peer helpers/student assistance team ▪ Prevention and intervention programs	**Counselor Strategies:** ▪ Coordination of educational/career planning with teachers, parents, mentors ▪ Student monitoring ▪ Consultation ▪ Workplace/placement ▪ Portfolio development	**Counselor Strategies:** ▪ Data analysis ▪ Consultation/collaboration (internal/external) ▪ Monitor program outcomes and system support

The Guidance Curriculum

A quality guidance curriculum includes a sequential, standards-based plan for instruction that cultivates students' competencies across key developmental domains. Curriculum units are delivered to all students, at every grade level, pre-K to 12. Successful implementation depends upon school-wide support and cooperation. While school counselors are responsible for designing, planning and implementing the curriculum, student outcomes are best met through the involvement and participation of teachers and parents/guardians. Components and delivery strategies include:

- **Scope and Sequence Charts:** Topics and competencies to be taught at each grade level articulating what students should know, understand and be able to do as a result of a program or intervention.

- **Classroom Instruction/Assessment:** Developmentally appropriate standards-based lessons, presentations and activities based on general research methods, assessment and anecdotal feedback. The MA Work Based Learning Plan is one example of a standards-based tool designed to drive learning and productivity in students' work-based learning experiences (e.g., job shadowing, internships). This assessment tool is used to evaluate employability skill proficiency while results inform classroom teaching and learning. Community Service Learning projects also provide opportunities to assess the application and transference of learning.

- **Interdisciplinary Curriculum Units/Activities:** Integration activities and classroom instruction to advance the Massachusetts' CDE benchmarks while supporting the Massachusetts Curriculum Frameworks and school curriculum.

- **Large and Small Group Instructional Activities and Presentations and Assessments:** Structured group activities, assessments (e.g., skill or interest inventories), workshops, assemblies and meetings to address student needs and interests.

- **Parent Educational Outreach:** Resources, information, training and/or programs delivered to parents/guardians with the goal of reinforcing the guidance curriculum and increasing student outcomes.

Responsive Services

Responsive services are short-term counseling interventions to resolve immediate conflicts/problems, respond to crisis events, and intervene in school-specific situations that disrupt learning. School staff, parents/guardians, community members and students can initiate responsive services. Under the Massachusetts Model, school counselors work in partnership with administrators, teachers and school and community mental health professionals to provide services via a delivery system that benefits the most students while maximizing counselors' time. Responsive Services and implementation strategies include:

- **Individual/Small Group Counseling**: Counseling students with identified needs/concerns to clarify needs and provide immediate, short-term interventions. The school counselor acts in accordance with all federal, state and local laws and policies with respect to confidentiality, suspected cases of abuse, and threats of harm or violence.

- **Consultation:** Working collaboratively with school psychologists, adjustment counselors, parents, teachers and community-based mental health professionals to develop a broad base of support for students.

- **Outside Referrals:** Referring students and families to community agencies to assist them in managing crises outside the scope of the school counseling program.

- **Student Peer Helpers and School-Wide Prevention/Interventions Programs:** Training of and collaboration with students to act as peer-helpers and/or mediators. This includes working with existing peer support programs (e.g., student council, Gay/Straight Alliance).

- **Preventative Interventions:** Ongoing interventions to reduce the need for crisis management and remediation. Intervention goals include the development of attitudes, knowledge and skills that build students' self-worth, resiliency, optimism, and future orientation. Community service learning projects and peer support groups are examples of such interventions.

- **Crisis Counseling:** Providing counseling and support to students and school staff dealing with crises.

- **Crisis/Safety Plans and School Response Teams:** Developing school crisis plans and establishing teams to implement school safety, preventative interventions and crisis response. Staff crisis training is conducted to establish readiness to meet student/school needs in emergency situations.

- **Student Assistance Teams:** Collaborating with school staff to plan and deliver interventions to address specific needs of students.

Individual Planning

Individual planning consists of ongoing, systematic interventions to assist students with planning, managing and monitoring their educational/career goals. Assistance is planned, delivered and/or coordinated for delivery by the school counselor. Individually or in small groups, each student is provided with information, encouragement and support to both establish and work towards his/her goals. Parents/guardians are kept informed and asked to provide input and approve plans. Operating under the Massachusetts Model, school counselors ensure that all students, with guidance from their parents/guardians, benefit from accurate and appropriate interpretation of assessment data in planning. Individual Planning implementation strategies include:

- **Individual/Small Group Appraisal:** Assisting students and parents/guardians with analysis and evaluation of abilities, interests, aptitudes and achievements. This includes a review of assessment results such as MCAS, PSAT/SAT, college placement tests, vocational assessments and career interest inventories. A review of students' course selection, grades, extracurricular activities and hobbies is also used to assist with identification of educational and career goals.

- **Individual/Small Group Counseling:** Using assessment results and up-to-date educational, career and labor market information to help students plan and reach their short and long-range goals.

- **Student Monitoring:** Monitoring students' progress with their education/career plans on a regular basis, assisting and advising as needed.

- **Consultation:** Partnering with parents/guardians, teachers and mentors to assist students in utilizing and carrying out their plans.

- **Referral/Placement:** Consulting and collaborating with school faculty, program coordinators (e.g., cooperative education or Tech Prep coordinators) and parents/guardians to augment students' positive transitions from grade to grade, school to school and onto postsecondary success.

- **Portfolio Development:** Assisting students with documenting and showcasing their personal achievements, competencies, extracurricular accomplishments and long-range goals.

System Support

System support consists of practices and activities establish, maintain and enhance the delivery of the school counseling program including program audits, professional development and community outreach. The strategic use of resources such as technology and paraprofessional staff allows counselors to maximize time for quality program development, delivery and evaluation. Implementation of the system support component may begin with an assessment of the school counseling program components for alignment with the school and district missions or its impact on student achievement. School counselors are responsible for establishing and maintaining system support through data-driven program management, assessment and collaboration. This would include:

- **Program Management/Coordination/Development:** Providing direction, vision and accountability for the school counseling program. Ongoing consultation and collaboration with school administration and staff to foster understanding and support for school counseling initiatives and calendars.

- **Program Audit:** Conducting annual program audits to determine the degree to which the school counseling program has been being implemented. Audit results may yield changes in the school counseling program and the master calendar for the following year.

- **Program Assessment:** Outcome assessment to clarify the impact and effectiveness of interventions, guide program direction, identify student needs and areas for program improvement.

- **Student Assessment**: Evaluating student achievement data to ensure that all students gain access to rigorous curricula. Based on data analysis, counselors may identify gaps in academic, technical or developmental skill progression and suggest changes in schedules or instructional practice in order to provide additional support for achievement.

- **The School Council/Other Advisory Councils:** Counselors serve on or attend council and committee meetings. Each school in Massachusetts convenes a school council comprised of the principal, teachers, parents, and community representatives who work to identify/assess needs, establish goals, and write an annual school improvement plan. Counselors may oversee the development of a council subcommittee to address counseling specific improvement goals.

- **Public Relations and Community Outreach:** Attendance at school committee and/or chamber of commerce meetings to inform the community of counseling programs and develop community partnerships and support.

- **Professional Development:** Data-driven professional development, including in-service training, to ensure that school counselors are able to implement the counseling program and services as outlined in the Massachusetts Model.

> We need to be the change we want to see happen.
> We are the leaders we have been waiting for.
>
> *Gandhi*

Section 3

Management System

In order to manage a school counseling program, various organizational tools and processes must be in place. Components of a quality management system include:

- Use of Time/Calendars
- Management Agreements
- Use of Data
- Performance Evaluation

A major goal and challenge in the delivery of a comprehensive school counseling program is providing equitable access and delivery. Consequently, relevant strategies and decisions regarding access and delivery are best made by a school-wide team of counselors, administrators and teachers. Considerations may include:

- **Scheduling:** What type of system is in place? Does the school designate time for responsive services, curriculum delivery, and individual planning? Can such time be identified? Is flextime to serve students and parents after hours an option?
- **Classroom Implementation:** Can time from classroom instruction be devoted to school counseling lessons that support the general curriculum? Can school counselors and teachers plan and co-teach a lesson?
- **Curriculum:** Can school counselors assist teachers in delivering or supporting the academic or technical curriculum? How can career components be integrated? Is character education being addressed?

Use of Time/Calendars

Time management becomes a critical issue in implementing a comprehensive school counseling program. Calendars must be used to document not only student access and participation levels but the time school counselors spend on delivering the curriculum, individual planning, responsive services, and system support. **The allocation of time for each program component varies according to grade levels, the developmental needs of students and the level of resources and program support.** The Massachusetts Model has adopted ASCA's guidelines in recommending the following target percentages of time for each component:

Recommended Allocations of Total School Counselor Time

Based on MASCA's recommended counselor to student ratio 1:250 maximum

Delivery System Component	Elementary School % of Time	Middle School % of Time	High School % of Time
Curriculum	35-45%	25-35%	15-25%
Responsive Services	30-40%	30-40%	25-35%
Individual Planning	5-10%	15-25%	25-35%
System Support	10-15%	10-15%	10-15%

It is important to assess how school counselors are using their time in relation to student needs and intended outcomes. When it is determined that services are more suited to other student support staff or community based professionals (e.g., school adjustment counselors, psychologists) or when tasks could be done by non-counseling staff (e.g., scheduling, test monitoring, bus duty) alternatives are explored. For example, some Massachusetts schools use paraprofessionals for tasks such as test monitoring and bus duty while others partner with community-based counseling agencies to provide services in the school building.

Master Calendar: A master calendar is developed and published to document and promote components of the school counseling program. The calendar is a counseling intervention that promotes students' access of services by increasing awareness of school counseling activities. The calendar is organized by grade level and highlights services, activities, and events such as wellness days, career fairs and financial aid workshops. The calendar is featured in several prominent places such as school bulletin boards, the program of studies, and the school website.

Planning Calendar: Individual planning calendars are completed by each counselor listing lessons, individual planning sessions, responsive services and system support efforts. School counselors use individual planning calendars, reports and logs for planning and documentation.

Monthly Reports: These reports contain the necessary data for documenting and evaluating the school counseling program. A report is completed by each school counselor summarizing such things as students' participation, time spent on program delivery, and evaluation outcomes.

School Counseling Record Keeping System: A system is established for recording, storing and retrieving records such as: counseling logs, contact information, sign-in sheets, permission slips and meeting agendas.

Management Agreements

Program management agreements are used to support effective program delivery. The entire school counseling team meets with the principal to reach and document agreement on program priorities, implementation strategies and the organization of the counseling department. This written agreement is designed to facilitate program delivery and outcomes. Ideally, program management agreements are reviewed and approved by other school administrators such as the vice principal (or administrator in charge of discipline), special education director and all department heads. The management agreement addresses:

- the needs of the students and the school (based on data analysis)
- the assignment of students to specific counselors (based on data analysis)
- the responsibilities of individual counselors for program management and delivery
- the professional development priorities for the school counseling department

Use of Data

Operating under the Massachusetts Model, the school counseling program becomes increasingly data driven. School counselors design and implement interventions based on analysis of data related to students' developmental needs, achievement levels and school practices (e.g., remediation, special education referrals). Under NCLB and Massachusetts Education Reform, public schools collect and report highly disaggregated school and student performance data that can be used by counselors in analyzing student outcomes and planning programs. Comprehensive

data sources such as the Student Information Management System (SIMS) are analyzed in planning, monitoring and evaluating the school counseling program. There are many other data sources within the school, such as course selection and postsecondary follow-up results. Individual competency checklists are also developed to provide feedback to students, parents, and teachers on students' progress in acquiring the *CDE Benchmarks* competencies. Data are also used to:

- Identify the need for program and curriculum modifications
- Focus resources and interventions where they are most needed
- Monitor student progress and development
- Evaluate the need for policy changes
- Evaluate intervention outcomes
- Demonstrate accountability
- Secure grants and community support

In a data-driven school counseling program, school counselors begin by looking at a wide range of data from several perspectives. They work with administrators, faculty and advisory councils to then create a picture of the school's and students' needs. **In this way, data analysis focuses discussion and planning on important variables such as students' developmental needs, the school environment, and school policy and practice. Based on such data analysis, the school counseling program concentrates its efforts on addressing these variables and evaluating outcomes.**

Performance Evaluation

Under the Massachusetts Model, the School Counselor Performance Standards below (also see Section 1 - *Program Foundation*) are used to evaluate school counselors' professionalism as well as their performance in program design, implementation and evaluation. School counselors work with the school and district to design appropriate evaluation tools that comply with their district governing board and bargaining unit policies to evaluate counselors' performance in:

- Standard 1: Planning, organizing and delivering the school counseling curriculum
- Standard 2: Implementing individual planning interventions in collaboration with partners (e.g., teachers, parents, mentors)
- Standard 3: Providing responsive services in consultation with administrators, teachers, and student support services and through referrals to external organizations/agencies
- Standard 4: Monitoring student progress on a regular basis
- Standard 5: Managing and using time effectively
- Standard 6: Collecting and analyzing school counseling data
- Standard 7: Encouraging and providing system support
- Standard 8: Communicating regularly with the school council and other advisory committees
- Standard 9: Conducting a yearly program audit
- Standard 10: Acting as a student advocate, leader, collaborator and systems change agent

Section 4

Accountability

- Measuring Student Outcomes
- Evaluation and Modification of Programs
- Disseminating Results

Education reform efforts across the nation and here in Massachusetts emphasize accountability for results. Under No Child Left Behind and the Massachusetts Education Reform Act all students are expected to: (1) meet the competency determination in mathematics and English; and (2) by 2014, reach the proficiency determination. No Child Left Behind also emphasizes three other criteria for student success: (1) all education initiatives should be based on data that demonstrate their effectiveness, (2) all students should graduate from high school, and (3) all schools should be safe. These expectations provide school counselors with several opportunities to demonstrate the value of the school counseling program. Massachusetts school counselors must collect and analyze data that demonstrates how the counseling program supports student achievement and school improvement. To that end, the following questions should be considered:

- How does individual planning positively impact high school graduation rates and postsecondary outcomes?
- What data best demonstrates the effectiveness of our school counseling interventions?
- How has the school counseling program supported school improvement goals?
- How do system support efforts positively impact school climate?

By answering such questions, school counselors cannot only demonstrate how they support the school mission but also the aforementioned education reform goals. **School counselors are critical players in supporting and guiding students to reach rigorous academic/technical standards and successfully transition to postsecondary education or training.** School counselors are uniquely positioned within schools to identify obstacles to teaching and learning and recommend strategies for improvement. However, until school counselors are able to demonstrate accountability for results they will continue to be viewed by many as providers of ancillary services rather than as critical players in supporting student achievement. School counselors must, therefore, view accountability as both an opportunity and a necessity rather than as an option or a threat.

Measuring Student Outcomes

With an emphasis on accountability for results, quantifying the number of counseling activities, students served, or products developed is viewed as "so what" data. Under the Massachusetts Model, school counselors, instead, strive to analyze data in relation to program goals and outcomes. They gather and disseminate data that demonstrate that specific counseling interventions contribute to gains in achievement such as: increased enrollment in rigorous courses and postsecondary education, better attendance or reductions in disciplinary incidents. Targeted student outcomes are based on data analysis, the needs of students and the vision of school and district leaders. Data elements deemed as critical measures of student outcome variables (e.g., learning style, school climate, test anxiety) are addressed and more importantly documented in the school improvement plan.

Evaluation and Modification of Program Implementation

Under the Massachusetts Model, the school counseling department sets its goals annually with input from the principal and the school council. The school counseling goals are reflected in the school improvement plan to ensure that the program is supported, carried out and modified as needed. The school improvement plan becomes a means for school counselors, the principal, faculty, and parents to ensure that the school counseling program is supporting the school improvement goals.

Program Audit

Implementing and maintaining a comprehensive school counseling program requires multifaceted systemic change. Consequently, school counselors must monitor progress and document results regularly. A program audit is one means of evaluating the central components of the school counseling program. **The primary purpose of an audit is to guide program delivery and improve results by identifying: (1) the strengths and weaknesses of the program, (2) short and long range goals and (3) the focus of professional development**. In addition to the program audit, evaluation may include assessment of student and/or parent satisfaction as well as the recommendations of the school council and other committees.

Dissemination of Results

In a comprehensive developmental school counseling program all students participate. Consequently, more parents/guardians, teachers, and other stakeholders become interested in program results. In order to ensure that all constituents understand both the accomplishments and challenges of the school counseling program, reports of progress and results should be shared at meetings and through newsletters, presentations, and websites. Ideally, information is presented and tailored to various stakeholder groups. The table below suggests the type of information suited for various audiences.

Data	Students	Parents	Teachers	Administration	Other Counselors
Aggregated Student Performance	✓	✓	✓	✓	✓
Disaggregated Student Performance		✓	✓	✓	✓
Student Wellness/Risk Surveys	✓	✓	✓	✓	✓
Specific Intervention Results	✓ *(students involved)*	✓ *(parents of students involved)*	✓	✓	✓
School Safety	✓	✓	✓	✓	✓
Counselor Development				✓	✓
Program Modifications		✓	✓	✓	✓
Needs Assessments	✓	✓	✓	✓	✓
Financial/Resource Planning			✓	✓	✓

There are many models and resources available for collecting and disseminating information about school counseling programs. For example, Missouri uses detailed criteria for program audits in its school and district accreditation process. The Los Angeles County Office of Education and the California Counselor Leadership Academy have developed an instrument for continuous improvement called SPARC (Support Personnel Accountability Report Card). In Los Angeles County, SPARC results are made available online. MASCA has adapted the SPARC to develop a tool for Massachusetts called the *Massachusetts Accountability Report Card* (MARC). It is available at www.masca.org.

IN CONCLUSION

The Massachusetts Model represents the collective input of numerous school counselors, university pre-service program faculty and personnel from the Massachusetts Department of Education (staff from Academic Support, Career and Technical Education, Program Approval, Student Support Services) including the Commissioner himself. Feedback from the field has also been considered (see the Task Force response to the public comment period starting on page 27).

The Massachusetts Model is available on the MASCA website, as well as those of the Massachusetts Department of Education and the National Center for School Counseling Outcome Research at the University of Massachusetts, Amherst.

> Seeing better [what it is that people are doing] increases our vulnerability to being recruited to the welfare of another. It is our recruitability, as much as our knowledge of what to do once drawn, that makes us of value in our caring for another's development.
>
> *Robert Kegan, The Evolving Self*

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MA Model for Comprehensive School Counseling Programs Response Form

Which best describes your current position(s)? [*If your feedback represents a group response, indicate how many?*]

❒ Superintendent/Asst. Superintendent ❒ School Counselor ❒ Principal/Asst. Principal

❒ Department Head/Teacher ❒ Guidance Director ❒ Other: _____

Name (*optional*): _____ School (*optional*): _____

1 *Fully Disagree*	*2* *Somewhat Disagree*	*3* *Unsure*	*4* *Somewhat Agree*	*5* *Fully Agree*

Use the scale above for rating the items below.

Evaluation Items	**Scale**				
1. The content is useful and well developed. *Comment:*	1	2	3	4	5
2. The document is written and formatted in a way that makes it easy to use. *Comment:*	1	2	3	4	5
3. The Model will help school counselors to plan and modify their current programs. *Comment:*	1	2	3	4	5
4. The Model will help school counselors to develop new programs. *Comment:*	1	2	3	4	5
5. The Model will help school counselors to evaluate their school counseling program. *Comment:*	1	2	3	4	5
6. The school counseling program standards on pages 10-11 are complete and appropriate. *Comment:*	1	2	3	4	5
7. The Career Development Education Benchmarks on pages 5-9 represent the foundation knowledge and skills students will need for school and future success. *Comment:*	1	2	3	4	5
8. The Model will assist counselors in guiding students to successful postsecondary transitions. *Comment:*	1	2	3	4	5

9. The Model will assist counselors in managing their programs.	1	2	3	4	5

Comment:

10. The document is useful to administrators as well as counselors.	1	2	3	4	5

Comment:

11. The Model will help counselors gain school and community support for their programs.	1	2	3	4	5

Comment:

12. The Model will help university pre-service programs to evaluate, strengthen and modify their programs.	1	2	3	4	5

Comment:

GENERAL COMMENTS AND RECOMMENDATIONS

(Additional pages may be attached)

Response to Public Comment Period [May –November, 2005]

August, 2006

Subject: Executive Summary and Response to Comments Received on the *MA Model for Comprehensive School Counseling Programs – Draft May 2005*

Dear Fellow School Counselors,

On behalf of the Massachusetts School Counselors Association and the Massachusetts Model Task Force, I want to thank all those who responded and commented on the Draft Model. Your interest in the future direction of our profession is critical to its continued growth and vitality. This letter summarizes the results of the comments and feedback collected over a six-month period [June –November, 2005] and explains the Task Force's response.

All comments received have been reviewed and tabulated. The Task Force was extremely pleased that for every one of the twelve evaluation items a sizable majority of respondents either somewhat agreed or fully agreed with the statement. The percentages of respondents in these categories were above 75% for nine of the twelve questions, and at least 65% in all cases. Responses somewhat disagreeing or fully disagreeing were less than 9% for all questions. To receive the full text of all comments and the data on the evaluation forms, please email me at kgray@valleytech.k12.ma.us.

Based on this strong endorsement, coupled with the endorsement of Commissioner David P. Driscoll, the Model Task Force has decided not to make any significant changes to the content at this time. This version of the Model completes a three-year effort of a very dedicated group of professionals. The Task Force is to be commended for its determination and commitment.

There were several major questions/themes that emerged in the feedback relative to Model implementation. These themes, and the Task Force's plans related to them, are:

a. A need for guidance and resources to assist in implementing the Model (suggestions included an implementation guide, on-line, and/or in-service/professional development).

   The Task Force fully recognizes the need for guidance and resources to implement the Model. The original draft of the model included a large number of appendices and supporting documents for this purpose. In the 2005 draft, these were separated for a number of reasons. These appendices and other materials are now available in draft form as a Model Implementation Guide. Additional workshops and trainings are being discussed and planned focusing on Model implementation. These will be presented at MASCA and other conferences and may also be available for in-service days locally.

b. Concerns about additional workload related to implementation of the Model in light of existing responsibilities.

   The Model is intended to make clear what school counselors should be doing to improve outcomes for all students. While not specifically listing all the things counselors should not be doing, it is implicit that certain activities are not included because they are not considered relevant to a school counselor's function. The Task Force recognizes that the wide variety of duties and large workload counselors are assigned make it challenging to work on new initiatives and redefinitions of job

responsibilities. The Model is intended to be a resource for counselors to focus their priorities, but also to guide administrators and directors in assigning duties to school counselors.

c. The absence of strong emphasis on individual relationships and counseling with students, especially concerning problems outside of school.

The individual relationship with students remains a fundamental aspect of education and most certainly for school counselors. School counselors, working collaboratively with teachers, administrators, adjustment counselors, school psychologists, nurses, and outside agencies provide access to individual services for students who need them. Balancing meeting individual needs with the goal of serving all students remains the challenge we must meet. The Task Force believes that a comprehensive developmental guidance program whose services are prioritized by data-based decisions and delivered with evidence-based practice in mind is the best way to achieve this balance.

d. The need for school administrators to understand and support the model.

In the coming months, the Task Force will be distributing the Model to associated professional organizations including those for Superintendents and Principals. In addition, MASCA has presented, and will continue, to present workshops to these organizations related to the Model. The Task Force, however, believes that ultimately Model implementation will require a strong grass roots effort. Superintendents and Principals will adopt the Model if they see its potential to improve educational outcomes for all students. MASCA members need to take responsibility for advocacy for implementing and evaluating the Model in their own schools and districts.

e. Defining and clarifying the roles and responsibilities of other student support personnel in implementation of the Model.

The Task Force believes working with the various professional associations is the best way to address the issue of roles, responsibility, and relationship among student support services professionals and other partners. To that end, the Task Force will recommend to MASCA that representatives of the association work with other professional associations or groups to coordinate roles and services to students.

f. The significance of an appropriate student to counselor ratio (250:1) to effectively implement the Model.

It is the hope of the Task Force that as the value of school counseling programs based on the Model become more widely recognized, school districts will shift resources to reduce student to school counselor ratios.

g. The concentration on framing school counseling competencies on the CDE benchmarks.

The *Massachusetts CDE Benchmarks* is a cutting edge document that is fully aligned with the ASCA National Standards. The *CDE Benchmarks* integrate personal - social, academic and career competencies.

h. The relatively little emphasis in the text given to professional ethics.

> In response to this concern, the Task Force decided to include a reference to professional ethics in the *Foundation* section of this final version.

The Task Force views the Model as a living document that will periodically be revisited and revised as counselors and schools gain experience with it and thereby collectively sharpen our professional perspective on its effectiveness.

Thank you again for your interest in this important document. As you discuss and work with it in your schools, please be attentive to areas for its improvement and also be conscious of celebrating the small steps you take in achieving its implementation. This represents a significant development in our profession designed to meet the needs of our students. We look forward to continued conversation with all of you about their future as well as that of our profession.

Sincerely,

Katie Gray
Massachusetts Model Task Force Chair

Appendix C1: Evidence of Current Status of State's Longitudinal Data System by Essential Elements of the America COMPETES Act

Brief overview of data collections:

ESE currently conducts several data collections each school year. Two collections constitute the foundation for our meeting several of the essential elements of the America COMPETES Act:

- SIMS – Massachusetts has implemented a statewide unique student identifier (SASID) since 1998 that does not permit a student to be individually identified. The SIMS collection is submitted by school districts for every public school student three times per year:
  - October 1st
  - March 1st
  - Last Day of School in June
- EPIMS – In 2007Massachusetts has implemented a statewide unique educator identifier (MEPID) as part of an annual (October 1st) new collection, the Education Personnel Information Management System (EPIMS). Data are transmitted in two separate records: the staff roster, containing demographic and related (e.g., HQT) information, and the work assignment (class sections taught).

Evidence for the 12 Essential Data Elements:

Element 1: A unique statewide student identifier that does not permit a student to be individually identified.

Element 2: Student-level enrollment, demographic and program participation information

EVIDENCE: All criteria for Element #1 and Element #2 met through SIMS; complete list of data collected follows.

Variable name	Data collected	Description
DOE001	Locally Assigned Student Identifier (LASID)	A code assigned and maintained by the local school district that is unique for each student in the district over time.
DOE002	State Assigned Student Identifier (SASID)	A unique number assigned to an individual by the ESE.
DOE003	First Name	A name given to an individual at birth, during a naming ceremony (e.g., baptism), or through legal change.
DOE004	Middle Name	A secondary name given to an individual at birth, during a naming ceremony (e.g., baptism), or through legal change.
DOE005	Last Name	The name borne in common by members of a family.
DOE006	Date of Birth	The month, day, and year on which an individual was born.
DOE007	Date of Birth Format	A code that indicates the format of the value of Data Element DOE006 — Date of Birth.

DOE008	City/Town of Birth	The name of the city (or comparable unit) in which an individual was born.
DOE009	Gender	The classification of a student as male or female.
DOE010	Race/Ethnicity	The general racial category that most clearly reflects the individual's recognition of his or her community or with which the individual most identifies.
DOE011	Reason for Reporting	An indication of the basis on which a district is reporting a student — financial responsibility, enrollment, or both. If the student is not enrolled at the time of reporting, or if the Reason for Enrollment has changed over time, the indication should represent the most recent reason for reporting.
DOE012	Enrollment Status at Time of Data Collection	An indication, as of the specified time of data collection (e.g., October 1), of the enrollment status of each student who has been enrolled or for whom the district paid for education services at any time during the current school year.
DOE013	Reason for Enrollment	An indication of the reason for a student's enrollment in the receiving school district. The indication should represent the reason for the most recent enrollment if the student is not enrolled at the time of reporting, or the current Reason for Enrollment if the reason has changed over time.
DOE014	City/Town of Residence — Student	The three-digit code for the city or town where the student lives at the time of reporting or the student's last known city or town of residence if the reporting district is no longer sending or receiving the student.
DOE015	School Identification Number	Each school in Massachusetts has a four-digit code assigned by ESE.
DOE016	Grade Level	Grade in which student is enrolled as of most recent enrollment.
DOE017	Days in Attendance	Cumulative number of days a member student has been present in the district from the beginning of the current school year to the time of reporting (e.g., October 1).
DOE018	Days in Membership	Cumulative number of days a student has been enrolled in the district from the beginning of the current school year to the time of reporting (e.g., October 1).
DOE019	Low-Income Status	An indication of whether the student meets any one of the following definitions of low income: 1. The student is eligible for free or reduced price lunch; or 2. The student receives Transitional Aid to Needy Families benefits; or 3. The student is eligible for food stamps.
DOE020	Title I Participation	An indication of the type of Title I Services being received at the specified time of reporting (e.g., October 1).

DOE021	LEP Students in their First Year in U.S. Schools	A student with limited English proficiency in grades K through 12 who has attended schools in the United States for less than twelve months
DOE022	Immigration Status	To meet the federal definition a student must 1. Not have been born in any State; AND 2. Not have completed three full academic years of school in any state.
DOE023	Country of Origin	Country of Origin is the country from which immigrant children have emigrated.
DOE024	First (Native) Language	Native language is the specific language or dialect first learned by an individual or first used by the parent/guardian with a child.
DOE025	Limited English Proficiency	Limited English Proficient Students are defined as children who were 1. Not born in the U.S., whose native tongue is a language other than English and who are incapable of performing ordinary classwork in English; or 2. Born in the United States of non-English speaking parents and who are incapable of performing ordinary classwork in English.
DOE026	English Language Learners Program Status	An indication of the type of English Language Learners Program in which a student is enrolled as of the time of reporting (e.g., October 1).
DOE027	Alternative Education	The 8-digit code of the alternative education program in which the student is enrolled at the time of reporting. If the student is not enrolled in an alternative program the value "00000000" should be entered.
DOE028	Title I School Choice Participation	An indication of a student's enrollment in a school after transferring from a Title I school in the district that is identified for improvement, corrective action, or restructuring under Section 1116 of the No Child Left Behind Act of 2001.
DOE029	DISCONTINUED	USE 500 FOR ALL STUDENTS
DOE030	DISCONTINUED	USE 500 FOR ALL STUDENTS
DOE031	Career/Vocational Technical Education — Competency Attainment	A credential issued to a student enrolled in a specific career/vocational technical education program. A recognized private organization and/or a state or federal government department, agency, or board may issue the credential. It may also be a "Chapter 74 Certificate" that is issued by a vocational technical or comprehensive high school to a student enrolled in a specific career/vocational technical education program, known as a Chapter 74–approved vocational technical education program.

DOE032	Special Education Placement, ages 3–5	An indication of the educational environment of a student with disabilities, ages 3–5, at the specific time of reporting (e.g., October 1).
DOE033	High School Completer Plans	An indication of what a student plans to do after completing high school.
DOE034	Special Education Placement, ages 6–21	An indication of the educational environment of a student with disabilities, ages 6–21, at the specific time of reporting (e.g., October 1).
DOE035	Career/Vocational Technical Education — Type of Program	An indication of the career/vocational technical education program type in which a student is enrolled at the specified time of reporting (e.g., October 1). Note that 01, 03, 05 and 13 have been discontinued.
DOE036	Special Education — Nature of Primary Disability	The major or overriding disability condition that has been identified by a team of people pursuant to federal and state special education law. The identified disability is known to be causal to an inability to make effective progress in education and requires special education services in order to access the general curriculum or specially designed curriculum.
DOE037	Graduate, Completed Massachusetts Core Curriculum	An indication of whether a student has met the graduation requirements of the Massachusetts Core Curriculum, designed to prepare students for college, work, and citizenship.
DOE038	Special Education — Level of Need	The degree of service that the student receives as determined by the school district upon review of the student's IEP.
DOE039	DISCONTINUED	USE 500 FOR ALL STUDENTS
DOE040	Special Education Evaluation Results	An indication of the result of a special education evaluation (initial or re-evaluation) that has been done since the end of the last school year (July 1st).
DOE041	DISCONTINUED	USE 500 FOR ALL STUDENTS
DOE042	Career/Vocational Technical Education — Special Population	An indication of the status (single parent) of a student enrolled in a career/vocational technical education program (Chapter 74–approved vocational technical or non-Chapter 74 career and technical) that meets the definition for single parent. Note that students with disabilities and those with limited English proficiency or those who are economically disadvantaged or in programs that prepare them for careers that would be nontraditional for their gender are captured in other data elements.

DOE043	Career/Vocational Technical Education — Chapter 74–Approved Vocational Technical Education Program Participation	A Chapter 74–approved vocational technical education program is a career/vocational technical education program that meets the approval criteria in Massachusetts General Law Chapter 74 and the Vocational Technical Education Regulations and has been approved by the Department of Education. Participation in these programs is reported by a Department of Education assigned, six-digit Classification of Instructional Program (CIP) code and state title.
DOE044	Career/Vocational Technical Education — Non-Chapter 74 Career and Technical Education Program Participation	A non-Chapter 74 career and technical education program is a career/vocational technical education program that is not a Chapter 74–approved vocational technical education program, but that does meet the new Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV) definition of career and technical education.
DOE045	Number of In-School Suspensions	The number of disciplinary actions imposed by school officials that removed the student from academic classes and placed him/her in a separate environment. The student remained in school during the suspension period.
DOE046	Number of Out-of-School Suspensions period	The number of disciplinary actions imposed by school officials that removed the student from participation in school activities. The student remained out of school during the suspension
DOE047	Advanced Placement Course 1	The program includes a demanding academic course of study in college-level subjects such as physics, biology, calculus, and foreign languages, among others. A student who performs above a specified level on the assessment may be awarded college credit for certain courses upon entry to the institution, as defined by the National Center of Education Statistics (NCES).
DOE048	Advanced Placement Course 2	See definition for DOE047.
DOE049	Advanced Placement Course 3	See definition for DOE047.
DOE050	Advanced Placement Course 4	See definition for DOE047.
DOE051	Advanced Placement Course 5	See definition for DOE047.
DOE052	Student Truancy	The number of school days a student was recorded as truant.

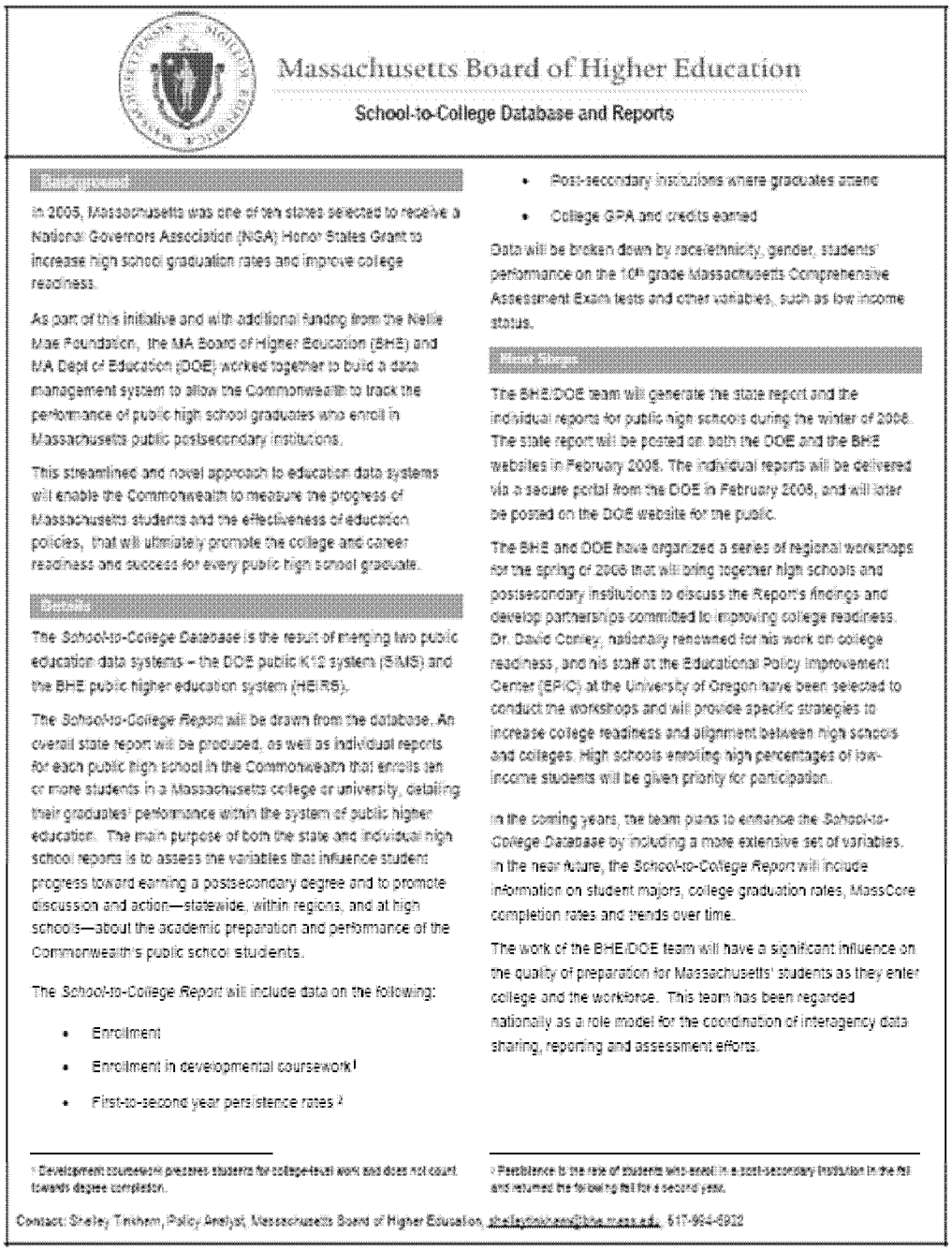
Element 3: Student-level information, re, when students exit, transfer in, transfer out, drop out, or complete P-16 education programs

EVIDENCE: For each student reported in SIMS the school district reports if the student exits, transfers in or out, drops out, or completes the program. The following is a listing of the related status codes reported to DESE through SIMS.

Acceptable Values/Code Description:
Enrolled
Graduate with a Competency Determination
Permanent Exclusion (Expulsion)***
Deceased
Reached maximum age, did not graduate or receive a Certificate of Attainment*
Certificate of Attainment**
Completed grade 12 and district-approved program. (District does not offer a Cer-
Transferred — In state public
Transferred — In state private
Transferred — Out-of-State (public or private)
Transferred — Home-school
Transferred — Adult diploma program, leading to MA diploma
Dropout — Enrolled in a non-diploma granting adult education program
Dropout — Entered Job Corps
Dropout — Entered the military
Dropout — Incarcerated, district no longer providing educational services
Dropout — Left due to employment
Dropout — Confirmed Dropout, plans unknown
Dropout — Student status/location unknown
Not enrolled but receiving special education services only.
Transferred — no longer receiving special education services only.

Element 4: The capacity to communicate with higher education data systems

EVIDENCE: The Massachusetts Department of Higher Education conducts data matching with our database of high school graduates and provides reports (consistent with the provisions of FERPA) regarding their subsequent performance in post-secondary education. [Except of report provided below; refer also to response to #11.]



Massachusetts Board of Higher Education

School-to-College Database and Reports

Background

In 2005, Massachusetts was one of ten states selected to receive a National Governors Association (NGA) Honor States Grant to increase high school graduation rates and improve college readiness.

As part of this initiative and with additional funding from the Nellie Mae Foundation, the MA Board of Higher Education (BHE) and MA Dept of Education (DOE) worked together to build a data management system to allow the Commonwealth to track the performance of public high school graduates who enroll in Massachusetts public postsecondary institutions.

This streamlined and novel approach to education data systems will enable the Commonwealth to measure the progress of Massachusetts students and the effectiveness of education policies, that will ultimately promote the college and career readiness and success for every public high school graduate.

Details

The *School-to-College Database* is the result of merging two public education data systems – the DOE public K12 system (SIMS) and the BHE public higher education system (HEIRS).

The *School-to-College Report* will be drawn from the database. An overall state report will be produced, as well as individual reports for each public high school in the Commonwealth that enrolls ten or more students in a Massachusetts college or university, detailing their graduates' performance within the system of public higher education. The main purpose of both the state and individual high school reports is to assess the variables that influence student progress toward earning a postsecondary degree and to promote discussion and action—statewide, within regions, and at high schools—about the academic preparation and performance of the Commonwealth's public school students.

The *School-to-College Report* will include data on the following:

- Enrollment
- Enrollment in developmental coursework[1]
- First-to-second year persistence rates[2]
- Post-secondary institutions where graduates attend
- College GPA and credits earned

Data will be broken down by race/ethnicity, gender, students' performance on the 10th grade Massachusetts Comprehensive Assessment Exam tests and other variables, such as low income status.

Next Steps

The BHE/DOE team will generate the state report and the individual reports for public high schools during the winter of 2006. The state report will be posted on both the DOE and the BHE websites in February 2006. The individual reports will be delivered via a secure portal from the DOE in February 2006, and will later be posted on the DOE website for the public.

The BHE and DOE have organized a series of regional workshops for the spring of 2006 that will bring together high schools and postsecondary institutions to discuss the Report's findings and develop partnerships committed to improving college readiness. Dr. David Conley, nationally renowned for his work on college readiness, and his staff at the Educational Policy Improvement Center (EPIC) at the University of Oregon have been selected to conduct the workshops and will provide specific strategies to increase college readiness and alignment between high schools and colleges. High schools enrolling high percentages of low-income students will be given priority for participation.

In the coming years, the team plans to enhance the *School-to-College Database* by including a more extensive set of variables. In the near future, the *School-to-College Report* will include information on student majors, college graduation rates, MassCore completion rates and trends over time.

The work of the BHE/DOE team will have a significant influence on the quality of preparation for Massachusetts' students as they enter college and the workforce. This team has been regarded nationally as a role model for the coordination of interagency data sharing, reporting and assessment efforts.

[1] Developmental coursework prepares students for college-level work and does not count towards degree completion.

[2] Persistence is the rate of students who enroll in a post-secondary institution in the fall and returned the following fall for a second year.

Contact: Shelley Tinkham, Policy Analyst, Massachusetts Board of Higher Education, shelleytinkham@bhe.mass.edu, 617-994-6932

Element 5: A state data audit system assessing data quality, validity, and reliability

EVIDENCE: Massachusetts currently implements data verification systems that assess data quality, validity and reliability. These systems include complex business/validation rules that confirm each data element meets specification and is not duplicated across the state prior to acceptance. The SIMS files are received through a web-based application that processes each student record through a total of 210 business rules (see sampling of rules below). Each record must

successfully meet each rule before it is accepted in the Departments database. A series of fourteen summary reports are then generated and provided via a secure website to the local school districts for their review. DESE staff also review the reports to identify any significant anomalies. These are identified and brought to the attention of the school district staff via email. Once any issues have been resolved the collection is certified by each local superintendent.

Element 6: Individual student test records under section 1111(b) of ESEA 1965.

Element 7: Information on students not tested, by grade and subject

EVIDENCE: Massachusetts has implemented data systems that provide individual student test records and related reports organized by learning standard (including every student's response to every MCAS/§1111(b) question) to districts and schools since 1999 that also include students not tested by grade and subject. Following is a sampling of the 529 fields captured and reported.

MCAS 2009-2010 File Layout				
Operational Tests and Retests (File type: comma delimited)				
FIELD FIRST	FIELD LENGTH	FIELD NAME	FIELD TYPE	DESCRIPTION
1	8	sprp_dis	C	official district code (includes out-of-district placed students)
9	8	sprp_sch	C	official school code (includes students from test sites)
…				
89	10	bookletnumber	C	Student's unique identifier (sasid, or bookletnumber if sasid is blank)
99	10	sasid	C	cleaned and verified SASID
…				
205	3	eteststat	C	Testing status in ELA (Composition and Lang & Lit) [Blank for February Biology and April STE tests]
				T = tested
				TR = tested Retake
				NTA = not tested absence
				NTM = not tested medically documented absence
				NTO = not tested other
				NTL = not tested first-year LEP
				ELA Composition (Applicable for grades 4, 7, and 10, blank if not applicable grades 3, 5, 6, 8) [Blank for February Biology and April STE tests]
208	2	wptopdev	C	Writing prompt topic development score
				02-12

				IE=Insufficient Evidence, LO= Language Other than English, OT= Off Topic, PS= Plot Summary, VI= Visible but Incomprehensible
				blank = no composition booklet
210	2	wpcompconv	C	Writing prompt composition convention score
				02-08
				IE=Insufficient Evidence, LO= Language Other than English, OT= Off Topic, PS= Plot Summary, VI= Visible but Incomprehensible
…				
212	1	eitem1	C	Respose to ELA item 1
213	1	eitem2	C	Response to ELA item 2
214	1	eitem3	C	Response to ELA item 3
…				
282	1	mitem1	C	Response to math item 1
283	1	mitem2	C	Response to math item 2
284	1	mitem3	C	Response to math item 3
…				
353	1	sitem1	C	Response to Science / Technology Engineering item 1
354	1	sitem2	C	Response to S&T item 2
355	1	sitem3	C	Response to S&T item 3
…				
528	1	LEPFirst	C	LEP Student enrolled first time in a US school (1=yes, blank)
529	8	Alt_Ed	C	Eight digit alternative education school code

Element 8: A teacher identifier system with the ability to match teachers to students
Element 9: Student-level transcript information including courses completed and grades earned

EVIDENCE: Massachusetts established a teacher / educator identifier system (EPIMS, including a unique MEPID identifier) in 2007 that also links teachers to their assigned classes (via a unique class code); see complete list of EPIMS data elements immediately below. We are now able to link teachers to students and the classes they are assigned to. EPIMS, SIMS and MCAS item responses are loaded into the Education Data Warehouse in order to generate reports and related analyses that combine data from these and other sources.
Following is the list of all EPIMS data elements:

MEPID Assign Record:		
Variable name	Data collected	Description
DOE001	First Name	A name given to an individual at birth, during a naming ceremony, or through legal change.
DOE002	Middle Name / Middle Initial	A secondary name given to an individual at birth, during a naming ceremony, or through legal change. If none exists, the code "NMN" (No Middle Name) should be entered in the field.
DOE003	Last Name	The name borne in common by members of a family.
DOE004	Date of Birth	The month, day, and year on which an individual was born. Format is mm/dd/yyyy.
DOE005	Gender	The classification of an individual as male or female. Format is not case sensitive: M=Male and F=Female.
DOE006	License / Certification Number	The number assigned by the Massachusetts Department of Elementary and Secondary Education at the time an individual receives their license.
DOE007	Local Employee Number	A number used at the local district to identify an employee.
Staff Roster Record		
SR01	Massachusetts Education Personnel Identifier (MEPID)	A unique number assigned to an individual by the Massachusetts Department of Elementary and Secondary Education. Primary key linked to the work assignment record and to an individual's identifying characteristics entered in ID Maintenance.
SR02	Local Employee Number	See above DOE 007
SR03	License / Certification Number	See above DOE 006
SR04	First Name	See above DOE 001
SR05	Middle Name / Middle Initial	See above DOE 002.
SR06	Last Name	See above DOE003.
SR07	Date of Birth	See above DOE004.
SR08	Race-Ethnicity	The general racial category or categories that most clearly reflect the individual's recognition of his or her community or with which the individual most identifies.
SR09	Employment Status at Time of Data Collection	The two-digit code that describes an individual's employment status at the time of the collection.

SR10	Reason for Exit	The two-digit code that describes an individual's reason for no longer being employed by the district.
SR11	Date of Hire	Federal Salary Source 1 One of potentially multiple federal salary sources (maximum of 3) for an individual. If a source of the funding associated with the individual's salary is a federal grant, enter the specific code for that grant.
SR12	Federal Salary Source 1	One of potentially multiple federal salary sources (maximum of 3) for an individual. If a source of the funding associated with the individual's salary is a federal grant, enter the specific code for that grant.
SR13	Percent of Federal Salary Source 1	Percent of an individual's salary paid from the federal grant identified in Federal Salary Source 1. Enter as a decimal to the thousandths (if necessary); e.g., .04, .25, .333, .5… 1.00.
SR14	Federal Salary Source 2	See Federal Salary Source 1.
SR15	Percent of Federal Salary Source 2	See Percent of Federal Salary Source 1.
SR16	Federal Salary Source 3	See Federal Salary Source 1.
SR17	Percent of Federal Salary Source 3	See Percent of Federal Salary Source 1.
SR18	Degree Type 1	One of potentially multiple educational degrees (maximum of 3) achieved by paraprofessionals, special education, and instructional support staff that are not certified in ELAR and must be reported in EPIMS.
SR19	Degree Institution 1	The educational institution from which the individual received the corresponding degree (Degree Type 1), or the code for out-of-country institutions.
SR20	Degree Subject 1	The major subject area in which the corresponding degree (Degree Type 1) was achieved
SR21	Degree Type 2	See Degree Type 1.
SR22	Degree Institution 2	See Degree Institution 1.
SR23	Degree Subject 2	See Degree Subject 1.
SR24	Degree Type 3	See Degree Type 1.
SR25	Degree Institution 3	See Degree Institution 1.
SR26	Degree Subject 3	See Degree Subject 1.

Work Assignment Record		
Variable name	Data collected	Description
WA01	Massachusetts Education Personnel Identifier (MEPID)	A unique number assigned to an individual by the Massachusetts Department of Elementary and Secondary Education. Primary key linked to the staff roster record and to an individual's identifying characteristics entered in ID Maintenance.
WA02	Massachusetts Education Personnel Identifier (MEPID)	A unique number assigned to an individual by the Massachusetts Department of Elementary and Secondary Education. Primary key linked to the staff roster record and to an individual's identifying characteristics entered in ID Maintenance.
WA03	First Name	See above DOE001.
WA04	Middle Name / Middle Initial	See above DOE002.
WA05	Last Name	See above DOE003.
WA06	District / School Identification Number	The eight-digit code for the district and school where the individual is currently employed. Each district/school in Massachusetts has an eight-digit code assigned by ESE. The first four digits represent the district code. The second four digits represent the school code. The last four digits for a district position will equal "0000." A listing of ESE school codes can be found at: http://www.doe.mass.edu/infoservices/data/sims/schoolcodes.html
WA07	Job Classification	A description of the specific group of duties and responsibilities of a position.
WA08	Teacher / Paraprofessional Assignment	The specific educational or educational support activity in which teachers, paraprofessionals, and other instructional staff are involved and employed on a daily basis. This data element is not applicable for all staff.
WA09	Grade	The predominant grade(s) for which the specific assignment provides educational services. Where appropriate, ranges may be provided. This data element is not applicable for all staff.
WA10	Subject Area-Course Code	The description of a subject area and course that an individual teaches or provides support for. NCES coded values will be provided for academic subject areas and course descriptions and CIP codes will be provided for Chapter 74 programs to report vocational technical program areas. This data element is not applicable for all staff.
WA11	Class Section	The class section code will be a value provided by the school district. The class section code will identify the class assigned for that subject area-course and will be unique for the data collection within a school. This data element is not applicable for all staff.

WA12	Full Time Equivalent (FTE) (as per District School and Staffing Reports)	The ratio between the hours expected of a full-time position and the number of actual hours being provided by an individual (i.e., the percent of workday staff are involved in an assignment: 1.00 is a full-time employee; a half-time employee is a .50 FTE, etc.)
WA13	NCLB Instructional Paraprofessional Requirements	Two-digit code that denotes the level of paraprofessional training achieved by the individual who is working in a Title I school. This data element is not applicable for all staff.
WA14	Highly Qualified Teacher Status	Whether or not this individual meets the US ED definition and criteria of highly qualified to teach a particular subject area-course. This data element is not applicable for all staff.
WA15	Subject Matter Competency	How this individual has demonstrated or has not demonstrated subject matter competency for this position. This data element is not applicable for all staff.

List of Student Course Schedule System Data Elements:		
Variable name	Data collected	Description
DOE001	Local Agency Student Identifier (LASID)	Unique Local Education Agency Assigned Student Identifier.
DOE002	State Assigned Student Identifier (SASID)	Unique 10-digit State Assigned Student Identifier collected in SIMS.
DOE003	School Identification Number	Indicates the location where a student takes a particular course. This code may differ from the school/district in which the student is enrolled.
DOE004	Local Course Code	The locally defined code that identifies the organization of subject matter and related learning experiences provided for the instruction of students.
DOE005	Subject-Area Course	The State defined code that identifies the organization of subject matter and related learning experiences provided for the instruction of students.
DOE006	Class Section	Indicates the class assigned for a unique occurrence of a subject area-course.
DOE007	Course Term	The length of an individual course. For the purposes of reporting, the term sequence must be provided in the value.
DOE008	Course Enrollment Status	Indicates a student's status in each course in which they are enrolled.
DOE009	Course Level	An indication of the general nature and difficulty of instruction provided throughout a course.

DOE010	Course Credit Available	The number of credits that a student can earn for enrolling in and completing a given course.
DOE011	Course Credit Earned	The number of credits awarded to a student who successfully meets the objectives of the course.
DOE012	Course Letter Mark	A meaningful alphabetical or categorical expression of the performance of an individual.
DOE013	Course Numeric Mark	A meaningful raw score or statistical expression of the performance of an individual expressed as a number or percentage.

Element 10: Student-level college readiness test scores

EVIDENCE: The ESE has purchased student level SAT, PSAT and AP data from the College Board. These data are incorporated into the ESE data system, which enables more comprehensive studies of college readiness.

Element #11: Data regarding students transition from secondary school to postsecondary education, including remedial course enrollments.

EVIDENCE: The Massachusetts Department of Higher Education conducts data matching with our database of high school graduates and provides reports (consistent with the provisions of FERPA) regarding their subsequent performance in post-secondary education, including enrollments in remedial courses. [Except of report provided below; refer also to response to #4]

Massachusetts School-to-College Report: Class of 2005 Summary Data

For data definitions and detailed individual school reports see: http://www.doe.mass.edu/research/reports/s2c.html

District Name	School Name	Number of high school graduates in the class of 2005	Number of graduates who enrolled as new students in MA public higher education in fall 2005	% of graduates who enrolled as new students in MA public higher education in fall 2005	% enrolled in one or more developmental (remedial) courses in fall 2005	% reenrolled for a second year of higher education in fall 2006
Abington	Abington High	151	63	42%	40%	75%
Acton-Boxborough	Acton-Boxborough Reg High	271	57	18%	18%	94%
Adams-Cheshire	Hoosac Valley High	111	44	40%	48%	79%
Agawam	Agawam High	243	106	44%	53%	88%
Amesbury	Amesbury High	170	49	29%	35%	97%
Amherst-Pelham	Amherst Regional High	318	106	33%	20%	85%
Andover	Andover High	387	83	23%	17%	87%
Arlington	Arlington High	246	71	29%	32%	89%
Ashburnham-Westminster	Oakmont Regional H S	160	65	41%	42%	77%
Ashland	Ashland High	142	40	28%	23%	97%
Assabet Valley	Assabet Valley Voc HS	190	45	24%	70%	60%
Athol-Royalston	Athol High	107	51	48%	53%	68%
Attleboro	Attleboro High	374	92	25%	33%	82%
Auburn	Auburn Senior High	151	63	42%	32%	84%
Avon	Avon Middle High School	39	19	49%	58%	83%
Ayer	Ayer High	94	41	44%	37%	70%
Barnstable	Barnstable High	389	116	30%	33%	85%
Bedford	Bedford High	161	43	27%	28%	85%
Belchertown	Belchertown High	154	56	36%	25%	83%
Bellingham	Bellingham High School	169	53	31%	17%	90%
Belmont	Belmont High	276	51	18%	16%	94%
Berkshire Hills	Monument Mt Reg High	121	40	33%	38%	87%
Berlin-Boylston	Tahanto Reg High	54	19	35%	47%	82%
Beverly	Beverly High	275	98	36%	28%	83%
Billerica	Billerica Memorial High School	337	153	45%	39%	85%
Blackstone Valley Reg	Blackstone Valley	182	31	17%	39%	68%
Blackstone-Millville	Blackstone Millville RHS	158	25	16%	20%	88%
Blue Hills Voc	Blue Hills Reg Voc Tech	160	55	34%	64%	66%
Boston	Boston Arts Academy	78	18	23%	56%	79%
Boston	Boston Community Leadership Academy	104	16	15%	56%	64%
Boston	Boston Latin	390	87	22%	1%	95%
Boston	Boston Latin Academy	185	83	45%	8%	88%
Boston	Brighton High	232	45	19%	49%	83%
Boston	Charlestown High	194	37	19%	46%	76%
Boston	East Boston High	236	54	23%	46%	77%
Boston	Excel High School	61	14	23%	29%	80%

Element #12: Other data/information necessary to address alignment and adequate preparation for postsecondary education

EVIDENCE: Each spring Massachusetts collects information on whether graduating seniors have completed MassCore, our recommended curriculum for college readiness. The chart below outlines that core curriculum.

MassCore	
Massachusetts High School Program of Studies	
English/Language Arts	4 Units*
Mathematics	4 Units Including the completion of Algebra II or completion of the Integrated Math equivalent. All students are recommended to take a math course during their senior year.
Science	3 Units of lab-based science Coursework taken in technology/engineering may count for MassCore science credit. Note: The Board of Higher Education admissions standards for public colleges and universities require three (two lab-based) physical and natural science units and do not currently recognize technology/engineering as a science course.
History/Social Science	3 Units Including US History and World History.
Foreign Language**	2 Units Of the same language.
Physical Education	As required by law State law (M.G.L. c. 71,s. 3) states: "Physical education shall be taught as a required subject in all grades for all students." Health can be integrated into Physical Education, science, or taught as a stand-alone course.
The Arts**	1 Unit
Additional Core Courses	5 Units Business Education, Career and Technical Education (CTE), Health, Technology (e.g., computer science, desktop publishing, multi-media and web design), or any of the subjects above. Note: Most students majoring in CTE will take more than 5 units in a CTE program of study.
	22 Units - Is a minimum that students should take in high school

Additional Learning Opportunities	Complete as many of the following as possible: Advanced Placement (AP); Capstone or Senior Project; Dual Enrollment courses taken for both high school and college credit; Online courses; Service Learning; and Work-based Learning.

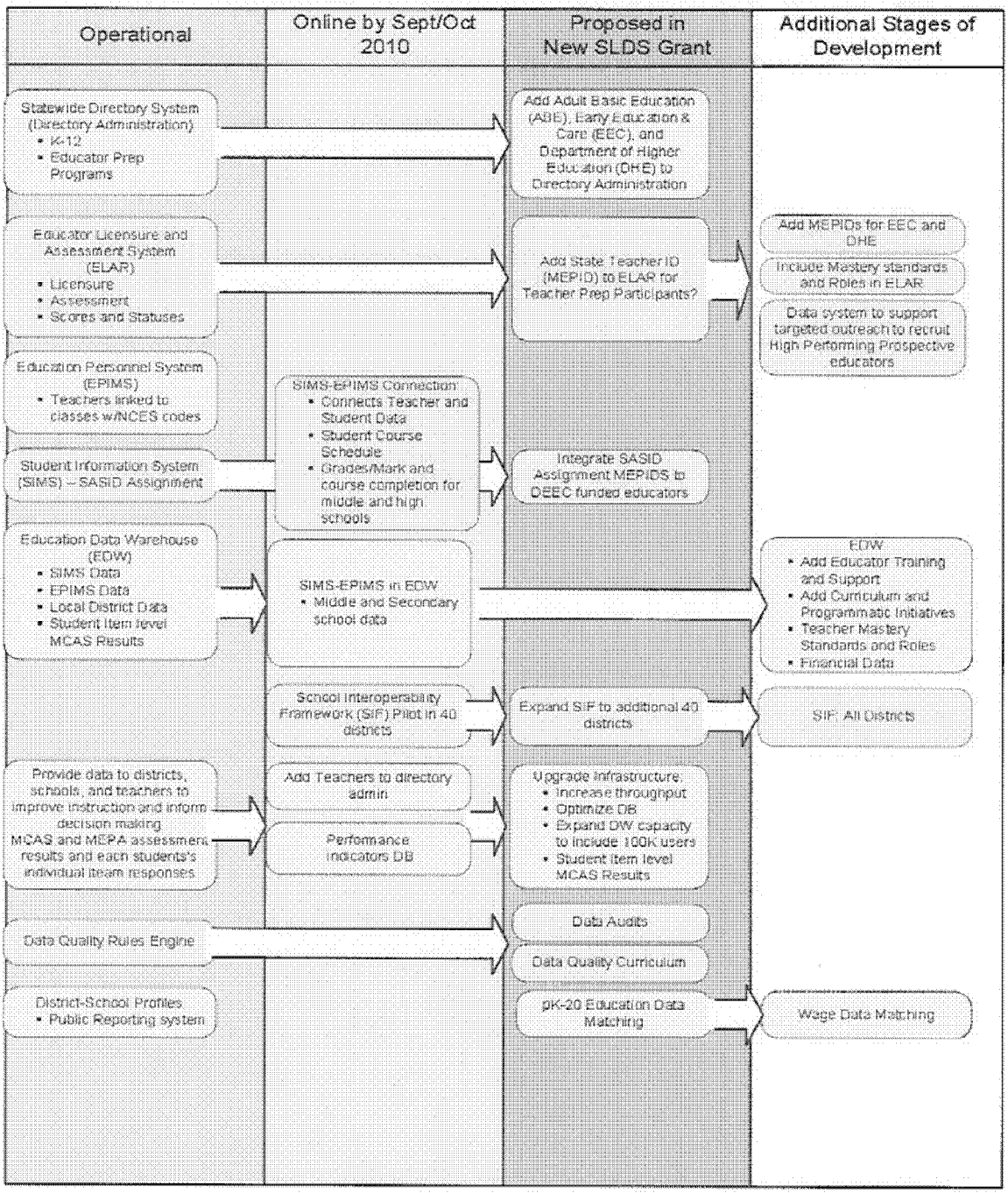
*A unit represents a full academic year of study or its equivalent in a subject that covers all the standards contained in a specific Curriculum Framework.

** Students enrolled in a state-approved Career and Technical Education program of studies have the option of opting out of Foreign Language and Art and still fulfill MassCore.

MassCore is the recommended program of study that Massachusetts high school students need in order to be better prepared for college and a career. Developed by a statewide advisory group from the K-12, higher education and business sectors, MassCore maintains flexibility for students and high schools while allowing districts to set additional graduation requirements. Courses included in MassCore should be rigorous, engaging, and based on appropriate Massachusetts Curriculum Frameworks high school level standards.

In addition, as noted in element #11, data matching with DHE provides postsecondary course enrollment and completion data. A new statewide data collection beginning in October 2010 will collect additional elements at the high school level, including course enrollments and grades/marks.

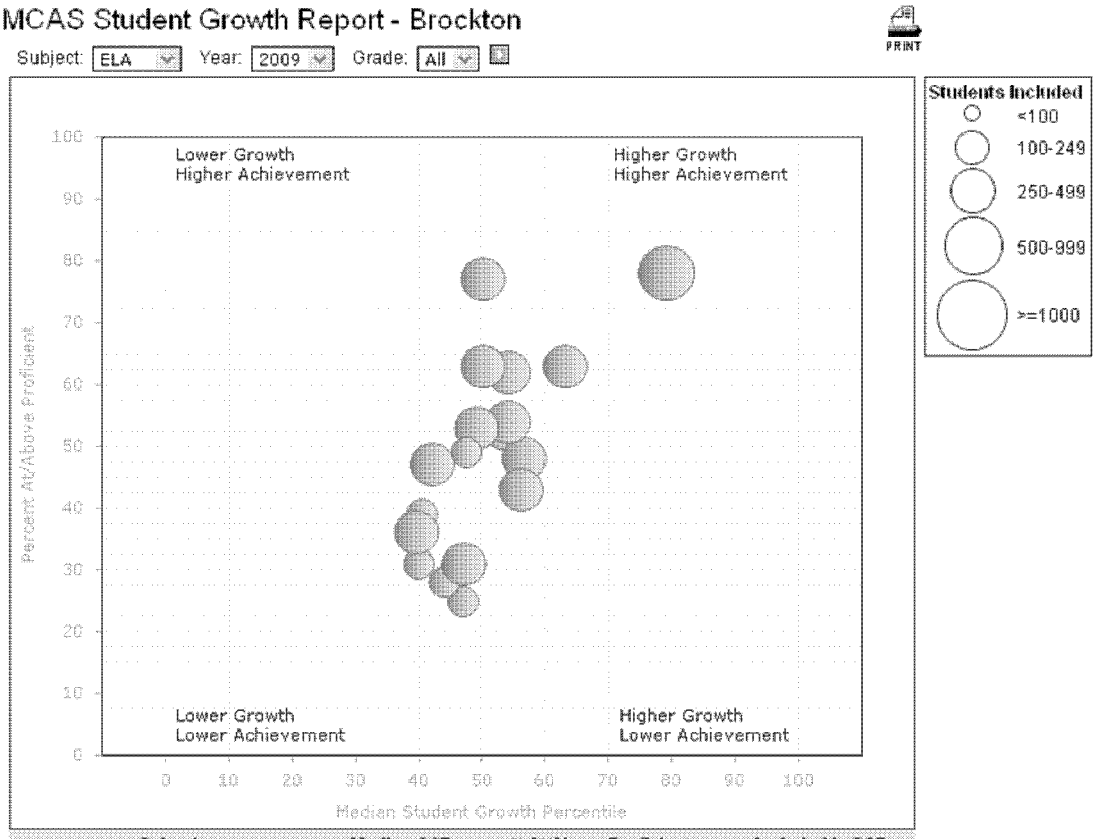
Appendix C2: Current Data Systems and Planned Initiatives



Appendix C3: Samples of Currently Available Reports

1. Student Growth Report:

This aggregate Student Growth Percentile report is available on the ESE's public website. It plots achievment versus growth in ELA and math MCAS scores for grades 4, 5, 6, 7, 8, and 10 in all LEAs and schools in Massachusetts. A user moves the cursor over a bubble to easily access more detailed information (e.g., median SGP for the school, number of students above proficient, and total number of students included). Deeper access to these data is provided through the secure Education Data Warehouse where school and district users can (in compliance with FERPA) drill down from aggregate data (shown at the school-level below) to student-level data.



School	Median SGP	% At/Above Proficient	Included in SGP
Brockton High	79.0	78	696
Brookfield	40.5	39	244
Downey	40.0	31	189
Dr W Arnone Comm Sch	53.0	52	247
East Junior High	56.5	48	412
Edgar B Davis	54.0	54	476
Gilmore Academy	50.0	77	332
Hancock	49.0	53	293
Huntington	47.0	25	132
John F Kennedy	47.5	49	150
Joseph F Plouffe Elem	42.0	47	296
Louis F Angelo Elem	56.0	43	306
Manthala George Jr School	44.0	28	122
Mary E. Baker School	39.5	36	282
North Junior High	54.0	62	443
Oscar F Raymond	47.0	31	281
South Junior High	63.0	63	428
West Junior High	50.0	63	443

2. School Standards Summary Report:

The Standards Summary Report is available in the ESE's EDW at the school and district levels. (The school level report is shown below.) All LEAs and schools in Massachusetts can compare their ELA, math, and science MCAS performance to the state average and the district average for grades 4-8 and grade 10. A user selects a district, school, grade level, and subject area (with an optional prompt for a subgroup such as low income or special education) and the report displays the results by strand and standard within each subject.

Massachusetts Department of ELEMENTARY & SECONDARY EDUCATION

School Standards Summary Report

Year: 2007
District: District A
Group: None

Grade: 8
School: Hammonton Regional MS
Subject: Math

Subgroup: None

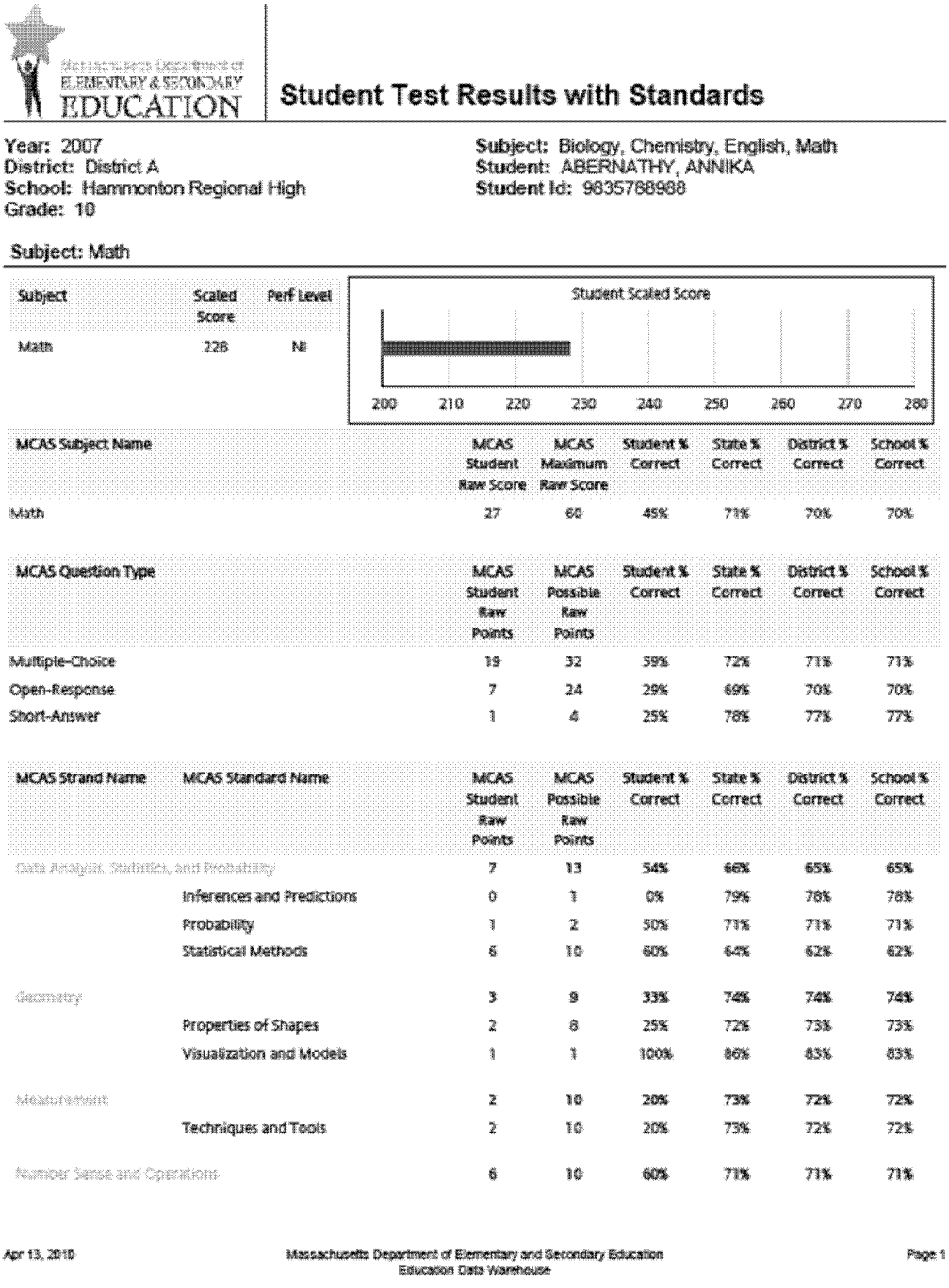
MCAS Subject Name	State % Correct	District % Correct	School % Correct
Math	68%	75%	75%

MCAS Question Type	State % Correct	District % Correct	School % Correct
Multiple-Choice	71%	76%	76%
Open-Response	65%	72%	72%
Short-Answer	67%	74%	74%

MCAS Strand Name	MCAS Standard Name	State % Correct	District % Correct	School % Correct
Data Analysis, Statistics, and Probability		66%	72%	72%
	Inferences and Predictions	66%	70%	70%
	Probability	42%	50%	50%
	Statistical Methods	69%	75%	75%
Geometry		70%	76%	76%
	Locations and Spatial Relationships	67%	74%	74%
	Properties of Shapes	81%	85%	85%
	Visualization and Models	69%	76%	76%
Measurement		63%	69%	69%
	Measurable Attributes and Measurement Systems	52%	58%	58%
	Techniques and Tools	65%	71%	71%
Number Sense and Operations		68%	73%	73%
	Computation	64%	73%	73%
	Numbers	72%	77%	77%
	Operations	57%	62%	62%
Patterns, Relations, and Algebra		72%	79%	79%
	Change	68%	75%	75%
	Models	77%	87%	87%
	Patterns, Relations, and Functions	81%	87%	87%
	Symbols	76%	80%	80%

3. Student Test Results with Standards:

The Student Test Results with Standards Report is available in the ESE's EDW for all LEAs and schools. It provides ELA, math, and science MCAS performance at the student level and breaks down the results by question type, strand, and standard to inform teachers about an individual's strengths and weaknesses. A user with permissions to access student level information filters the data on school, grade level, and subject area prior to generating the requested report.



Massachusetts Department of ELEMENTARY & SECONDARY EDUCATION

Student Test Results with Standards

Year: 2007
District: District A
School: Hammonton Regional High
Grade: 10

Subject: Biology, Chemistry, English, Math
Student: ABERNATHY, ANNIKA
Student Id: 9835788988

Subject: Math

Subject	Scaled Score	Perf Level
Math	228	NI

Student Scaled Score

200 210 220 230 240 250 260 270 280

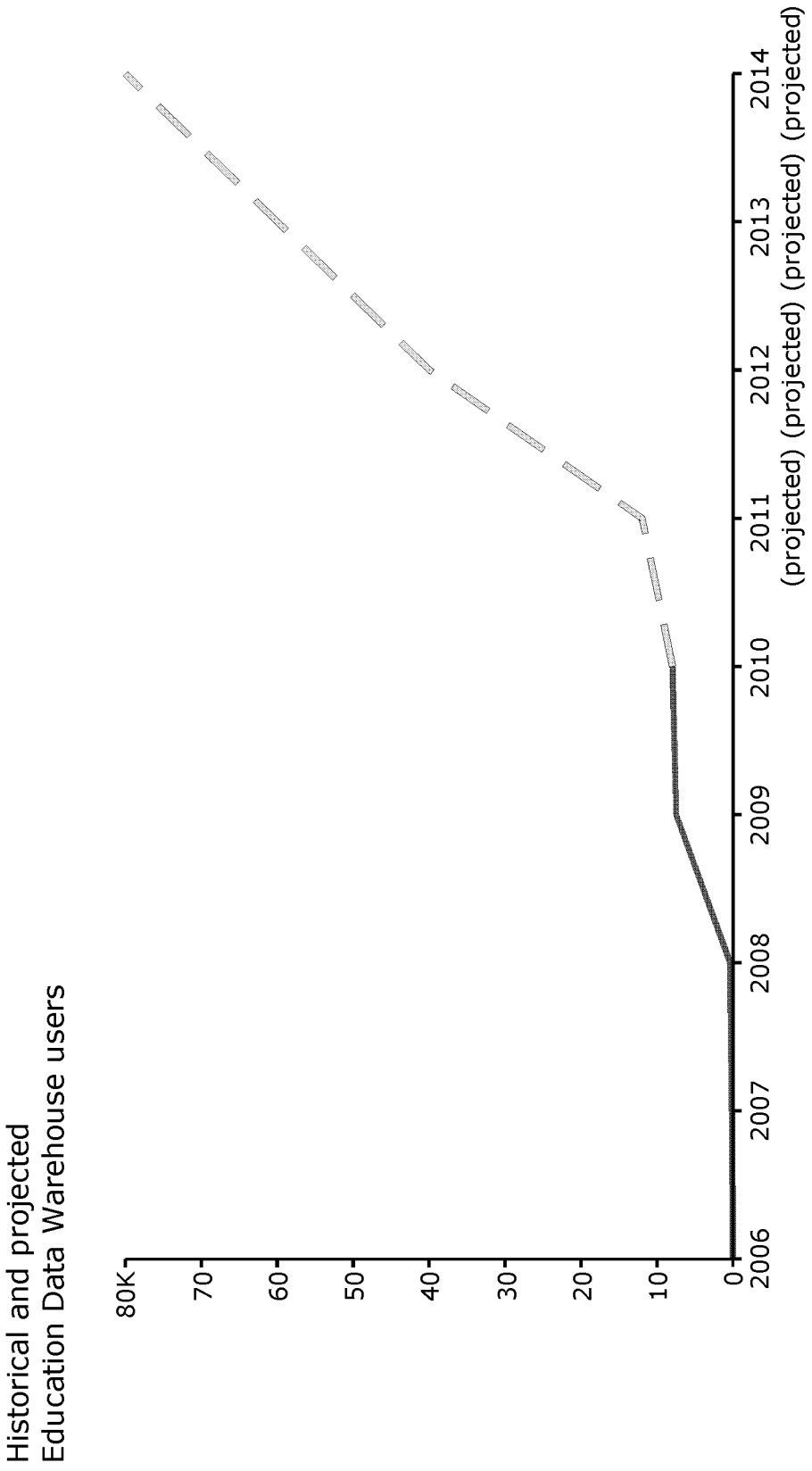
MCAS Subject Name	MCAS Student Raw Score	MCAS Maximum Raw Score	Student % Correct	State % Correct	District % Correct	School % Correct
Math	27	60	45%	71%	70%	70%

MCAS Question Type	MCAS Student Raw Points	MCAS Possible Raw Points	Student % Correct	State % Correct	District % Correct	School % Correct
Multiple-Choice	19	32	59%	72%	71%	71%
Open-Response	7	24	29%	69%	70%	70%
Short-Answer	1	4	25%	78%	77%	77%

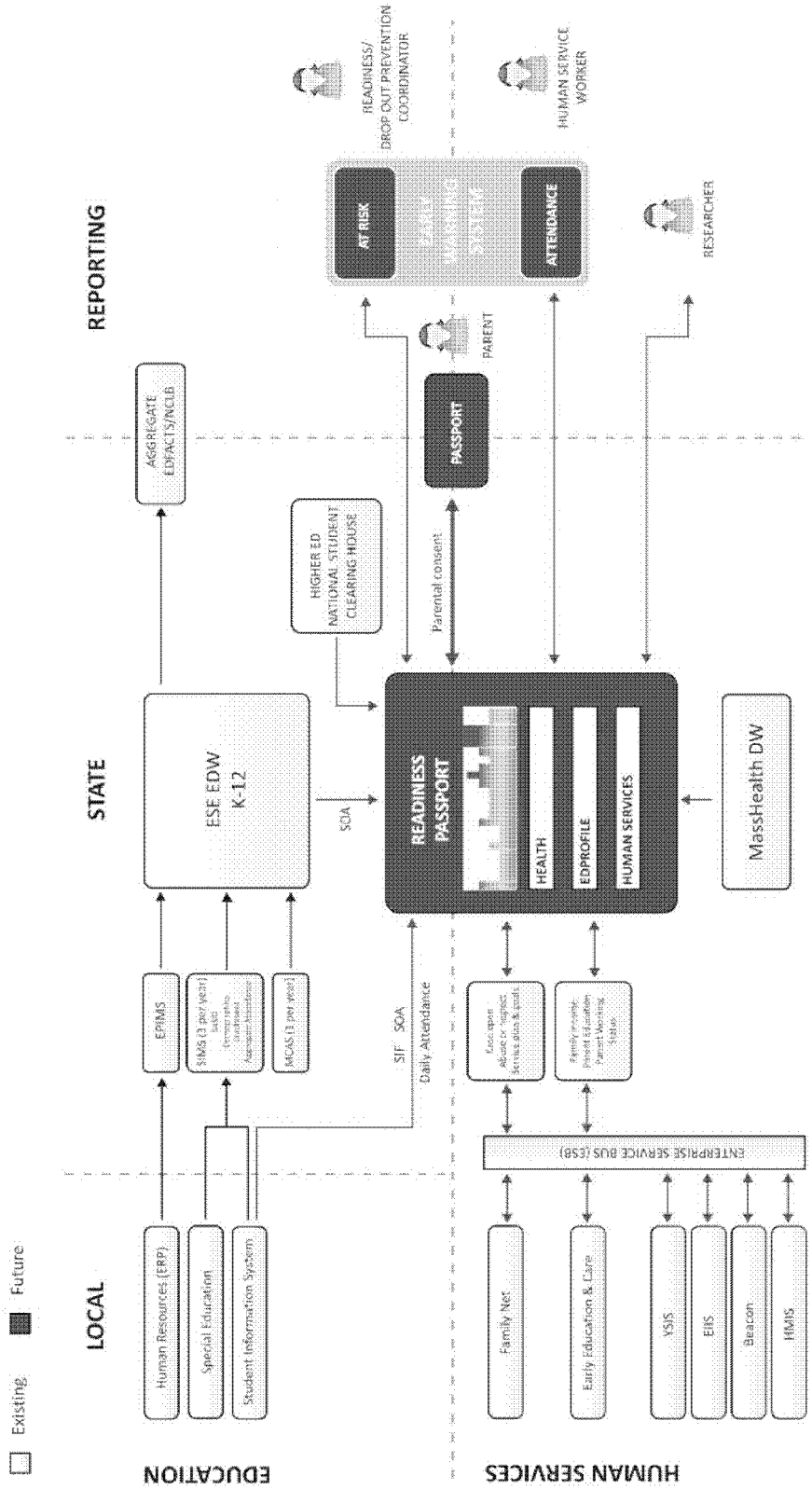
MCAS Strand Name	MCAS Standard Name	MCAS Student Raw Points	MCAS Possible Raw Points	Student % Correct	State % Correct	District % Correct	School % Correct
Data Analysis, Statistics, and Probability		7	13	54%	66%	65%	65%
	Inferences and Predictions	0	1	0%	79%	78%	78%
	Probability	1	2	50%	71%	71%	71%
	Statistical Methods	6	10	60%	64%	62%	62%
Geometry		3	9	33%	74%	74%	74%
	Properties of Shapes	2	8	25%	72%	73%	73%
	Visualization and Models	1	1	100%	86%	83%	83%
Measurement		2	10	20%	73%	72%	72%
	Techniques and Tools	2	10	20%	73%	72%	72%
Number Sense and Operations		6	10	60%	71%	71%	71%

Apr 13, 2010 Massachusetts Department of Elementary and Secondary Education Education Data Warehouse Page 1

Appendix C4: Graph of Historical and Projected Growth in Users of the Education Data Warehouse



Appendix C5: Massachusetts's Vision for a "Readiness Passport"



Appendix C6: School Safety and Discipline Report

The following information is collected from each LEA throughout the school year at the incident and student level.

Massachusetts Department of Elementary and Secondary Education
Drug, Violence or Criminal Related Incidents on School Property

Please complete an electronic copy of this form for each violence or substance-related incident that occurred on school property from July 3, 2009 through June 30, 2010.

Incident ID_____ **Incident Date**_____

Type of Offense	√	Number of Victims				Number of Offenders			Incident resulted in a physical injury (Yes, No)
		Student	*School Personnel*	*Non-School Personnel*	*Unknown*	*Student*	*Non-Student*	*Unknown*	
A	B	C	D	E	F	G	H	I	J
1. Illegal substances									
a. Tobacco use (cigarettes, cigars, pipes or smokeless tobacco)									
b. Alcohol possession									
c. Alcohol use									
d. Marijuana possession									
e. Marijuana use									
f. *Possession of other illegal substances (describe):									
g.*Illegal use of other substances (describe):									
h. Sale of illegal drugs									
i. Possession of illegal drugs with intent to sell									
2. Physical fight									
3. Threat of physical attack									
4. Physical attack, assault (non-sexual)									
5. Sexual Harassment									
6. Sexual assault (including rape)									
7. Theft (school, staff or student property)									
8. Threat of robbery									
9. Robbery using force									
10. Vandalism/Destruction of Property									
11. Destruction of Property due to arson									
12. Kidnapping									
13. Homicide									
14. Weapon on school premises									

a. Knife (cutting weapon)									
b. Gun									
1. Handgun									
2. Rifle									
3. Shotgun									
4. Other firearm									
c. Explosive or incendiary device									
d. Other weapon (describe):									
15. Other violence, drug or criminal incident (Please specify)									
16. Felony Conviction Outside of School (Please indicate type of felony)									

*If you have the information, please indicate which other drugs/substances have been illegally possessed/used on school property.

Massachusetts Department of Elementary and Secondary Education
Student Discipline Record 2009-2010

Please complete an electronic copy of this form for every student disciplined for a violence or drug or criminal -related offense (as reported on a Violence or Drug- Related Incident Report), or any other General Education students receiving a suspension of more than 10 consecutive school days (including expulsion) for non-drug or violence related activities or all Special Education students receiving disciplinary action for non-drug or violence and drug related activities during the 2009-2010 school year.

If the same student is disciplined on more than one occasion, you must complete a separate form for every instance in which that student is disciplined. If you have any questions about completing this form, please contact Data Collection at (781) 338-3282.

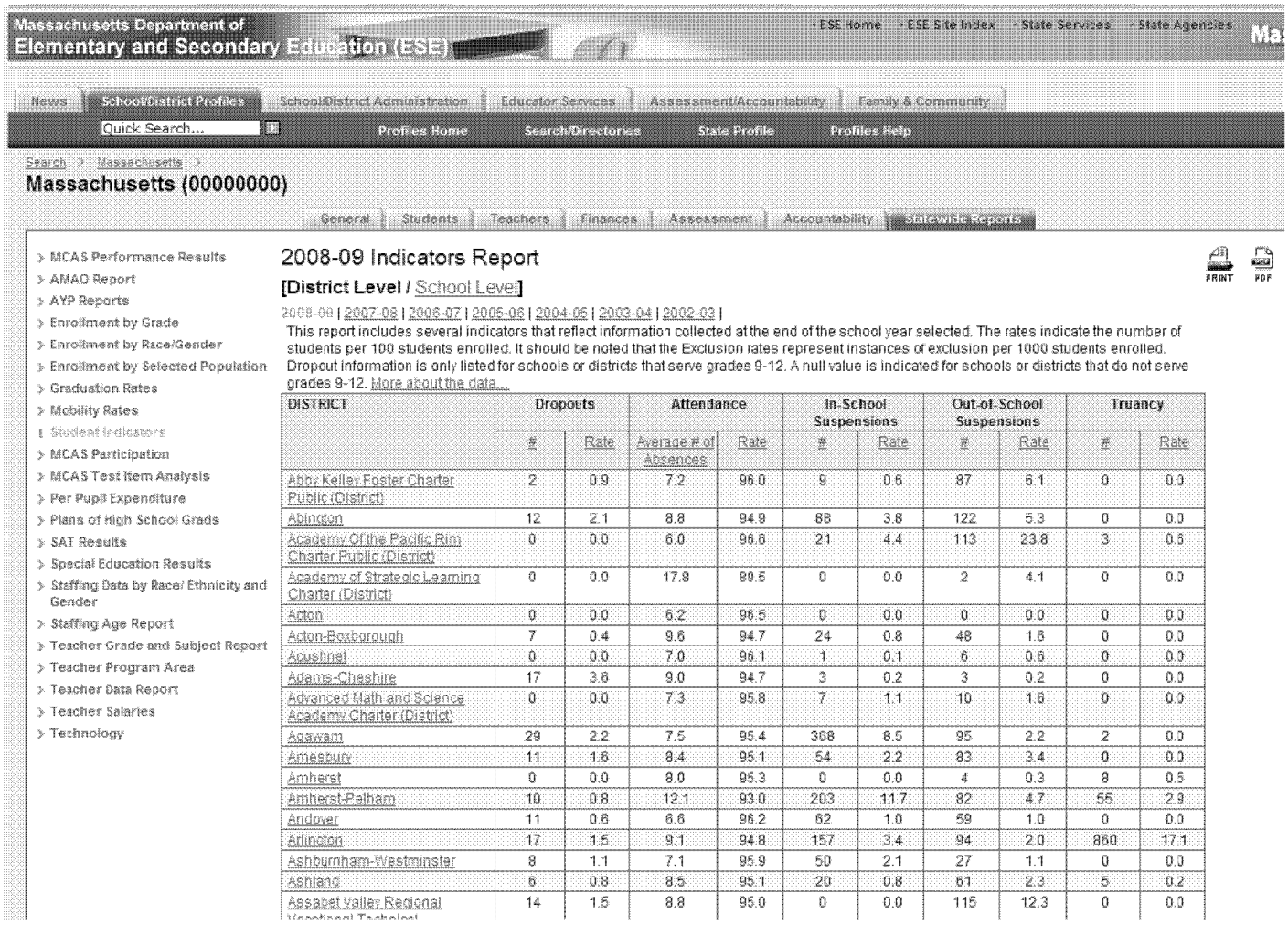
1.	**Incident Date** _____ / _____ / _____ (mm/dd/yyyy) Please enter the date the incident occurred. Date must be during 2009-10 school year.
2.	**Incident ID** _____ This number will be automatically generated by the Department.
3.	**SASID** _____ Please enter the State Assigned Student Identification number for the student.
4.	First Name _____ **(This information will automatically be displayed by the Department)**
5.	**Date of Birth** _____ / _____ / _____ (This information will automatically be displayed by the Department)
6.	**Program Status** (This information will automatically be displayed by the Department) _____ 1. General Education _____ 2. Special Education - student has an Individualized Education Plan
7a.	**Disciplinary action taken** (check only one) _____ 1. In-school suspension (1 day or more) _____ 2. Out-of-school suspension (1 day or more) _____ 3. Expulsion * _____4. Removed by an impartial hearing officer to an alternative setting _____5. Removed by school personnel to an alternative setting (Items 4 and 5 should only display if Program Status = 2. Special Education)
7b.	**Is this student being disciplined as the result of an incident that caused serious bodily injury?** _____ 1. Yes _____ 2. No (Item 7b should only display if Program Status = 2. Special Education)
8.	**Start Date** _____ / _____ / _____ (mm/dd/yyyy) Indicate date student was initially removed from school in this instance. Date must be during 2009-10 school year.
	Complete only ONE of the following two items. (If student moved or transferred, complete 8-10 as if student remained enrolled there.)
9.	**Date Returned to School** _____ / _____ / _____ (mm/dd/yyyy) Indicate date if the student returned to school.
10.	**Date Eligible to Return** _____ / _____ / _____ (mm/dd/yyyy) If the student has not yet returned to school and is eligible to return, indicate date eligible to return. Enter 09/01/10 if student was removed for remainder of the 2009-10 school year.
11.	**Number of school days missed due to disciplinary action** _____ Count number of school days from the start date of suspension/exclusion, to the return date or eligible return date. For exclusions through the end of the 2009-10 school year, or expulsions, count the number of days through the last day of the 2009-10 school year.
12.	**Alternative Education** Did the district provide the student with alternative education for the duration of exclusion _____ 1. Yes _____ 2. No
13.	**Type of Alternative Education** (if Yes checked in 12 above; otherwise leave blank) If the district provided the student with alternative education, in what setting were services provided? _____ 1. Home tutoring _____ 2. In-district alternative program _____ 3. Alternative program in another district _____ 4. Private alternative setting _____ 5. Work/community service setting

14.	**Alternative Education Not Provided** (if No checked in 12 above; otherwise leave blank) Indicate the reason why the student was not provided with alternative education. _____ 1. Moved/transferred _____ 2. Refused/did not respond _____ 3. Incarcerated * _____ 4. School exercised its right to not provide alternative education *

*** Students who are incarcerated may be expelled. Students with disabilities may be expelled, or removed from the current setting permanently for disciplinary reasons. However, IDEA regulations specify that continued educational services representing a free and appropriate public education (FAPE) must be provided, even though a student may not be allowed to return to the same setting, until they exit the school district.**

Appendix C7: Sample Profile Report

Description of report below: This summary report is available through ESE's website and includes aggregate data on every LEA and school in Massachusetts on dozens of measures (each of which has its own more detailed set of reports), from student demographic and performance data to teacher salaries to school technology resources. Historical data for these measures is available dating back to 2003.



Massachusetts Department of Elementary and Secondary Education (ESE)

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- Enrollment by Selected Population
- Graduation Rates
- Mobility Rates
- Student Indicators
- MCAS Participation
- MCAS Test Item Analysis
- Per Pupil Expenditure
- Plans of High School Grads
- SAT Results
- Special Education Results
- Staffing Data by Race/ Ethnicity and Gender
- Staffing Age Report
- Teacher Grade and Subject Report
- Teacher Program Area
- Teacher Data Report
- Teacher Salaries
- Technology

2008-09 Indicators Report

PRINT PDF

[District Level / School Level]

2008-09 | 2007-08 | 2006-07 | 2005-06 | 2004-05 | 2003-04 | 2002-03 |

This report includes several indicators that reflect information collected at the end of the school year selected. The rates indicate the number of students per 100 students enrolled. It should be noted that the Exclusion rates represent instances of exclusion per 1000 students enrolled. Dropout information is only listed for schools or districts that serve grades 9-12. A null value is indicated for schools or districts that do not serve grades 9-12. More about the data...

DISTRICT	Dropouts		Attendance		In-School Suspensions		Out-of-School Suspensions		Truancy	
	#	Rate	Average # of Absences	Rate	#	Rate	#	Rate	#	Rate
Abby Kelley Foster Charter Public (District)	2	0.9	7.2	96.0	9	0.6	87	6.1	0	0.0
Abington	12	2.1	8.8	94.9	88	3.8	122	5.3	0	0.0
Academy Of the Pacific Rim Charter Public (District)	0	0.0	6.0	96.6	21	4.4	113	23.8	3	0.6
Academy of Strategic Learning Charter (District)	0	0.0	17.8	89.5	0	0.0	2	4.1	0	0.0
Acton	0	0.0	6.2	96.5	0	0.0	0	0.0	0	0.0
Acton-Boxborough	7	0.4	9.6	94.7	24	0.8	48	1.6	0	0.0
Acushnet	0	0.0	7.0	96.1	1	0.1	6	0.6	0	0.0
Adams-Cheshire	17	3.6	9.0	94.7	3	0.2	3	0.2	0	0.0
Advanced Math and Science Academy Charter (District)	0	0.0	7.3	95.8	7	1.1	10	1.6	0	0.0
Agawam	29	2.2	7.5	95.4	368	8.5	95	2.2	2	0.0
Amesbury	11	1.6	8.4	95.1	54	2.2	83	3.4	0	0.0
Amherst	0	0.0	8.0	95.3	0	0.0	4	0.3	8	0.5
Amherst-Pelham	10	0.8	12.1	93.0	203	11.7	82	4.7	55	2.9
Andover	11	0.6	6.6	96.2	62	1.0	59	1.0	0	0.0
Arlington	17	1.5	9.1	94.8	157	3.4	94	2.0	860	17.1
Ashburnham-Westminster	8	1.1	7.1	95.9	50	2.1	27	1.1	0	0.0
Ashland	6	0.8	8.5	95.1	20	0.8	61	2.3	5	0.2
Assabet Valley Regional	14	1.5	8.8	95.0	0	0.0	115	12.3	0	0.0

Appendix C8: Interim Assessment in the Everett, MA Public Schools

The following is a brief description of two interim assessment systems being piloted by the Everett, MA Public Schools. Everett's experience and current efforts are representative of a large number of mid-sized Massachusetts school districts. The Teaching and Learning System we propose will respond to the needs and interests already identified by these districts. Further, we will provide a technology and data infrastructure that rapidly provides their teachers and instructional leaders with more comprehensively integrated reports than these stand alone solutions typically provide as well as links to appropriate proven instructional resources – at a lower long term per student cost than single districts acting alone can procure.

The Everett Public Schools, is a local public school system with an enrollment of 6,135 students in 7 schools PK through 12. The district is currently piloting two very different assessment systems with the original intention of adopting one of the two piloted systems or a similar system for future use.

Previously, each school had their own, locally developed (within the school) system of interim assessments administered several times throughout the year to students at each grade level. There was significant variability in the tests themselves between the elementary buildings and between the grade levels. What was being tested at a particular grade level in one school may not have been tested in the same grade at the same time at a different school. There was little consistency in test administration and, in addition, the district had no method of determining the validity or reliability of the test instruments. Did they measure what they were intended to measure? Furthermore, the district had no means with which to systematically analyze the aggregated data (grade level across the district), or the disaggregated data (subgroup or individual student performance). Schools and teachers were left to analyze the data on their own, and develop intervention plans that addressed the needs of the students in their classrooms.

In an effort to provide a more focused method of assessing the curriculum, the delivery of service and student progress, the district sought to implement an assessment system district wide that would accomplish that task.

Two systems are being piloted this school year, are Assessment Technology Incorporated's Galileo K-12 and Northwest Evaluation Association's Measure of Academic Progress (MAP) system. The Galileo system is a standards-based instructional improvement system that is aligned with the Massachusetts state standards. Grade level teachers from across the district determine which items to use in the grade level test. All students are administered the same test, composed of mutually agreed upon items, they take it at the same time. Upon completion, answer sheets are scanned into the system, uploaded to ATI and reports are generally available twenty-four hours later. With the data in hand, staff can see potential shortcomings in the broad curriculum across the district or in the performance within classrooms and with individual students themselves. They have enough detailed information to prepare remediation plans for each level.

The NWEA MAP system is a computerized adaptive assessment tool that adjusts item difficulty based upon a student's previous responses while taking the test. If a student answers a question correctly, the test presents a more challenging question to the student. If the student misses the question, an easier item is presented. As with the Galileo system, a number of reports are available at all levels for analysis.

Generally the two systems differ in that with MAPS, NWEA works with educators to create test items that students experience and with Galileo, district teachers construct the tests from items they select. MAPS is a completely computerized assessment system, whereas Galileo has the look and feel of the MCAS tests.

Appendix C9: Legacy Development Track Record

ESE has an impressive track record of successfully building, implementing, and maintaining complex legacy IT projects. Below is a list of projects which ESE has played a substantial role in developing on its own or in partnership with vendors.

Application	Description	Launch Year	Partnership	Build
SIMS	Statewide Student Information System with unique identifier. Used by 392 LEA tracking approximately 1M students a year	1997/2001		√
ELAR	Transactional Educator Licensure System actively used by 80,000 educators[1]	2001/2002		√
EPIMS	Statewide Educator Identifier and Information System; tracking 80,000 educators in 392 LEAs	2006		√
Directory Admin	Single sign-on system and directory of LEA and state agency directory information	1999	√	
School and District Profiles	Public website user interface providing a wide range of comprehensive ESE reports including individual profiles, views that can be sorted and downloads of school and district directories and data reports.	2000		√
Curriculum Frameworks Search	Application which supports searches and retrieval of standards across any subject area, strand, and grade.	2009		√
Education Data Warehouse	Collaborative effort among ESE and LEAs to centralize PreK–12 educational performance demographic and growth data into one state coordinated data repository hosted by the Department.	2007	√	
MassOne (formerly VES)	Set of web-based tools for communication, collaboration, and curriculum planning, which are designed to support K–12 standards-based teaching and learning.	2000	√	

[1] Won "Outstanding Achievement Award" in the category of Digital Government from the National Association of State Chief Information Officers in 2002

Boston Public Schools

Office of the Superintendent

May 24, 2010

The Honorable Arne Duncan
Secretary of Education
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan,

I am writing to express my support for the Race to the Top application submitted by the state of Massachusetts and pledge to work collaboratively with the state in building an interim/formative assessment system. Boston recognizes the need for predictive and diagnostic data based on psychometrically sound assessments to aid teaching and learning. The district has purchased formative assessment systems for grades 3-12 and has begun to implement these assessments in our schools this school year. Our goal as a district is to utilize the data generated from these assessments as the basis of data inquiry in our schools with the purpose of informing instruction in every school.

This district-wide implementation of a formative assessment system is at the core of Boston Public Schools' Acceleration Agenda, which states that "a great urban public school system should offer the best education possible for all of its students, that sustained and transformative change requires shifting our frame of reference, and that schools should be focused on academic achievement, both in the classroom and beyond to connections with families, the community, and support programs." The data generated from these formative assessments allows our teachers to tailor their instruction and focus

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Boston Public Schools' experience with formative assessment systems – from the request for proposals through the training and implementation of the systems, to our ongoing design of professional development for the use of the data – will benefit the state of Massachusetts in providing important lessons learned, as well as aiding in the planning for the design of a state-wide system that can be utilized in all districts. Boston's on-going experience with the formative assessment systems will also provide the opportunity for Boston and the state of Massachusetts to work collaboratively to learn where the systems currently work well with teachers, instructional leaders, and district leaders, and where there may be opportunities for improvement. Boston Public Schools also recognizes that no matter how rigorous the assessments, student academic outcomes cannot be improved without intensive professional development support for teachers and teacher-teams. With the support of the MA Department of Elementary and Secondary Education, we are eager to serve as a lab for exploring the effectiveness of different models.

I also write to confirm Boston's active participation in the evaluation of formative assessment systems for the state of Massachusetts, as well as our participation in the decision to build a state-wide formative assessment system. We also commit to participating in the working group that will guide the planning, scoping, design, development, and implementation efforts over the coming four years of the Department of MA Elementary and Secondary Education's proposed "teaching and learning system" that integrates interim and formative assessment data and seamlessly connects them to related curriculum resources and the Education Data Warehouse system.

Finally, I support this application as it provides an unprecedented opportunity for the Boston Public Schools and the state of Massachusetts to work together to arrive at the best solution for the students of Massachusetts for years to come. I hope that the Department of Education will give this proposal every possible consideration.

Sincerely,

Carol R. Johnson
Superintendent

Central Office
P.O. Box 1410
195 State Street
Springfield, MA 01102-1410

SPRINGFIELD PUBLIC SCHOOLS - SPRINGFIELD, MASSACHUSETTS

Dr. Alan J. Ingram
Superintendent of Schools
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Tel. 413.787.7087
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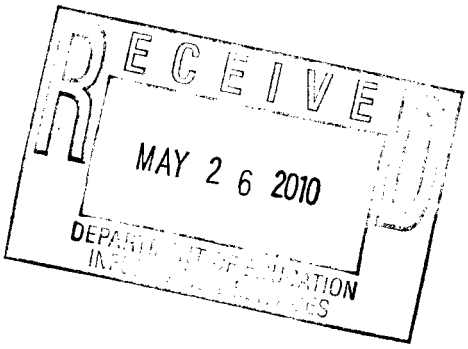


May 24, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

It is with great pleasure that I write this letter of support for the Massachusetts Department of Elementary and Secondary Education's Race to the Top application, and in particular, their unified assessment system initiative which would support the creation of statewide interim and/or formative assessments. The availability of a rigorous, valid, and reliable assessment system which contains a continuum of assessments and is in complete alignment with our state standards is an absolute necessity for increasing student achievement. Having that system in use statewide will be valuable in measuring and evaluating our students' achievement and growth in relation to their peers both locally and statewide.

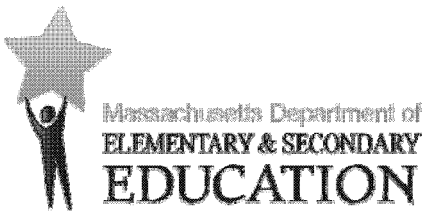
The partnership between the Springfield Public Schools and the Massachusetts Department of Elementary and Secondary Education is strong. We have collaborated on several projects, including the Education Data Warehouse, a previous assessment system, and numerous grants. I am certain that this new initiative will continue the pattern, and I urge you to act favorably upon their application.

With hope,

Alan J. Ingram, Ed.D.
Superintendent of Schools

Appendix C11: Released Items Count by Grade and Subject

Subject and Grade	Released Item Counts																	
YEAR	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL
ELA 3	X	X	X	42	42	42	42	42	42	42	42	13	13	13	13	13	13	414
ELA 4	35	41	42	42	42	42	42	42	42	42	42	19	19	19	19	19	19	568
ELA 5	X	X	X	X	X	X	X	X	40	40	40	17	17	17	17	17	17	222
ELA 6	X	X	X	X	X	X	X	X	40	40	40	18	18	18	18	18	18	228
ELA 7	X	X	X	42	42	42	42	42	42	42	42	19	19	19	19	19	19	450
ELA 8	34	41	41	41	X	X	X	X	40	40	40	17	17	17	17	17	17	379
ELA 10	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	714
March ELA Retest	X	X	X	41	41	41	41	41	41	41	41	41	41	41	41	41	41	574
Nov. ELA Retest	X	X	X	41	41	41	41	41	41	41	41	41	41	41	41	41	41	574
Math 3	X	X	X	X	X	X	X	X	35	35	35	16	16	16	16	16	16	201
Math 4	32	39	39	39	39	39	39	39	39	39	39	17	17	17	17	17	17	524
Math 5	X	X	X	X	X	X	X	X	39	39	39	17	17	17	17	17	17	219
Math 6	X	X	X	39	39	39	39	39	39	39	39	17	17	17	17	17	17	414
Math 7	X	X	X	X	X	X	X	X	39	39	39	17	17	17	17	17	17	219
Math 8	32	39	39	39	39	39	39	39	39	39	39	17	17	17	17	17	17	524
Math 10	39	42	42	41	42	42	42	42	42	42	42	42	42	42	42	42	42	710
March Math Retest	X	X	X	42	42	42	42	42	42	42	42	42	42	42	42	42	42	588
Nov. Math Retest	X	X	X	42	42	42	42	42	42	42	42	42	42	42	42	42	42	588
STE 4	32	39	39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	110
STE 5	X	X	X	20	20	39	39	39	39	39	39	19	19	19	19	19	19	388
STE 8	32	39	39	20	20	39	39	39	39	39	39	19	19	19	19	19	19	498
STE 10	38	42	42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	122
Biology	X	X	X	X	X	X	22	22	45	45	45	45	45	45	45	45	45	449
February Biology	X	X	X	X	X	X	X	X	X	X	X	45	45	45	45	45	45	270
Chemistry	X	X	X	X	X	X	22	22	45	45	45	X	45	45	45	45	45	404
Physics	X	X	X	X	X	X	22	22	45	45	45	45	45	45	45	45	45	449
Tech./Eng.	X	X	X	X	X	X	22	22	X	45	45	X	45	45	45	45	45	359
HSS 5	X	X	X	39	39	X	X	X	X	17	17	X	X	X	17	17	17	163
HSS 7	X	X	X	X	X	X	X	X	X	17	17	X	X	X	17	17	17	85
HSS 8	X	39	39	39	39	X	X	X	X	X	X	X	X	X	X	X	X	156
HSS High School	X	39	38	42	X	X	X	X	X	23	24	X	X	X	48	96	96	406
TOTAL	316	442	442	693	611	571	659	659	939	1041	1042	627	717	717	799	847	847	11969
	Prior Framework Total = 1709						Current Framework Total = 7050							Future Total = 3210				



MODULE 0: INTRODUCTION TO THE TOOLKIT

Table of Contents

Tools and Resources for the Introduction

0.1.1R: Objectives for All Modules

0.1.2R: Tools and Resources for All Modules

0.2.1T: District Data Team Self-Assessment

INTRODUCTION

Welcome to the District Data Team Toolkit. This Toolkit is designed to help a district establish, grow, and maintain a culture of inquiry and data use that can inform decisions that impact teaching and learning, and ultimately improve the achievement of all students. This short introduction will help you understand and navigate the tools and resources available to support this work.

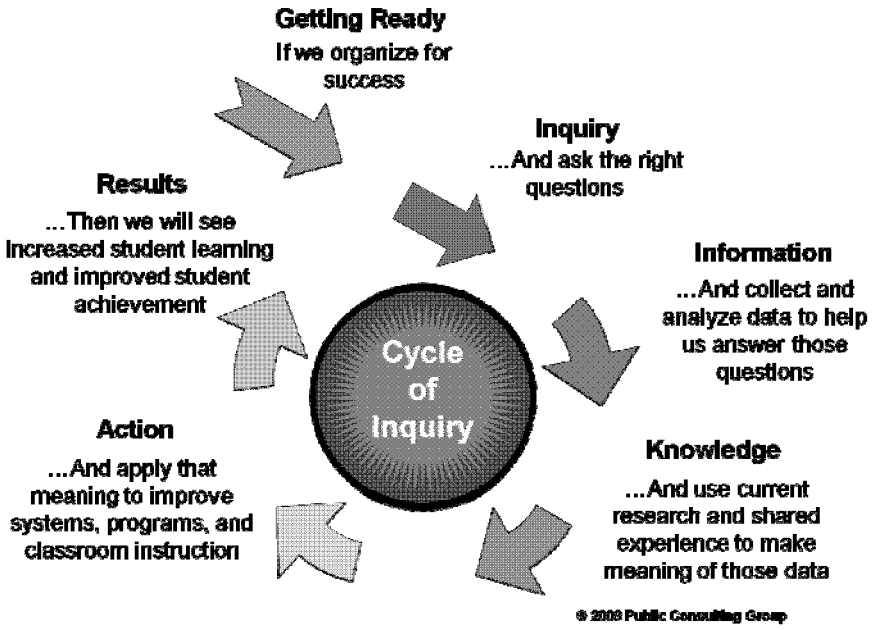
WHAT IS THE TOOLKIT?

Ensuring the effective use of inquiry and data district-wide involves many tasks and types of expertise. For that reason, this Toolkit is designed to assist in the establishment of a District Data Team—a cadre of staff who is collectively responsible for the technical, organizational, and substantive aspects of data use. These Team members must be data literate and able to lead the collaborative inquiry process with both district and school staff. Members of the District Data Team work with district staff and school-level data teams to:

- Craft questions about accountability, equity, and continuous improvement
- Coordinate the collection, analysis, and dissemination of data displays that are necessary to address these essential questions
- Build action plans
- Monitor progress of improvement initiatives

These activities can help build the capacity of a District Data Team to engage in inquiry and use data to inform district-level decisions. Over time, the Team can engage the entire staff in using multiple data sources to continuously improve teaching and learning throughout the district. Districts that engage with the Toolkit should plan for a multi-year commitment to increase and embed a capacity for effective data use.

The Toolkit is designed around a theory of action, the Data-Driven Inquiry and Action Cycle (see diagram) on the next page, which provides a foundation for effective data use. The Cycle provides a structure that takes data use from asking the right questions to getting results. It is an iterative process in which the district uses data to target and support continuous improvement. A disciplined application of this kind of data-driven approach can build a district and school environment that is focused on continuous improvement grounded in evidence. This Cycle is also the basis for the ESE Education Data Warehouse trainings, which further provide excellent tools to access and analyze data. But analyzing data alone will not result in continuous improvement. Concrete actions that are grounded in evidence and continually monitored through the collection and analysis of multiple forms of data are critical to achieve improved results.



HOW CAN THE TOOLKIT HELP OUR DISTRICT?

Districts and schools gather enormous amounts of data throughout the school year. These data have historically been collected merely to comply with external requirements. Increasingly, educators are seeking ways to use data systemically for their own learning and to inform decisions about curriculum, instruction, resource allocation, and other vital functions at district and school levels.

The ESE District Data Team Toolkit can help district staff:

- Organize a District Data Team to facilitate productive use of data throughout the district
- Learn and practice the steps of an effective data use model
- Access and apply tools and resources to support a process of inquiry

Engaging with this Toolkit can help a district identify and/or refine a focus for improvement, including determining if current improvement efforts are having the desired effect on student learning outcomes. For example, a district may frame an inquiry process around one aspect of an existing District Improvement Plan as a means to delve deeply into questions about the impact of the related initiatives. Once a District Data Team has built its own capacity for data use and a culture of inquiry, it will be better poised to support such efforts with principals, teachers, and other stakeholders in the district.

WHAT'S IN THE TOOLKIT?

The Toolkit has seven modules – this Introduction, and six modules aligned to the Data-Driven Inquiry and Action Cycle. Each module contains objectives, detailed information, tools, and resources to help implement the work.

1. Getting Ready module provides guidance on forming a District Data Team and taking steps to build a solid foundation for building a culture of inquiry and systemic data use. The module addresses the need for systems to inventory, collect, and disseminate the data. It also has information to promote assessment literacy and help manage change.
2. Inquiry module launches a process of inquiry by identifying high-level questions of importance to the district, generating clarifying questions to focus the inquiry, and identifying data needed to answer them. The module includes guidance for effective data displays and data overviews.
3. Information module guides the process of analyzing the data identified in Inquiry, first making factual observations about the data and then generating inferences about what the data mean.
4. Knowledge module helps place information (analyzed quality data) into the context of research and practice to accurately define the problem and identify possible solutions.
5. Action module provides frameworks for putting new knowledge to work by developing a logic model and articulating clear measures that will guide and focus the work, and then by creating an action plan (if necessary). If the information and knowledge gained from quality data analysis are not acted on, data collection efforts are wasted and improvement won't occur!
6. Results module shares methods for monitoring the work, evaluating the impact, making mid-course corrections if necessary, and communicating the outcomes with stakeholders.

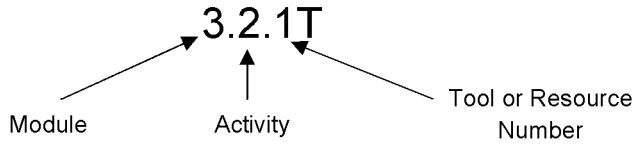
HOW SHOULD THE TOOLKIT BE USED?

The Toolkit is designed for district-level staff, to promote the skills and knowledge necessary to build their capacity to effectively use inquiry and data to inform district-level decisions. As a District Data Team gains comfort with the tools, resources, and processes in the Toolkit, it can plan ways to share them with school-and teacher-level data teams.

Each of the modules provides specific tools and activities to implement the steps of the inquiry process. Some tools are best used electronically. It is important to understand, however, that superimposing a process does not necessarily yield a positive result. A district must be mindful of doing what it can to embed a culture of inquiry and data use that goes beyond technical compliance with processes.

HOW DO I NAVIGATE THE TOOLKIT?

No matter the entry point taken, the Toolkit is designed to support ready access to tools and resources as a District Data Team needs them, using a numbering system to make finding the right tool quick and efficient.



When an activity has multiple tools or resources associated with it, they are numbered sequentially and designated with either a T (tool) or an R (resource).

Tools *are templates, protocols, organizers, or other items that the Team will work with to build its knowledge and expertise.*

Resources *provide further reading, documentation, or guidance to help the Team use the tools or expand its understanding.*

Activity 0.1 Overview of Toolkit Contents

These documents summarize elements of the Toolkit in order to assist a district in engaging with ones that will be most useful to its work.

(0.1.1R: Objectives for All Modules)
(0.1.2R: Tools and Resources for All Modules)

WHERE SHOULD OUR DISTRICT BEGIN?

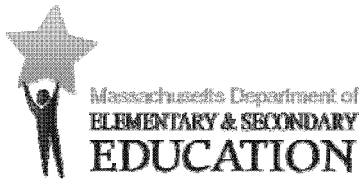
Districts should begin by engaging with the *District Data Team Self-Assessment*, at the end of this Introduction module, which will help determine the district's strengths and areas of need in regards to data use and a culture of inquiry. The *Self-Assessment* aligns with each of the modules and therefore can help the district identify where to begin engaging with the Toolkit – which modules, tools, and resources would most help the district move forward with its work.

If in doubt, a district might gain the most value from starting in *Module 1:* Getting Ready and working through the Toolkit sequentially, committing to a multi-year process of building robust use of data at the district level. If the District Data Team has been in existence for several years and needs to work on refining processes and policies that support data use, it may find it useful to go directly to certain tools in the Toolkit.

Activity 0.2 District Data Team Self-Assessment

This self-assessment can help a district determine its strengths and needs, and how best to use this Toolkit to support inquiry and data use.

(0.2.1T: District Data Team Self-Assessment)



Many thanks to all the individuals who contributed to the creation of this Toolkit, including a number of personnel from:

Public Consulting Group (PCG);

MA ESE Offices of Urban District Assistance, School Improvement Grants Management, Information Technology, Data Collection, and the Center for Curriculum and Instruction; and

Brockton, Chelsea, Fitchburg, Holyoke, and Lynn Public School Districts.

For more information on this and other district support resources, or to share feedback on this tool, visit http://www.doe.mass.edu/sda/ucd/ or email districtassist@doe.mass.edu.

Appendix C13: Memorandum of Understanding for Data Sharing with Researchers Template

MEMORANDUM OF AGREEMENT BETWEEN THE MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION AND [insert organization name]

This Memorandum of Agreement ("the Agreement") is entered into on this _____ day of _____, _____ by and between the Massachusetts Department of Elementary and Secondary Education ("the Department") and [organization] for the purpose of conducting the [project name] (hereinafter "the project").

I. PARTIES. The Massachusetts Department of Elementary and Secondary Education is a state educational agency, authorized to collect and maintain student educational records and to receive information from local educational agencies (LEAs) consistent with applicable state and federal laws and subject to the federal Family Educational Rights and Privacy Act (FERPA), as authorized by 20 U.S.C. § 1232g(b) and 34 CFR Part 99, and the Fair Information Practices Act (FIPA), M.G.L. c. 66A.

[description of organization with whom we are sharing data]

II. PURPOSE. The purpose of the Agreement is to document the terms under which the Department is authorized to release to [organization] personally identifiable student information for the project, and to designate [organization] as the authorized representative of the Department consistent with applicable federal and state laws concerning access to and confidentiality of student record information including FERPA and FIPA. As described herein, [organization], as the Department's authorized representative, may have temporary access to data in the custody of the Department for use in the project identified in this Agreement and any addenda to it. A description of the project is attached hereto.

III. AUTHORITY. Consistent with the federal Family Educational Rights and Privacy Act (FERPA), the Department designates [organization] as its agent for the purpose of disclosing personally identifiable information from students' education records.

[choose one below]

1. *for an audit/evaluation of state or federal programs or compliance with federal legal requirements related to those programs:* … in connection with the Department's audit or evaluation of a federal or state supported education program, or for the enforcement of or compliance with federal legal requirements which relate to those programs pursuant to 34 CFR §§ 99.31(a)(1) and 99.35(a).

2. *for studies to develop tests, administer aid, or improve instruction:* …in connection with the Department's conducting studies to develop, validate, or administer predictive tests; administer student aid programs; or improve instruction, pursuant to 34 CFR § 99.31(a)(6)(i).

Such disclosures are also consistent with the Fair Information Practices Act, M.G.L. c. 66A, § 2(c).

IV. DATA DISCLOSURE. The Department shall provide [organization] with the following data: [list data elements or information, the Department database from which it comes, periods that the data will cover, grades covered, and the timeline for disclosure].

V. TERMS AND CONDITIONS. To effect the transfer of data and information that is subject to State and Federal confidentiality laws and to ensure that the required confidentiality of personally identifiable information shall always be maintained, [organization] agrees to:

1. In all respects comply with the provisions of FERPA. For the purposes of the Agreement and the specific projects conducted pursuant to the Agreement and described in addenda to it, FERPA includes any amendments or other relevant provisions of federal law, as well as all requirements of 34 CFR Part 99 and 20 U.S.C. § 1232g. Nothing in this Agreement may be construed to allow either party to maintain, use, disclose, or share student record information in a manner not allowed under Federal law or regulation.

2. For purposes of this project and for ensuing [organization]'s compliance with the terms of this Agreement and all applicable state and federal laws, [organization] designates [name] as the temporary custodian of the Department's data. The Department will release all data and information for this project to the named temporary custodian. [Name] shall be responsible for transmitting all data requests and maintaining a log or other record of all data requested and received pursuant to the Agreement, including confirmation of the completion of the project and the return or destruction of data as described below. The Department or its agents may upon request review the records required to be kept by [organization] under this Agreement.

   The Department designates Carrie Conaway as its liaison for all communications with [organization] regarding this project and the Agreement as it relates to the project.

3. Use data shared under the Agreement for no purpose other than the research project described in this Agreement, and as authorized under [cite the appropriate section referred to in Part III above]. Nothing in the Agreement shall be construed to authorize [organization] to have access to additional data from the Department that is not included in the scope of the Agreement, or to govern access to the data by entities

other than the Parties. [Organization] further agrees not to share data received under the Agreement with any other entity without prior written approval from the Department. [Organization] understands that the Agreement does not convey ownership of data to [organization].

4. Require all employees, contractors, and agents of any kind to comply with the Agreement and all applicable provisions of FERPA and other federal and state laws with respect to the data and information shared under the Agreement. [Organization] agrees to require of and maintain an appropriate confidentiality agreement from each employee, contractor, or agency with access to data pursuant to the Agreement. Nothing in this section authorizes [organization] to share data and information provided under the Agreement with any other individual or entity for any purpose other than completing [organization]'s work as authorized by the Department consistent with this Agreement.

5. Not amend or alter the scope, design, format, or description of a project or report generated by [organization] for this project, except as consistent with the Agreement, without prior written notice to the Department. [*if desired]* [Organization] shall provide the Department with periodic status reports during the project term [specify content and due dates].

6. Not copy, reproduce, or transmit data obtained pursuant to the Agreement except to [organization]'s own agents acting for or on behalf of the Department and as necessary to fulfill the purpose of the project described herein. Data may be stored on a server with other data but may not be merged with that data without prior permission from the Department. Data must be stored using industry-standard encryption and authentication to ensure that only authorized agents of the Department have access to the data. Data may not be taken outside the United States. All copies of data of any type, including any modifications or additions to data from any source that contains information regarding individual students, are subject to the provisions of the Agreement and in the same manner as the original data disclosed by the Department to [organization]. The ability to access or maintain data under the Agreement shall not under any circumstances transfer from [organization] to any other individual, institution, or entity.

7. Not disclose data contained under the Agreement to it in any manner that could identify any individual student, except as authorized by FERPA, to any entity other than the Department, or authorized employees, contractors, and agents of [organization] working as the Department's authorized representative on the project approved by the Department consistent with this Agreement. Persons participating in the approved project on behalf of the Parties shall neither disclose or otherwise release data and reports relating to an individual student, nor disclose information relating to a group or category of students without ensuring the confidentiality of individual students in that group. Publications and reports of this data and information related to it, including preliminary project descriptions and draft reports, shall involve only aggregate data and no personally identifiable information or other information

that could lead to the identification of any student. No report of aggregate data based on an identifiable group of students fewer than ten in number shall be released to anyone other than the Department. [Organization] shall require that all employees, contractors, and agents working on this project abide by that statistical cell size.

8. Not provide any data obtained under this Agreement to any entity or person ineligible to receive data protected by FERPA, or prohibited from receiving data from any entity by virtue of a finding under 34 CFR § 99.31(a)(6)(iii).

9. Destroy all data obtained under the Agreement and addenda to it when no longer needed for the purpose for which it was released by the Department. Nothing in this Agreement authorizes [organization] to maintain data beyond the time period reasonably needed to complete the project and respond to inquiries from other researchers, defined as [number of months] following the date of publication of the final report of this project. Upon termination of the Agreement or publication of reports generated under this Agreement, as authorized by the Department, whichever occurs first, [organization] will return all data files and hard copy records to the Department and purge any copies of data from its computer systems in compliance with 34 CFR §§ 99.31(a)(6)(ii)(b) and 99.35(b)(2). [Organization] agrees to require all employees, contractors, or agents of any kind working on the project to comply with this provision. No other entity is authorized to continue research using the data obtained under the Agreement upon the termination of the Agreement and project described herein.

10. Provide the Department with an electronic copy of the final versions of all reports and other documents associated with the project. The Department, as the owner of the report, reserves the right to distribute and otherwise use the final report and associated documents as it wishes, in sum or in part.

11. [if desired] Provide the Department with an electronic copy of the program code created by [organization] to perform analyses within its statistical software platform (e.g., .do files created for use in Stata). The Department agrees to keep these files and a copy of the original data for at least seven years.

12. [Organization] shall be provided reasonable notification of any changes in Department policies regarding limits on the use of confidential data and, as agents of the Department, shall either affirmatively agree to uphold these policies or relinquish access to the data.

VI. COMPLIANCE WITH FIPA. For the purposes of FIPA, M.G.L. c. 66A, [organization] is a "holder" of personal data and will comply in all respects with the applicable requirements of FIPA, a copy of which is available at http://www.mass.gov/legis/laws/mgl/gl-66a-toc.htm.

VII. RELATED PARTIES. [Organization] represents that it is authorized to bind to the terms of the Agreement, including confidentiality, maintenance, publication, and destruction or return of data, all related or associated institutions, individuals, employees or contractors who may have access to the data or may own, lease, or control equipment or facilities of any kind where the data is stored, maintained or use in any way.

VIII. TERM. This Agreement takes effect upon signature by the authorized representative of each party and shall remain in effect until the data access time period defined in paragraph V9 has ended, or until canceled by either party upon 30 days written notice, whichever occurs first. The Agreement is renewable upon written approval by the authorized representative of each party.

IX. This Agreement expresses the entire agreement of the parties and shall not be modified or altered except in writing executed by the authorized representatives of the Department and [organization], and in a manner consistent with applicable state and federal laws.

_____ _____

Carrie Conaway Date
Director of Planning, Research, and Evaluation
Massachusetts Department of Elementary and Secondary Education

_____ _____

[name] Date
[title]
[organization]

Attachment: Project description

Appendix D1: Overview of Working Group for Educator Excellence

The Working Group for Educator Excellence

The Working Group for Educator Excellence (WGEE) is a broad coalition of organizations and individuals united in the belief that the most effective way to provide every child with an excellent education is to take a systemic approach to influencing what teachers and educational leaders know and can do.

Within our current education system the processes that aim to support educator quality are frequently disconnected, undermining their collective ability to support and sustain educator excellence, and bleeding resources from schools. We believe that when key elements of this system are organized to align with one another and with a common, research-based, field-tested core of professional knowledge, however, the cumulative effect will be a more efficient and effective system that supports high quality teaching and educational leadership in all schools, transforming the face of public education today.

10 Key Elements of a System to Support Educator Expertise

1) Preparation
2) Licensure
3) Recruitment, hiring, and placement
4) Induction
5) Professional development
6) Supervision and evaluation
7) Relicensure
8) Teacher leadership
9) Organizational structure
10) Organizational culture

To bring about this alignment requires an unprecedented break with the piecemeal education reforms of the past. Single-issue solutions have not achieved the long-term, sustainable gains in student achievement that we have hoped for. We believe these gains can be achieved by working systemically to support the expertise of our educator workforce. This means implementing a coherent system of rigorous standards and performance-based accountability that is sustained by authentic, aligned supports for educators, and it means coordinating the efforts of the many organizations and institutions that share responsibility for providing these supports.

These shared beliefs unite the more than 50 individual members and the 23 supporting organizations of the WGEE. Since its founding in 2004, membership has grown to include two members of the Massachusetts legislature, four major state business groups, the two Massachusetts teachers' unions, the state superintendent's association, both state principals' organizations, representatives from the Massachusetts Department of Elementary and Secondary Education, colleges and universities, educators' professional associations, parent and student advocacy organizations, and working teachers and administrators.

The Working Group for Educator Excellence is proud to bring so many individuals and organizations together under one banner. As wide-ranging in membership as it is unified by the shared mission, we offer what we believe to be the greatest hope for the students, teachers, and educational leaders of Massachusetts.

Appendix D2: Educator Certification Law

MASSACHUSTTS GENERAL LAWS

Chapter 71: Section 38G. Certification for certain teaching and administrative positions; provisional and standard certificates; policies and guidelines regarding requirements and qualifications; applications; recommendations; review; continuing education; renewal of certificate

Section 38G. As used in this section the following words shall have the following meanings:

"Board", the board of education established by chapter fifteen.

"Provisional educator", a person who holds a provisional educator certificate.

"Provisional educator with advanced standing", a person who holds a provisional educator certificate with advanced standing; said certificate shall be valid for five years of employment as an educator in the schools of the commonwealth and may be renewed for an additional five years of employment in accordance with regulations adopted by the board.

"Provisional educator certificate", a license to teach issued to a person who has successfully met the preparation and eligibility requirements as established by the board. The provisional educator's certificate shall be valid for five years of employment as an educator in the schools of the commonwealth.

"Provisional educator certificate with advanced standing", a license to teach issued to a person who has successfully met the preparation and eligibility requirements as established by the board for provisional certification and completed (1) a college program, graduate or undergraduate, approved by the board of education for the preparation of teachers; or (2) a college preparation program included in the National Association of State Directors of Teacher Education and Certification (NASDTEC); or (3) an out of state teacher education program approved by the National Council for the Accreditation of Teacher Education (NCATE); or (4) other program approved by the board.

"Regionally licensed or certified educator", an applicant for a teacher's certificate in Massachusetts who has been granted a regional license or certificate by another state jurisdiction under terms of a contract entered into pursuant to chapter seven hundred and forty-eight of the acts of nineteen hundred and sixty-eight, the Interstate Agreement on Certification of Educational Personnel. Such certificate shall be equivalent to the provisional educator certificate with advanced standing.

"Reciprocity of certified educators", the process and requirements established by the commissioner for candidates to obtain certification who have completed (1) a college preparation program included in the alternative certification reciprocity system of the National Association of State Directors of Teacher Education and Certification (NASDTEC); (2) out-of-state

programs approved by the National Council for the Accreditation of Teacher Education (NCATE); or (3) other programs approved by the board. Such certificate shall be equivalent to the provisional educator with advanced standing certificate.

"Standard educator", a person who holds a standard educator certificate.

"Standard educator certificate", a license to teach issued to a person who has successfully met the preparation and eligibility requirements as established by the board. The standard educator's certificate shall be valid for renewable terms of five years.

"Temporary certificate", a license to teach which the commissioner of education may, at his discretion, issue to a person who holds a valid teaching certificate from another state and who has been employed under the certificate for a minimum of three years but has not satisfied the certification testing requirements contained in this section. The temporary certificate shall be valid for one year and is nonrenewable. Service under a temporary certificate shall be counted as service in acquiring professional teacher status, contingent upon the teacher passing the applicable certification tests.

The commissioner of education shall have authority to grant, upon application, provisional educator, provisional educator with advanced standing, temporary, and standard educator certificates to persons who have satisfied the requirements for such certificates as established by the board. The board shall define the knowledge of subject matter and demonstration of competencies commensurate with attainment and renewal of such certificates.

To be eligible for certification as a provisional educator, the candidate shall (1) hold a bachelor's degree in arts or sciences from an accredited college or university with a major course in the arts or sciences appropriate to the instructional field; (2) pass a test established by the board which shall consist of two parts: (A) a writing section which shall demonstrate the communication and literacy skills necessary for effective instruction and improved communication between school and parents; and (B) the subject matter knowledge for the certificate; and (3) be of sound moral character. Candidates who complete the requirements in this paragraph shall be issued provisional educator certificates which will permit them to seek employment in teaching positions requiring instructional certification in districts which have an approved provisional educator preparation program.

The commissioner shall establish standards for the training, support and supervision of provisional educators. During the period of employment, a person holding a provisional teaching certificate pursuant to this section shall be under the direct supervision of the principal or other appropriate supervisor who shall regularly observe and evaluate the performance of assigned duties by such holder of a provisional teaching certificate. Such evaluation shall be according to relevant to nationally recognized professional standards for personnel evaluation.

Each public school district seeking to hire a provisional educator must submit an provisional educator program plan to the department of education. No district shall be authorized to employ a provisional educator unless it has submitted a plan for such a program and received approval of the commissioner. Each plan shall describe the key elements of the proposed provisional

educator program in accordance with guidelines established and published by the department. Such guidelines shall require that provisional educators in district-based programs meet the equivalent standards that provisional educators with advanced standing meet in approved college and university programs. Districts shall show either evidence of joint sponsorship or collaboration of training programs with (1) colleges or universities, or (2) other districts, or (3) other programs approved by the commissioner to provide such programs. The department shall issue standard district plans which districts may implement in lieu of developing original plans. The department shall coordinate the training efforts of districts, shall insure that district programs meet fair, substantive and comprehensive professional development standards and shall establish regional programs for provisional educators. The department shall also provide orientation programs for support team members. Provisional educators shall be observed by a professional support team. The department of education shall devise standardized criteria for a final comprehensive evaluation of each provisional educator, conducted at the end of the provisional educator period by the professional support team. All such evaluations shall be conducted according to nationally recognized professional standards for personnel evaluation.

At the conclusion of each year of the approved district training program for provisional educators, the chairperson of the support team shall prepare a comprehensive evaluation report of the provisional educator's performance. Such report shall be submitted by the chairperson directly to the department of education. The final comprehensive evaluation report on each provisional educator shall be made on forms provided by the department of education. Said report shall include an assessment of the individual's on the job performance and one of the following recommendations:

(1) Approved: recommends that advanced standing status be granted upon completion of the other preparation and eligibility requirements as established by the board;

(2) Insufficient: recommends that the candidate be allowed to seek entry in the future into a district training program; or a candidate found insufficient twice shall not be allowed to enter another district training program; or

(3) Disapproved: recommends that advanced standing status not be granted and that the candidate not be allowed to enter into a district training program.

The support team chairperson shall provide the provisional educator with a copy of the written evaluation report and certification recommendation before submitting it to the commissioner of education.

If the recommendation is to disapprove, the provisional educator may, within fifteen days, submit to the chairperson written materials documenting the reasons why the provisional educator believes his provisional educator certification should continue to remain valid or a recommendation of insufficient granted. The chairperson shall forward all such documentation to the commissioner of education along with the evaluation report and recommendation concerning certification.

Candidates who receive a recommendation of "disapproved" or two or more recommendations of "insufficient" may appeal to the commissioner for approval of additional opportunities to seek provisional educator employment in districts other than those in which they received unfavorable recommendations. The candidate shall be responsible for demonstrating why he would be likely to succeed if granted the requested opportunity.

To be eligible for certification as a provisional educator with advanced standing, the candidate shall provide evidence that he (1) holds a bachelor's degree in arts or sciences from an accredited college or university with a major course in the arts or sciences appropriate to the instructional field or the equivalent baccalaureate degree; (2) has passed a test established by the board which shall consist of two parts: (A) a writing section which shall demonstrate the communication and literacy skills necessary for effective instruction and improved communication between school and parents; and (B) the subject matter knowledge for the certificate; (3) has satisfactorily completed a board of education approved teacher preparation program; and (4) is of sound moral character. A candidate who completes the requirements of this paragraph shall be issued a provisional educator certificate with advanced standing which will permit him to seek employment in a teaching position requiring instructional certification.

Each public school district seeking to hire a provisional educator with advanced standing must submit a plan to the department of education which details how the district will supervise and support such provisional educators with advanced standing. No district shall be authorized to employ a provisional educator with advanced standing unless it has submitted a plan for the support and evaluation of such educator to the commissioner and received the approval of the commissioner. The department of education shall issue standard plans for provisional educators with advanced standing which districts may implement in lieu of developing an original plan.

In not less than one year after the issuance of a provisional educator certificate, the commissioner upon receipt of a proper application shall issue a standard educator certificate to such provisional certificate holder who has provided the commissioner with evidence, in such manner and form as prescribed by the board, that he has met the preparation and eligibility requirements set by the board through a master's degree program approved by the commissioner, or through an equivalent district program for standard certification approved by the commissioner, or other equivalent programs approved by the commissioner; and has met the requirements set by the commissioner for demonstration of successful performance.

Each standard educator certificate shall be valid for five years and continued every five years thereafter upon the successful completion of an individual professional development plan that meets the subject matter knowledge and teaching skill requirements set by the board. Such plan shall be designed to increase the ability of the person to improve student learning.

Certificates granted by the board prior to October first, nineteen hundred and ninety-four are hereby deemed standard certificates which shall be renewed every five years. All such certificates must be renewed by June eighteenth, nineteen hundred and ninety-nine.

The commissioner shall develop alternative paths for certifying school management and educational leadership personnel which shall facilitate a process whereby persons with significant managerial experience can obtain such certification.

Any certificate issued by the commissioner may be revoked for cause, pursuant to standards and procedures established by the board.

The board shall have the authority to promulgate, amend and rescind such rules and regulations as may be necessary to carry out the provisions of this section. Such regulations shall be presented to the joint committee for informational purposes ninety days before implementation.

All applications for any certificates granted under this section shall be accompanied by a fee to be determined annually by the commissioner of administration under the provisions of section three B of chapter seven. Said fees shall be established and limited to allow the department to carry out the certification and recertification responsibilities but in no case shall said applications exceed one hundred dollars per year with an annual increase no greater than the consumer price index.

Notwithstanding the foregoing, the board shall establish for each certification area alternate methods for fulfilling the professional development requirement, at least one of which shall be provided at no cost to persons employed by a school district, including paraprofessionals or assistant teachers, who are engaging in such activity for the purpose of satisfying the professional development requirement of this section.

No person shall be eligible for employment as a teacher, guidance counselor, director, school psychologist, school adjustment counselor, school social worker, school nurse, library media specialist, school business administrator, principal, supervisor, director, assistant superintendent of school, and superintendent of schools by a school district unless he has been granted by the commissioner a provisional, or standard certificate with respect to the type of position for which he seeks employment; provided, however, that nothing herein shall be construed to prevent a school committee from prescribing additional qualifications; and provided further, that a superintendent may upon request be exempt by the commissioner for any one school year from the requirement in this section to employ certified personnel when compliance therewith would in the opinion of the commissioner constitute a great hardship in securing teachers for that school district. During the time that such a waiver is in effect, service of an employee of a school district to whom the waiver applies shall not be counted as service in acquiring professional teacher status or other rights under section forty-one.

In addition to any other requirements of this section, the board shall require, as a provision of an administrator's or educator's initial certification, that all educators and administrators shall have training in strategies for effective inclusive schooling for children with disabilities, instruction of students with diverse learning styles and classroom organization and management. Such training shall include, at a minimum, practical experience in the application of these strategies.

In addition to any other requirements in this section, in order to receive a provisional or standard educator certificate, persons applying for such certification shall have completed such courses or training sessions as the board shall require in second language acquisition.

Competence in Braille instruction shall be a requirement for initial certification as a teacher of students with vision impairments. Such competence shall be verified through a testing program which meets the standards of the Library of Congress National Library Service for the Blind or its successor.

For the purposes of certifying educators, the board shall establish policies and guidelines and the commissioner may approve preparation programs devoted to the preparation of teachers and other educational personnel. A college or university or school or district or other institution offering such an approved program shall certify to the commissioner that a student has demonstrated satisfactory competence in the skills and knowledge expected of college graduates in the most advanced nations, and has completed the program approved. The college or university or school district or other institution shall also provide the commissioner with a transcript of the student's record.

At the end of each five-year period each standard educator shall attest to and provide appropriate supporting evidence and documentation to the state department of education, in such form and at such time as the commissioner shall prescribe, that the standard educator has successfully completed a professional development plan which meets the standards set by the board.

In addition to any other requirements of this section, the board shall require, as a provision of an administrator's or educator's recertification, that all educators and administrators shall have training in strategies for effective inclusive schooling for children with disabilities, instruction of students with diverse learning styles and classroom organization and management. Such training shall include, at a minimum, practical experience in the application of these strategies.

It shall be one of the objectives of all school districts' professional development plans to satisfy the individual professional development plans required by this section; provided, however, that this requirement shall not be construed to require that a school district or the commonwealth provide funding for the fulfillment of the professional development requirements of this section and section thirty-eight Q beyond the foundation budget.

The board shall establish policies and guidelines for approval for any continuing education units, inservice seminars, projects, courses and other activities which would be deemed sufficient to maintain the development of professional skills and the knowledge of subject matter pertinent to particular certificates in accordance with the same procedures used for initial approval of collegiate preparation programs. The commissioner shall establish for each certification alternate methods for fulfilling the professional development requirement, at least one of which must be at no cost to persons employed by a school district who are engaging in such an activity for the purpose of satisfying the professional development requirements for recertification of this section.

Such policies shall provide that a teacher who is to be employed in a position in an area of certification in which he is not currently employed, but for which he held a certificate which had been valid within five years immediately preceding the starting date of employment in this position, shall be given a reasonable period, as determined by the board, to fulfill a professional development plan which demonstrates currency in the subject matter knowledge and requalify him for certification in said area. In every instance, all evaluations and assessments shall follow nationally recognized professional standards.

Each local and regional school district shall attest to the department of education, in such form and at such time as the commissioner shall prescribe, that professional development activities for which credit toward certification renewal is granted meet the requirements set by the board and are documented in accordance with procedures established by the board.

The board shall, in establishing said policies and criteria for professional development, give special consideration to the best interests of the students in the commonwealth, including the need for high quality teachers of English language learners programs established under chapter 71A for limited English proficient students and the need to maintain the highest performance standards of teachers while taking into proper consideration the financial or time constraints these policies may require. In developing such policies, guidelines and assessment methods, the board shall obtain the input of teachers, administrators, educational experts, parents, business leaders and others interested in the improvement of the professional status of teachers.

Except as otherwise specifically provided in this section, no rights of any employees of a school district under the provision of this chapter shall be impaired by the provisions of this section.

Anyone granted either a provisional or standard certificate under this section or currently holding such certification shall be required to maintain the development of professional skills and the knowledge of subject matter pertinent to the areas of certification.

Teachers who were authorized, permitted or approved to teach in a subject or area for which there was no certification standard before September first, nineteen hundred and eighty-two, shall acquire and maintain the development of the skills and training required of persons certified to teach in said subject or areas after that date.

This section shall not apply to trade, vocational, temporary substitute teachers, exchange teachers, regionally licensed or certified teachers or to teaching or administrative interns; provided, however, that approval for the employment of such personnel shall be generated by the board under such rules and regulations as it may adopt.

The requirements of this section shall not apply to the certification of teachers of adult education. Nothing in this section or section 1H of chapter 69 shall be construed to prohibit a school committee from employing a teacher certified under this section to teach adult education.

Appendix D3: Educator Licensure Regulations

Educator Licensure and Preparation Program Approval Regulations (603 CMR 7:00) - Excerpts

7.02: Definitions

Sponsoring Organization: College, university, school district, professional association, or other organization that provides, or seeks to provide, approved preparation programs.

7.03: Educator Preparation Program Approval

(1) Program Approval.

(a) Candidates may qualify for licensure through successful completion of an approved preparation program leading to the license sought, providing they meet all other requirements. Individuals who complete approved programs are eligible for licensure reciprocity with other states that are parties to the NASDTEC Interstate Contract.

(b) Sponsoring organizations with approved preparation programs have the authority to review prior course work and work experience of their candidates and waive otherwise required course work, including the first half of the practicum or practicum equivalent, when designing programs of study for them. Granting such waivers is the official responsibility of the sponsoring organization. Records of candidates for whom coursework or other program requirements have been waived must be available during onsite review.

(c) A sponsoring organization that has received approval of one or more of its preparation programs is authorized to do the following:

1. Endorse a candidate who has completed an approved program.
2. Recommend a candidate for licensure, providing such candidate has both completed an approved program and passed all MTEL tests required for the Massachusetts license.

(d) A sponsoring organization seeking approval of its preparation program(s) shall invite the Department to review them. The sponsoring organization shall provide written evidence that it satisfies the requirements set forth in 603 CMR 7.03 (2) and (3) for each program for which approval is sought. The Department of Elementary and Secondary Education shall review the written information for each proposed program and verify it through an onsite review at the sponsoring organization. The Department shall use the same standards in reviewing all programs and sponsoring organizations for approval.

(e) Program approval will be for a period of five years, unless the program ceases to meet the requirements set forth in 603 CMR 7.03 (2) and (3).

(f) During the five-year approval period a sponsoring organization that seeks approval of a new program may ask the Department for an informal review of that program. Sponsoring organizations seeking approval for the first time may also request an informal review. If the review is favorable, individual candidates who complete the program will be deemed to have met the requirements for licensure in Massachusetts, providing they meet all other requirements. Approval of the program will be considered at the time of the next five-year program review.

(2) Required Program Components

(a) Initial License. All sponsoring organizations and approved programs leading to the Initial license shall provide the following components:

1. Preparation that addresses the following:
    1. Subject matter knowledge requirements for the license. See 603 CMR 7.06, 7.07, 7.09, and 7.11. The following additional requirements apply to baccalaureate teacher preparation programs:
        1. For elementary, teacher of students with moderate disabilities, teacher of students with severe disabilities, teacher of the deaf and hard of hearing, and teacher of the visually impaired licenses: not less than 36 semester hours in upper and lower level arts and sciences coursework addressing the relevant subject knowledge topics for those licenses set forth in 603 CMR 7.06. Some of this coursework might also count toward the required arts or sciences major or general education requirements.
        2. For middle school licenses: 36 semester hours in a mathematics/science or English/history program of studies. This does not exclude the possibility of obtaining a single subject license in any of these subjects for grades 5-8.
        3. For the general science license: at least 36 semester hours addressing the topics for the general science license.
    2. Knowledge of appropriate student learning standards in Massachusetts Curriculum Frameworks.
    3. Professional Standards for Teachers or Administrators (603 CMR 7.08 and 7.10), including the use of Massachusetts Curriculum Frameworks in instruction.
    4. Application of knowledge in practice.
2. Pre-practicum.
3. Practicum or practicum equivalent.
4. License-specific assessment of candidate performance during the practicum or practicum equivalent, using guidelines developed by the Department.
5. Appropriate services for advising candidates.
6. Official transcripts of all candidates enrolled in each program.
7. Preparation and expertise that is appropriate for the respective roles and responsibilities of all professional educational faculty, faculty in the academic discipline most appropriate to the instructional field, and school district personnel involved in approved programs to prepare educators for licensure.
8. An annual report to the Department that includes the following information:
    1. Substantial changes in program components previously approved.

2. Responses to any recommendations for improvement stated in previous program approval reports.
3. Standards and requirements for program admission, admission to the practicum or practicum equivalent, and exit from each program.
4. Number of candidates newly enrolled in each program.
5. Number of candidates newly enrolled in the practicum or practicum equivalent for each program.
6. Number and total list of program completers for each program.
7. Number and total list of program completers taking Massachusetts educator licensure tests and the explanation for any difference between 603 CMR 7.03 (2) (a) 7.f. and g.
8. Number and total list of program completers who sought and of those, who obtained a teaching position within the first year after program completion.
9. Single assessment and aggregate pass rates of program completers of all programs leading to Initial educator licensure on licensing tests or assessments required by the Board.
10. The sponsoring organization's summary pass rate, for completers of all programs leading to Initial licensure as a teacher, on licensing tests or assessments required by the Board.

(b) Professional License. Approved programs leading to the Professional license shall demonstrate the following components:

1. Preparation that satisfies the requirements in 603 CMR 7.04 (2) (c) 5.a., b.i., or c.i. Coursework and experiences used by candidates to satisfy the requirements for an Initial license may not be used to satisfy the requirements for the Professional license in the same field. The academic disciplines appropriate to the instructional field of the Professional license sought are specified in appropriate provisions of 603 CMR 7.06 for teachers and in 603 CMR 7.07 for specialist teachers.
    1. Approved teacher or specialist teacher license programs sponsored by a school district, collaborative, professional association, or other non-higher education institution of at least 50 contact hours of content-based seminars beyond the induction year.
    2. Approved programs sponsored by accredited higher education institutions.
        1. For early childhood, elementary, physical education, teacher of students with moderate disabilities, teacher of students with severe disabilities, teacher of the deaf and hard of hearing, teacher of the visually impaired, and other teacher licenses at levels PreK-8: at least half the credits are in any combination of: upper-level undergraduate or graduate courses in arts or sciences or in professional schools other than education, in the academic disciplines appropriate to the instructional field of the license sought; and pedagogical courses advanced beyond those for the Initial license and based on the academic discipline appropriate to the instructional field of the Professional license sought.
        2. For specialist teacher licenses and teacher licenses at levels 5-12 and All: at least half the credits are in upper level undergraduate or graduate level

courses in arts or sciences or in professional schools other than education and are in the academic disciplines appropriate to the instructional field of the Professional license sought.

3. For teacher licenses at levels 8-12: at least half the credits are in graduate level courses in arts or sciences or in professional schools other than education, in the academic disciplines appropriate to the instructional field of the Professional license sought.

2. Appropriate services for advising candidates.
3. Official transcripts of all candidates enrolled in the program.
4. Preparation and expertise that is appropriate for the respective roles and responsibilities of all professional educational faculty, faculty in the academic discipline most appropriate to the field of the license, and school district personnel involved in approved programs to prepare educators for licensure. Contributions of faculty in the academic discipline most appropriate to the field of the license are evident in all pedagogical courses for the academic discipline.
5. An annual report to the Department that includes the following information:
    1. Substantial changes in program components previously approved.
    2. Responses to any recommendations for improvement stated in the previous program approval report.
    3. Standards for admission to and exit from each program.
    4. Number of candidates newly enrolled in each program.
    5. Number and total list of program completers for each program.

(3) Required Minimum Pass Rate.

(a) All sponsoring organizations with approved programs and each approved program shall demonstrate an 80% pass rate of program completers who take state licensing tests and assessments required for Initial licensure in the field and at the level of preparation.

1. For sponsoring organizations, this shall be the summary pass rate.
2. For each approved program, this shall be the single assessment pass rate for subject matter tests or the aggregate pass rate for the Communication and Literacy Skills Test where there is no subject matter test.

(b) Sponsoring organizations and each of their approved programs shall report pass rates only when there are ten or more in a cohort of completers who take a test.

(c) The sponsoring organization shall publish, in official organizational publications, the initial and cumulative pass rates, for each cohort of program completers who take required state licensure tests:

1. Reading subtest (single assessment pass rate).
2. Writing subtest (single assessment pass rate).
3. Communication and Literacy Skills Test (aggregate pass rate).
4. Each Subject Matter Knowledge Test (single assessment pass rate).
5. All Subject Matter Knowledge Tests (aggregate pass rate).

6. All tests of subject matter knowledge and communication and literacy skills (summary pass rate).

(d) Organizations with fewer than ten program completers in any cohort shall aggregate the pass/fail status of test-takers over multiple years until the number of completers who take tests reaches ten. At that point, an organization shall be subject to the requirements set forth in 603 CMR 7.03 (3) (a) 2. and (c) 5., providing that approval shall not be revoked until the organization has a second total of at least ten new program completers who take required state licensure tests.

(e) Programs with fewer than ten program completers in any cohort are not obligated to report pass rates for such programs, and those with at least ten program completers in any cohort shall be subject to the requirements set forth in 603 CMR 7.03 (3) (a) 2. and (c) 4.

(4) Revoking Approval of Individual Preparation Programs.

(a) Any program that fails to demonstrate that it satisfies all of the requirements set forth in 603 CMR 7.03 (2) and (3) shall be subject to review and possible revocation of approval.

(b) The Department may initiate a review of such a program and request an improvement plan. The Department shall offer technical assistance where appropriate.

(c) The sponsoring organization shall submit an improvement plan to the Department for programs that are under review. The Department will monitor progress in meeting the goals of the improvement plan. If, after two years under review, a program has not made satisfactory progress, its approval may be revoked. The Commissioner may extend the review for a third year if additional data must be collected, e.g., for small programs.

(d) The Commissioner will make the final determination regarding revocation of state approval of an individual program.

(5) Revoking Approval of Sponsoring Organizations.

(a) Any sponsoring organization that fails to meet an 80% pass rate on all required state licensure tests taken by its program completers in any year (summary pass rate) or to demonstrate that it satisfies any other Program Components set forth in 603 CMR 7.03 (2) shall be subject to revocation of approval of all its programs and shall be referred to the Commissioner for review.

(b) The Commissioner shall initiate a review of all the programs offered by a sponsoring organization that has been referred for review and issue a report. Such report shall identify potential areas for improvement of those programs and offer technical assistance where appropriate.

(c) A sponsoring organization that has been referred for review shall have 60 days to submit an improvement plan to the Department. The Department will monitor progress in meeting the goals

of the improvement plan for two years. At the end of two years the Commissioner shall make a determination as to whether the organization has made satisfactory progress.

1. Sponsoring organizations whose programs have achieved an 80% pass rate on all required state licensure tests taken by program completers (summary pass rate) and satisfy all other Program Components set forth in 603 CMR 7.03 (2) shall be taken off review.
2. Sponsoring organizations whose programs have not achieved an 80% pass rate on all required state licensure tests taken by program completers (summary pass rate) but have made satisfactory progress shall be monitored for one more year.
3. Sponsoring organizations whose programs have not achieved an 80% pass rate on all required state licensure tests taken by program completers (summary pass rate) and who have not made satisfactory progress shall be designated as "at risk of becoming low performing" in the state's annual report to the U.S. Department of Education.

(d) If, after three years under review, a sponsoring organization fails to achieve an 80% pass rate on all required state licensure tests taken by program completers (summary pass rate), the Commissioner shall designate the organization as "low performing" and recommend that the Board of Education revoke approval of all of the sponsoring organization's educator preparation programs. The Board will make the final determination.

(6) Restoring Approval of Individual Programs and Sponsoring Organizations.

(a) A sponsoring organization must wait two years after revocation before it can apply to the Department to restore approval. The sponsoring organization shall submit written documentation of how it will address the requirements set forth in 603 CMR 7.03 (2) and (3).

(b) The Department will review the written documentation to determine whether the organization and its program(s) satisfy all of the requirements set forth in 603 CMR 7.03 (2) and (3). Programs that demonstrate that they satisfy the requirements set forth in 603 CMR 7.03 (2) will be allowed to recruit students.

(c) Upon demonstration of an 80% pass rate on all required state licensure tests taken by the first cohort of program completers (summary pass rate), the Commissioner will restore approval to the program or sponsoring organization, providing it continues to satisfy the requirements set forth in 603 CMR 7.03 (2) and (3).

(7) Implementation

(a) All programs approved prior to October 1, 2001 must comply with 603 CMR 7.03 by October 1, 2003.

(b) Sponsoring organizations seeking approval of new programs after October 1, 2001 must comply with 603 CMR 7.03

(c) Individuals who complete an approved preparation program after October 1, 2003 will have to meet the requirements in 603 CMR 7.00 to qualify for licensure.

7.05: Routes to Initial Teacher and Specialist Teacher Licenses

(1) Route One is for teacher candidates who receive their preparation in approved undergraduate programs. Route One cannot be used to prepare for a license as a library teacher. Candidates seeking licensure under Route One shall meet the following requirements:
(a) Bachelor's degree.
(b) Completion of an approved program as set forth in 7.03 (2) (a).
(c) Passing score on the Communication and Literacy Skills test.
(d) Passing score on the subject matter knowledge test(s) appropriate to the license sought, based on the subject matter knowledge requirements set forth in 603 CMR 7.06 and 7.07.

(2) Route Two is for teacher candidates who receive their preparation in approved post-baccalaureate programs, including approved alternative programs. Teacher candidates seeking licensure under Route Two must meet the following requirements:
(a) Bachelor's degree.
(b) Completion of an approved program as set forth in 7.03 (2) (a).
(c) Passing score on the Communication and Literacy Skills test.
(d) Passing score on the subject matter knowledge test(s) appropriate to the license sought, based on the subject matter knowledge requirements in 603 CMR 7.06 and 7.07.

(3) Route Three is for teacher candidates who hold a Preliminary license, serve in a school and are either hired as teachers of record or are serving an apprenticeship in a classroom under the direct supervision of a teacher who holds an appropriate license. Candidates seeking licensure under Route Three shall meet the following requirements:
(a) Possession of a Preliminary license in the field and at the level of the license sought. See 603 CMR 7.04 (2) (a).
(b) An approved program for the license sought.

(4) Route Four is the Performance Review Program for Initial Licensure process for teacher candidates who hold a Preliminary license, are hired as teachers of record, and are working in a district that does not have an approved program for the Initial license. Route Four is not available for the following teacher and specialist teacher licenses: early childhood, elementary, library, teacher of students with moderate disabilities, teacher of students with severe disabilities, teacher of the deaf and hard-of-hearing, teacher of the visually impaired, academically advanced, reading, and speech/language/hearing disorders. Candidates seeking licensure under Route Four shall meet the following eligibility requirements:
(a) Possession of a Preliminary license in the field and at the level of the license sought. See 603 CMR 7.04 (2) (a).
(b) At least three full years of employment in the role of the Preliminary license.
(c) Documentation of seminars, courses, and experience relevant to the Professional Standards for Teachers in 603 7.08 (2).
(d) A recommendation from the principal of each school where the candidate was employed

under the Preliminary license or in the role of the license sought.
(e) A competency review for those license fields that have no subject matter knowledge test, or for which not all the subject matter knowledge required for the license is measured by the test.

(5) Route Five is for candidates from outside Massachusetts. Candidates seeking licensure under Route Five shall meet the following requirements:
(a) Evidence of one of the following:

1. Completion of a state-approved educator preparation program in a state with which Massachusetts has signed the NASDTEC Interstate Contract.
2. Completion of an educator preparation program sponsored by a college or university outside Massachusetts that has been accredited by the National Council for Accreditation of Teacher Education (NCATE).
3. Possession of a Regional Credential.
4. Possession of the equivalent of at least an Initial license/certificate issued by a state with which Massachusetts has signed the NASDTEC Interstate Contract and three years of employment under such license/certificate during the previous seven years.

(b) Passing score on the Communication and Literacy Skills test.
(c) Passing score on the subject matter knowledge test(s) appropriate to the license sought, where available, based on the subject matter knowledge requirements set forth in 603 CMR 7.06 and 7.07.

7.09: Licenses and Routes for Administrators

For candidates who were prepared outside Massachusetts, see 603 CMR 7.04 (2) (d) and 7.05 (5) (a) and (b). For candidates who hold a Massachusetts administrator license, see 603 CMR 7.14 (3).

(1) Superintendent/Assistant Superintendent (Levels: All)
(a) Preliminary License.

1. Completion of at least three full years of employment in an executive management/leadership role or in a supervisory, teaching, or administrative role in a public/charter school, private school, higher education, or other educational setting accepted by the Department.
2. Passing score on the Communication and Literacy Skills test.

(b) Initial License.

1. Possession of at least an Initial license in another educational role or Preliminary Superintendent/Assistant Superintendent license and completion of three full years of employment in a district-wide, school-based, or other educational setting.

2. Demonstration of successful application of the Professional Standards for Administrators set forth in 603 CMR 7.10 through completion of a Performance Assessment for Initial License and one of the following:
    1. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the superintendent/assistant superintendent role.
    2. An administrative apprenticeship/internship (300 hours) in the superintendent/assistant superintendent role with a trained mentor, using Department guidelines.
    3. A Panel Review.
3. Passing score on the Communication and Literacy Skills test.

(c) Professional License.

1. Possession of an Initial license as superintendent/assistant superintendent.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial superintendent/ assistant superintendent license.

(2) School Principal/Assistant School Principal (Levels: PreK-6; 5-8; 9-12)

(a) Initial License.

1. Prerequisite Experience. Completion of at least three full years of employment in an executive management/leadership role or in a supervisory, teaching, or administrative role in a public school, private school, higher education, or other educational setting accepted by the Department.
2. Demonstration of successful application of the Professional Standards for Administrators set forth in 603 CMR 7.10 through completion of a Performance Assessment for Initial License and one of the following:
    1. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the principal/assistant principal role and at the level of the license sought.
    2. An administrative apprenticeship/internship (300 hours) in the principal/assistant principal role and at the level of the license sought with a trained mentor, using Department guidelines.
    3. A Panel Review. Eligibility for a Panel Review is limited to candidates who have completed one of the following:
        1. A post-baccalaureate program in management/administration at an accredited college or university.
        2. Three full years of employment in an executive management/ leadership, supervisory, or administrative role.
3. Passing score on the Communication and Literacy Skills test.

(b) Professional License.

1. Possession of an Initial license as principal/assistant principal.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial school principal/assistant principal license.

(3) Supervisor/Director (Levels: Dependent on Prerequisite License)

(a) Validity. A Supervisor/Director license is required for individuals employed for one-half time or more as a director, department head, or curriculum specialist in the field and at the level of the prerequisite license(s).
(b) Initial License.

1. Prerequisite Licenses. Possession of at least a Preliminary license as follows:
    1. Pupil personnel directors:
        1. School psychologist,
        2. School guidance counselor, or
        3. School social worker/school adjustment counselor
    2. School guidance directors:
        1. School guidance counselor or
        2. School social worker/school adjustment counselor
    3. Directors, department heads, and curriculum specialists:
        1. Teacher
        2. Specialist Teacher
2. Prerequisite Experience. Completion of three full years of employment in a leadership, supervisory, teaching, or administrative role in a public school, private school, higher education, or other educational setting accepted by the Department.
3. Demonstration of successful application of the Professional Standards for Administrators set forth in 603 CMR 7.10 through completion of a Performance Assessment and one of the following:
    1. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the supervisor/director role.
    2. An administrative apprenticeship/internship (300 hours) in a supervisor/director role for the license sought with a trained mentor, using Department guidelines.
    3. A Panel Review. Eligibility for a Panel Review is limited to those candidates who have either completed a post-baccalaureate program in management/administration at an accredited institution or have three full years of employment in an executive management/leadership, supervisory, or administrative role.
4. Passing score on the Communication and Literacy Skills test.
5. Additional requirements for directors, department heads, and curriculum specialists in the core academic subjects at the secondary level (5-12):
    1. A master's degree in the arts or sciences in one of the core academic subjects they will supervise, or
    2. At least 18 credits of advanced graduate studies in one of the core academic subjects they will supervise.

(c) Professional License.

1. Possession of an Initial license as supervisor/director.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial supervisor/director license.

(4) Special Education Administrator (Levels: All)

(a) Initial License.

1. Prerequisite Experience.
    1. Possession of at least an Initial license in special education, or as school guidance counselor, school principal/assistant school principal, school psychologist, school social worker/school adjustment counselor, or speech, language and hearing disorders teacher and completion of three full years of employment in a district-wide, school-based, or other educational setting, or
    2. Completion of at least three full years of employment in law, public policy, higher education, or other related field accepted by the Department.
2. Demonstration of successful application of the Professional Standards for Administrators set forth in 603 CMR 7.10 and appropriate knowledge of special education laws, regulations, and issues through completion of a Performance Assessment for Initial License and one of the following:
    1. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the special education administrator role.
    2. An administrative apprenticeship/internship (300 hours) in the special education administrator role, with a trained mentor, using Department guidelines.
    3. A Panel Review. Eligibility for a Panel Review is limited to those candidates who have either completed a post-baccalaureate program in management/administration at an accredited college or university or have three full years of employment in an executive management/leadership, supervisory, or administrative role.
3. Passing score on the Communication and Literacy Skills test.

(b) Professional License.

1. Possession of an Initial license as special education administrator.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial special education administrator license.

(5) School Business Administrator (Levels: All)

(a) Initial License.

1. Prerequisite Experience.

1. Possession of at least an Initial license in another educational role and completion of three full years of employment in a district-wide, school-based, or other educational setting, or
2. Completion of at least three full years of employment in a business management/administrative role in a business, educational, or other setting accepted by the Department.

2. Subject Matter Knowledge.
    1. Financial planning and management methods.
    2. Accounting systems.
    3. Management of federal and state appropriations for special services (e.g., special education, food, and transportation).
    4. Municipal and school finance laws and regulations.
    5. Personnel matters including contract negotiations.
    6. Purchasing and district level facilities management.
    7. Insurance.
    8. Payroll.
    9. Scheduling.
3. Demonstration of successful application of appropriate Professional Standards for Administrators set forth in 603 CMR 7.10, as determined in Department guidelines, and successful application of school business administrator subject matter knowledge through completion of a Performance Assessment for Initial License and one of the following:
    1. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the school business administrator role.
    2. An administrative apprenticeship/internship (300 hours) in the school business administrator role with a trained mentor, using Department guidelines.
    3. A Panel Review. Eligibility for a Panel Review is limited to those candidates who have either completed a post-baccalaureate program in management/administration at an accredited college or university or have three full years of employment in an executive management/leadership, supervisory, or administrative role.
    4. Passing score on the Communication and Literacy Skills test.

(b) Professional License.

1. Possession of an Initial license as school business administrator.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial school business administrator license.

(6) The Commissioner may waive the requirements listed in 603 CMR 7.09 (1) through (5), with the exception of a passing score on the Communication and Literacy Skills test, for candidates with significant leadership/managerial experience who meet the standards through both their experience and their formal education.

Appendix D4: Multiple Alternative Routes to Initial Licensure

(D)(1) Providing high-quality pathways for aspiring teachers and principals

(i) Provisions allow for alternate routes to certification

(ii) Alternative routes to certification in use

Routes to Initial Licensure for Teachers, Regulations 603 CMR, 7.05, http://www.doe.mass.edu/lawsregs/603cmr7.html?section=05):

7.05: Routes to Initial Teacher and Specialist Teacher Licenses

(1) **Route One** is for teacher candidates who receive their preparation in approved undergraduate programs. Route One cannot be used to prepare for a license as a library teacher. Candidates seeking licensure under Route One shall meet the following requirements:
(a) Bachelor's degree.
(b) Completion of an approved program as set forth in 7.03 (2) (a).
(c) Passing score on the Communication and Literacy Skills test.
(d) Passing score on the subject matter knowledge test(s) appropriate to the license sought, based on the subject matter knowledge requirements set forth in 603 CMR 7.06 and 7.07.

(2) **Route Two** is for teacher candidates who receive their preparation in approved post-baccalaureate programs, including approved alternative programs. Teacher candidates seeking licensure under Route Two must meet the following requirements:
(a) Bachelor's degree.
(b) Completion of an approved program as set forth in 7.03 (2) (a).
(c) Passing score on the Communication and Literacy Skills test.
(d) Passing score on the subject matter knowledge test(s) appropriate to the license sought, based on the subject matter knowledge requirements in 603 CMR 7.06 and 7.07.

(3) **Route Three** is for teacher candidates who hold a Preliminary license, serve in a school and are either hired as teachers of record or are serving an apprenticeship in a classroom under the direct supervision of a teacher who holds an appropriate license. Candidates seeking licensure under Route Three shall meet the following requirements:
(a) Possession of a Preliminary license in the field and at the level of the license sought. See 603 CMR 7.04 (2) (a).
(b) An approved program for the license sought.

(4) **Route Four** is the Performance Review Program for Initial Licensure process for teacher candidates who hold a Preliminary license, are hired as teachers of record, and are working in a district that does not have an approved program for the Initial license. Route Four is not available for the following teacher and specialist teacher licenses: early childhood, elementary, library, teacher of students with moderate disabilities, teacher of students with severe disabilities, teacher of the deaf and hard-of-hearing, teacher of the

visually impaired, academically advanced, reading, and speech/language/hearing disorders. Candidates seeking licensure under Route Four shall meet the following eligibility requirements:
(a) Possession of a Preliminary license in the field and at the level of the license sought. See 603 CMR 7.04 (2) (a).
(b) At least three full years of employment in the role of the Preliminary license.
(c) Documentation of seminars, courses, and experience relevant to the Professional Standards for Teachers in 603 7.08 (2).
(d) A recommendation from the principal of each school where the candidate was employed under the Preliminary license or in the role of the license sought.
(e) A competency review for those license fields that have no subject matter knowledge test, or for which not all the subject matter knowledge required for the license is measured by the test.

(5) **Route Five** is for candidates from outside Massachusetts. Candidates seeking licensure under Route Five shall meet the following requirements:
(a) Evidence of one of the following:

1. Completion of a state-approved educator preparation program in a state with which Massachusetts has signed the NASDTEC Interstate Contract.
2. Completion of an educator preparation program sponsored by a college or university outside Massachusetts that has been accredited by the National Council for Accreditation of Teacher Education (NCATE).
3. Possession of a Regional Credential.
4. Possession of the equivalent of at least an Initial license/certificate issued by a state with which Massachusetts has signed the NASDTEC Interstate Contract and three years of employment under such license/certificate during the previous seven years.

(b) Passing score on the Communication and Literacy Skills test.
(c) Passing score on the subject matter knowledge test(s) appropriate to the license sought, where available, based on the subject matter knowledge requirements set forth in 603 CMR 7.06 and 7.07.

Licensure Requirements for Principal, Regulations 603 CMR 7.09,
http://www.doe.mass.edu/lawsregs/603cmr7.html?section=09

(2) **School Principal/Assistant School Principal** (Levels: PreK-6; 5-8; 9-12)

(a) **Initial License**.

1. Prerequisite Experience. Completion of at least three full years of employment in an executive management/leadership role or in a supervisory, teaching, or administrative role in a public school, private school, higher education, or other educational setting accepted by the Department.

2. Demonstration of successful application of the Professional Standards for Administrators set forth in 603 CMR 7.10 through completion of a Performance Assessment for Initial License and one of the following:
    a. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the principal/assistant principal role and at the level of the license sought.
    b. An administrative apprenticeship/internship (300 hours) in the principal/assistant principal role and at the level of the license sought with a trained mentor, using Department guidelines.
    c. A Panel Review. Eligibility for a Panel Review is limited to candidates who have completed one of the following:
        i. A post-baccalaureate program in management/administration at an accredited college or university.
        ii. Three full years of employment in an executive management/ leadership, supervisory, or administrative role.
3. Passing score on the Communication and Literacy Skills test.

(b) **Professional License**.

1. Possession of an Initial license as principal/assistant principal.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial school principal/assistant principal license.

Appendix D5: Alternative Program Data

Profile of Organizations and Approved Programs in Massachusetts:

Approved programs for teachers and principals	Number of Organizations	Number of Program Completers (2007-2008)
All organizations		
Teachers	73	4624
Principals	34	437
Total	91	6892*
Alternative organizations and preparation programs (as defined in the Race to the Top application)		
Teachers	32	843
Principals	12	857
Total	39	1700

Note: An organization may have programs for both principals and teachers, and other types of preparation programs.
* - This number includes the total number of program completers from all types of programs, not just teacher and principal.

Organizations with Alternative Programs

Higher Education Institutions:	**Number of Program Completers (2007-08, teachers):**	**Number of Program Completers (2007-08, principals):**
Bridgewater State College (Teacher only)	52	N/A
Clark University (Teacher only	Data not available	N/A
Lesley University (Teacher only)	75	N/A
Salem State College	18	28
Simmons College (Teacher only)	Data not available	N/A
Tufts University (Teacher only)	Data not available	N/A
UMass-Amherst (Teacher only)	80	N/A
UMass-Boston (Teacher only)	12	N/A
UMass-Dartmouth	43	25
Public School Districts:		
Boston (Principal only)	N/A	19
Cambridge (Teacher only)	7	N/A
Lawrence (Teacher only)	2	N/A
Lowell (Teacher only)	15	N/A
Medford (Teacher only)	24	N/A

Newton (Teacher only)	4	N/A
Springfield	6	12
Worcester (Teacher only)	11	N/A
Charter Schools:		
City on a Hill Charter School (Teacher only)	3	N/A
Francis W. Parker Charter Essential (Teacher only)	9	N/A
MATCH Charter School (Teacher only)	24	N/A
Educational Collaboratives:		
Assabet Valley Collaborative (Special Education Administrator program only)	N/A – SPED Administrators only	N/A
EDCO Collaborative (Principal only)	N/A	16
Hampshire Educational Collaborative (Teacher only, no completers in Principal program)	44	N/A
Merrimack Education Center	42	27
South Coast Educational Collaborative	16	8
South Shore Educational Collaborative (Principal only)	N/A	4
The Education Cooperative	30	13
Foundations:		
Boston Plan for Excellence (Teacher only – Boston Teacher Residency Program)	72	N/A
National Organizations:		
Teach for America (Teacher only)	N/A – not approved during reporting period	N/A
Private Schools:		
Shady Hill (Teacher only)	15	N/A
Private Education Providers:		
Catherine Leahy Brine Education Consultants, Inc. (Teacher only)	140	N/A
Class Measures (Teacher only)	6	N/A
DeLet (Teacher only)	8	N/A
French River Education Center (Teacher only)	55	N/A
The Reading Institute (Teacher only)	16	N/A
Professional Associations:		
Massachusetts Elementary School Principals Association (Principal only)	N/A	5
Massachusetts School of Professional Psychology (School Psychologists only)	N/A – School Psychologists only	

Massachusetts Secondary School Administrators Association (Principal only)	N/A	37
Norfolk County Teachers Association (Teacher only)	14	N/A
State Routes to Administrative Licensure:		
Review Panel	N/A	8
300-Hour Administrative Apprenticeship	N/A	655
Total:	**843**	**857**

The total number of teachers and principals licensed in 2008:

Type of License:	**Teachers**	**Principals**
Temporary	255	n/a
Preliminary	4,645	n/a
Initial	8,832	1,172
Professional	3,071	253
Total:	**16,803**	**1,425**

Readiness Centers Initiative

Governor Patrick's Education Action Agenda included a recommendation to establish regional Readiness Centers, multipurpose and collaborative centers focused on improving the quality of teaching both across the education continuum and across Massachusetts. The Executive Office of Education (EOE) established six Readiness Centers in October 2009, and they are managed and operated by regional consortia of partners that include public and private institutions of higher education, school districts, early education and out-of-school-time providers, educational collaboratives, non-profit organizations, and business and community partners.

Core Functions of the Readiness Centers

- Provide high-quality professional development and instructional services to educators in early education and out-of-school-time programs, K-12 institutions, and higher education institutions to address both local/regional needs and statewide priorities

- Convene stakeholders from early education, elementary and secondary education, higher education, and other sectors to collaboratively address key education priorities, leverage resources, build statewide capacity, and increase integration and coherence across the education continuum

The Readiness Centers are beginning to provide professional development and instructional services to address local/regional needs and the following statewide priorities: 1) closing persistent achievement gaps among different groups of students; 2) improving the quality of instruction for English language learners, students receiving special education services, and in STEM courses of study; 3) using data more effectively to assess student progress and inform instruction; and 4) improving the quality of early education and out-of-school-time services in Massachusetts. In addition, they are leveraging existing relationships and building new partnerships among stakeholders to improve the delivery mechanisms through which services are provided to educators and also collaboratively address the following education priorities: 1) developing and implementing a rigorous and aligned P-20 curriculum; 2) developing and retaining an effective educator workforce; 3) improving reading proficiency for children from birth through grade three; 4) increasing college and career readiness; and 5) increasing student engagement and success in STEM fields of study.

Each Readiness Center is also providing a site and basic operational support for a District and School Assistance Center that is providing targeted assistance and focused professional development to selected districts and schools that are identified pursuant to regulations of the Board of Elementary and Secondary Education.

Leadership and Governance

In collaboration with the Departments of Early Education and Care (EEC), Elementary and Secondary Education (ESE), and Higher Education (DHE); the Standing Committee on Professional Education for the State Colleges Council of Presidents (SCOPE); and other partners, the EOE has established an organizational structure to sustain this initiative. The Readiness Centers Network includes all of the regional partners and state representatives, and supports successful partnerships among the Readiness Centers by disseminating information about effective professional development models and instructional

practices and developing strategies that address common needs across all regions. In addition, the Readiness Centers Coordinating Committee, which includes representatives from each region and also state representatives, is the leadership team for this initiative.

The six Readiness Centers and the primary regional partners are as follows.

Berkshire Readiness Center – Massachusetts College of Liberal Arts, Berkshire Community College, and the Berkshire Compact for Higher Education

Central Massachusetts Readiness Center – Fitchburg State College, Massachusetts Elementary School Principals' Association, Worcester State College, Mount Wachusett Community College, Quinsigamond Community College, Ashburnham Westminster Regional School District, Auburn Public School District, Fitchburg Public Schools, Dudley-Charlton Regional School District, Worcester Public Schools, FLLAC Educational Collaborative, and the French River Education Center

Greater Boston Readiness Center – Framingham State College, University of Massachusetts Boston, Wheelock College, Massachusetts Bay Community College, and the Greater Boston Regional Collaboratives Organization

Northeast Regional Readiness Center – Salem State College, University of Massachusetts Lowell, North Shore Community College, Middlesex Community College, Northern Essex Community College, Merrimack College, Endicott College, and Gordon College

Pioneer Valley Readiness Center – Westfield State College, University of Massachusetts Amherst, Hampshire Educational Collaborative, and the Lower Pioneer Valley Educational Collaborative

Southeastern Massachusetts Readiness Center – Bridgewater State College, University of Massachusetts Dartmouth, Bristol Community College, Cape Cod Community College, Massasoit Community College, Massachusetts Maritime Academy, Brockton Workforce Investment Board, New Bedford Workforce Investment Board, Southeast Collaboratives Regional Organization, Lighthouse Superintendents' Group, and the Lighthouse Assistant Superintendents' Group

Impact and Added Value

The Readiness Centers are having positive impact and adding value by:

- Increasing the effectiveness of educators across the continuum and across Massachusetts by increasing the quality, alignment, and coherence of professional development/instructional services;
- Maximizing the power of collaboration and convening local, regional, and state stakeholders to address critical issues in education;
- Building new mechanisms for sharing information about best practices and effective models; and
- Building local, regional, and statewide capacity to create a truly coherent and seamless education system in Massachusetts.

For additional information about the Readiness Centers initiative, please contact Saeyun Lee in the EOE at saeyun.lee@state.ma.us.

Readiness Centers Network

The Readiness Centers Network (RCN) is promoting and supporting the development of effective partnerships among the entities that are managing and operating six Readiness Centers in Massachusetts.

Primary Functions

- Disseminate information about best practices and replicable professional development, instructional, and other educational models to the regional partners for the Readiness Centers and other stakeholders across the state

- Establish mechanisms that will promote effective and consistent communication among the regional partners

- Support the development and implementation of strategies that can address common goals across the regions (including increasing the quality, alignment, and coherence of professional development and instructional services; allocating existing resources more efficiently and effectively; and leveraging existing relationships and developing new partnerships among stakeholders to achieve the primary goals of the Readiness Centers initiative)

- Support the assessment of progress to date, both with regard to the establishment of the Readiness Centers and the impact of services and activities on student, educator, and other outcomes

The RCN is also serving as the primary system through which the Executive Office of Education (EOE) and the Departments of Early Education and Care (EEC), Elementary and Secondary Education (ESE), and Higher Education (DHE) are providing technical assistance and support to the regional partners.

Leadership and Membership

The RCN was established and is being managed by the EOE with the support of several partners: representatives from EEC, ESE, and DHE; Carol Keirstead, RMC Research Corporation; Jan Phlegar, Learning Innovations at WestEd; and Frederick Clark, the Standing Committee on Professional Education (SCOPE) for the Council of State College Presidents.

The members of the RCN include representatives from the regional partners for the Readiness Centers, including but not limited to members of the governing boards or executive committees for each region, and the Executive Director for each Readiness Center. Each region must be represented by a diverse array of stakeholders from early education and care, elementary and secondary education, and higher education. Representatives from the EOE, EEC, ESE, DHE, and SCOPE are also serving as members of the RCN.

Roles and Responsibilities of the State Partners

To oversee the establishment and management of the RCN and ensure that stated goals are being achieved, the EOE (in collaboration with state and regional partners) is identifying evolving priorities, defining and coordinating the efforts of the contributing partners, convening the regional partners on a regular basis, and coordinating the delivery of statewide technical assistance and support. In addition, the EOE is actively seeking fiscal and other resources to sustain the Readiness Centers initiative in the short- and long-term.

EEC, ESE, and DHE are supporting the RCN by providing information related to early education and care, elementary and secondary education, and higher education respectively to the regional partners as needed or requested; and working in collaboration with the EOE to achieve stated goals.

Carol Keirstead and Jan Phlegar are supporting the RCN by providing technical assistance to EOE staff members (and EEC, ESE, and DHE staff members as appropriate), assisting with the design of initial RCN meetings, facilitating/documenting RCN meetings, and disseminating the proceedings and products to all participants.

SCOPE is supporting the RCN by leveraging existing partnerships among the state colleges to advance the goals of the Readiness Centers initiative, contributing to the development of a common rubric to evaluate professional development activities, and contributing to the creation and maintenance of the RCN website that will provide information and also link proposed websites for the Readiness Centers. SCOPE will also support the organization of a statewide annual research and practice conference for multiple stakeholders.

The outcomes have included the development of a cohesive vision for the Readiness Centers initiative, increased collaboration among the regional partners and state agencies, the development of strategic plans for meeting the goals of the Readiness Centers initiative and the RCN, and the creation of preliminary outcomes and measures to guide the first phase of implementation.

Schedule of RCN Meetings

The EOE convened the first RCN meeting on Friday, November 13, 2009, and subsequent meetings were convened in December 2009 and also March and April 2010.

The EOE will convene at least three RCN meetings per year, and will also organize an annual conference. In addition, in collaboration with the EEC, ESE, DHE, and other partners, the EOE will continue to disseminate information (including guidance documents and information about best practices) to the RCN members as appropriate.

For more information about the RCN, please contact Saeyun Lee in the EOE at saeyun.lee@state.ma.us.

MCAS Student Growth Percentiles: State Report

October 2009

Massachusetts Department of Elementary and Secondary Education
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Mitchell D. Chester, Ed.D.
Commissioner

For years, educators across the Commonwealth have called for the state to develop a way to measure student *progress* as a complement to the measures of student *achievement* already available through the MCAS testing system. As a result of the efforts of educators around the state, I am pleased to release the first round of student growth reports statewide and for all districts and schools.

The public now has access to school and district results by going to the "School and District Profiles" (http://profiles.doe.mass.edu/state_report/mcas.aspx) on our Department's website. Support materials, including a tutorial video, as well as this report are available at: http://www.doe.mass.edu/mcas/growth.

As part of the development of the methodology used to generate growth data, the Department conducted a field test with a diverse group of nine districts from April 29th to July 2, 2009. The participating districts were: Community Day Charter Public School, Franklin, Lowell, Malden, Newton, Northampton, Sharon, Springfield, and Winchendon. I want to thank these nine districts for their generous contributions of time, talent and insights during one of the busiest periods in the school year. Districts and schools across the state will benefit from what our staff learned from this process including important refinements to reports, training and interpretive materials.

I am optimistic about the potential that this measure of student growth presents for the improvement of curriculum and instruction in all districts. While in no way do I want the growth measure to obscure our goal of getting all students to proficiency and beyond, I am confident that used in combination with MCAS achievement data, growth will provide a more robust profile of school and district performance. I am looking forward to our discussion of the student percentile growth model and the insights we are gaining about performance.

Mitchell D. Chester, Ed. D.
Commissioner of Elementary and Secondary Education

Table of Contents

Introduction

This report describes a new method of interpreting student achievement using results from the Massachusetts Comprehensive Assessment System (MCAS). In the traditional view, measures of student performance reflect the extent to which students have mastered the standards contained in the English Language Arts (ELA) and Mathematics Massachusetts Curriculum Frameworks each school year.

In order to complement the traditional MCAS scaled scores and performance levels, we have designed Student Growth Percentiles (SGPs) to measure how much a student's or group of students' achievement has grown or changed over time. For K–12 education in Massachusetts, the phrase "growth model" describes a method of measuring individual student progress on statewide assessments by tracking student scores from one year to the next. Each student in grades 4 through 8 and 10 with at least two consecutive years of MCAS scores will receive a *student growth percentile,* which measures how much the student gained from one year to the next relative to other students statewide with similar MCAS test score histories. Student growth percentiles range from 1 to 99, where higher numbers represent relatively higher growth and lower numbers represent relatively lower growth.

The Importance of Measuring Growth

Making sense of results over time

In 2006 the Department began testing all students each year in ELA and Mathematics in Grades 3–8 and 10. Naturally, educators and parents with access to student results wanted to compare each student's performance from one year to the next. Although the tests and the curriculum frameworks for each grade are adjusted to cover different content in each subject each year, the scaled score results were not designed to allow direct comparisons of student scores from one year to the next.

The typical[1] "growth" or change in a typical student's score from one year to another varies widely depending on three factors: the student's grade level; the subject; and where on the MCAS scale each student started. So while it may be common for high performing 3rd graders to score lower when they move on to the more challenging 4th grade frameworks, the opposite can be true for tests in the other grades and other subjects. In order to accurately measure growth, we developed a method that accounted for all three factors.

Fairness

Student growth percentiles capture growth from each student's starting point. The growth percentile is not dictated by student performance on the MCAS in previous years, because growth is measuring change in performance rather than absolute performance.

[1] "Typical," throughout this document, means: "neither high growth nor low growth, but growth that was somewhere in the middle of the distribution."

In this way, all students at all performance levels are provided an equal chance to demonstrate growth at any percentile on the next year's test. Similarly, all districts, schools, grades, programs, or groups also have an equal opportunity to demonstrate growth regardless of the populations they serve.

What Is a Student Growth Percentile (SGP)?

A student growth percentile is a measure of student progress that compares changes in a student's MCAS scores to changes in MCAS scores of other students with similar achievement profiles. The model establishes cohorts of students with "similar performance profiles" by identifying all students with the same (or very similar) MCAS scores in prior years; all MCAS data for a student since 2006 are used (where available) to establish academic peers.

Percentiles are familiar to most educators and parents because they are used to report performance on some national standardized tests and in other common arenas such as pediatrics, where charts put children in percentiles depending on their height and weight. The key distinction between those customary uses of percentiles and those used to measure academic progress in this report is that student growth percentiles measure change instead of an absolute quantity. For example:

- A student with a growth percentile of 90 in 5th grade mathematics grew as much or more than 90 percent of her academic peers (students with similar score histories) from the 4th grade math MCAS to the 5th grade math MCAS. Only 10 percent of her academic peers grew more in math than she did.

- A student with a growth percentile of 23 in 8th grade English language arts grew as much or more than 23 percent of her academic peers (students with similar score histories) from the 7th grade ELA MCAS to the 8th grade ELA MCAS. More than three-fourths of her academic peers grew more in ELA than she did.

Student Growth Percentiles in the Aggregate: Median Growth Percentiles

To report student growth at the subgroup, grade, school, or district level, individual student growth percentiles can be aggregated. The most appropriate measure for reporting growth for a group is the median student growth percentile: the middle score if the individual student growth percentiles are ranked from highest to lowest. The average or mean is not an appropriate measure when comparing percentiles. A typical school or district in the Commonwealth would have a median student growth percentile of 50.

No matter how student growth percentiles are aggregated, whether at the subgroup, grade, school, or district level, the statistic and its interpretation remain the same. The comparison group is always the students' academic peers: students with similar MCAS test score histories. For example, if the students with disabilities in a district have a median student growth percentile of 53, it could be stated that that particular group of students progressed at a relatively higher level than their academic peers—a group of

students who may or may not be students with disabilities. The measure does not indicate that students with disabilities improved more than 53 percent of other students with disabilities.

Statewide trends in 2009

It is important to note that growth statistics are norm-referenced, therefore they will always be centered around 50. The figures below are designed to show how common or uncommon it is for schools to grow at various median percentiles. The first pair of graphs shows the distribution of median growth percentiles statewide at the school level. Figures 1 and 2 depict how many schools are growing at relatively higher (above 60), typical (between 40 and 60), or lower rates (below 40) on both the ELA and mathematics MCAS tests. Consistent with the nature of percentiles, the majority of schools (63 percent in ELA; 60 percent in mathematics) had medians between 40 and 60.

Figure 1: Distribution of School Median Student Growth Percentiles for ELA, 2009 (all grades)

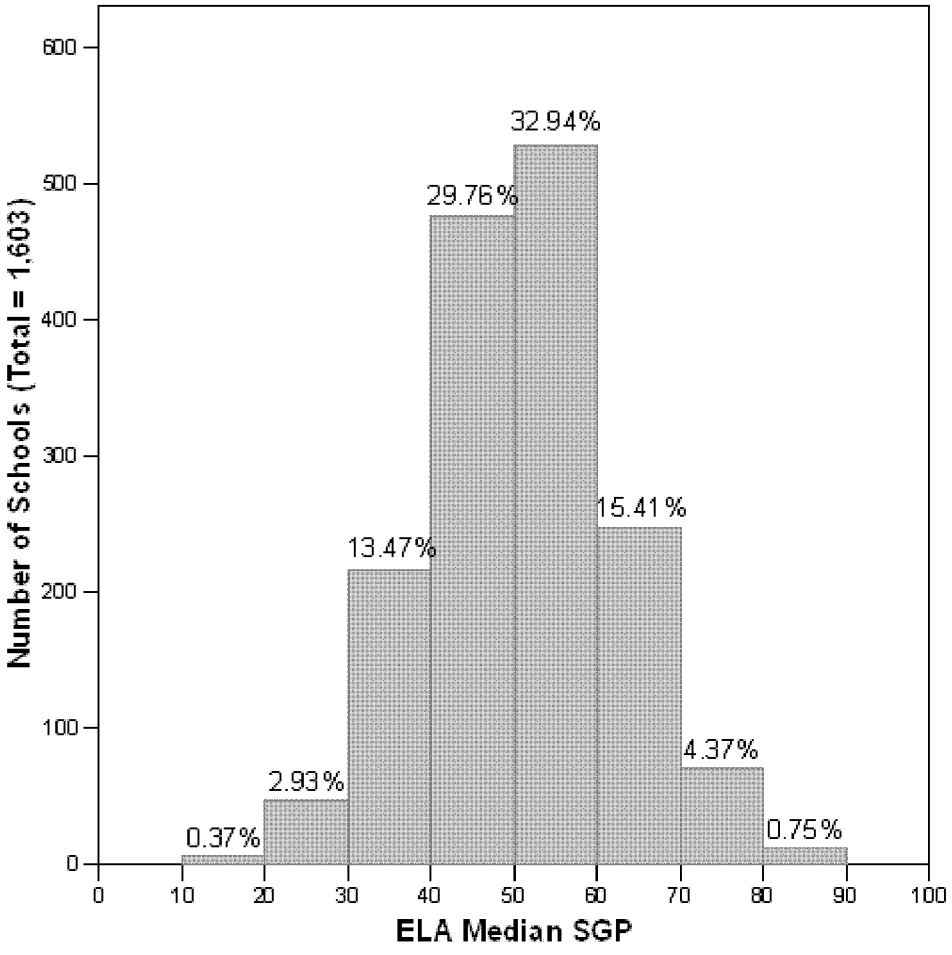
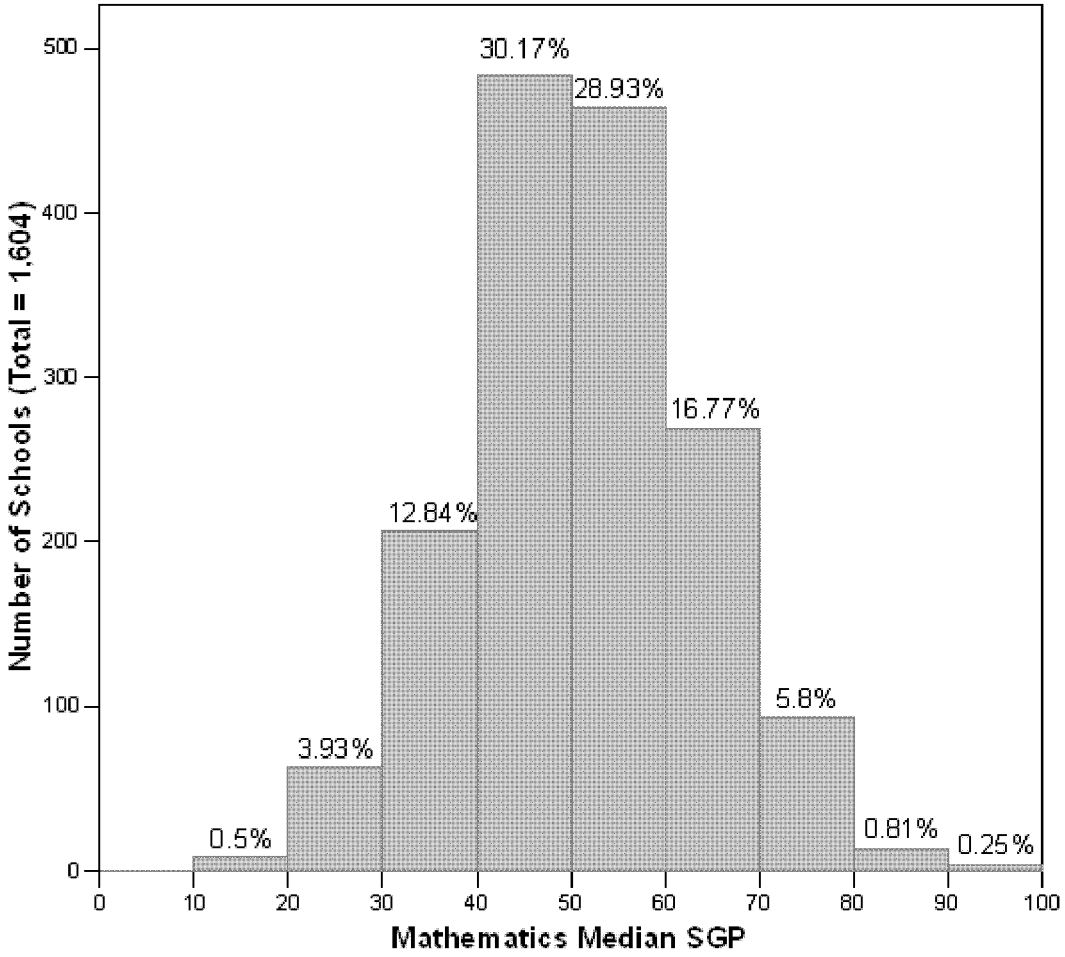


Figure 2: Distribution of School Median Student Growth Percentiles for Mathematics, 2009 (all grades)



The Education Data Warehouse provides districts and schools with several reports that will help them analyze their growth profile. For district and school personnel as well as the public at large, the "MCAS Student Growth Percentiles Interpretive Guide" provides examples of these reports and commentary on how to read and interpret them. The stacked bar charts" (pages 7–10 of the Interpretive Guide) are particularly helpful in highlighting how local and statewide performance compare.

The data presented in this next set of charts shows the median student growth percentiles for selected student groups. The median student growth percentile for all students at the state level is 50.[2] The median growth percentiles of select populations, however, reveal that some groups are progressing at a higher or lower rate from the statewide median student growth percentile.

[2] In rare instances when the number of score points in the baseline is limited, as in Grade 4, the median can vary from 50 by a point or two.

Table 1. 2009 Statewide ELA Median Student Growth Percentiles

Group	All Grades # Included	Median Student Growth Percentiles						
		All Grades	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
All Students	396,371	50	50	50	50	50	50	50
African-American/Black	30,107	48	41	44	52	47	53	51
Asian	18,925	60	58	61	62	59	62	59
Hispanic/Latino	49,717	46	42	45	49	46	51	45
Multi-race/Non-Hispanic	7,341	50	48	50	49	51	53	49
Native American	1,089	47	46	49	48	50	46	46
White	288,750	50	52	51	49	50	49	50
Non-Low Income	277,329	52	54	53	51	52	50	51
Low Income	118,989	45	41	44	47	45	49	45
LEP	13,474	48	44	46	52	49	57	50
Formerly LEP	10,008	54	50	51	58	55	59	56
Female	194,583	53	55	53	55	54	49	50
Male	201,735	47	44	47	45	46	51	49
Students w/ Disabilities	66,224	40	34	42	41	41	43	39
Non-Title 1	298,227	51	54	52	51	51	50	51
Title 1	98,091	46	42	45	49	45	51	44

Table 2. 2009 Statewide Mathematics Median Student Growth Percentiles

Group	All Grades # Included	Median Student Growth Percentiles						
		All Grades	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
All Students	397,572	50	50	50	50	50	50	50
African-American/Black	30,260	46	40	48	46	45	50	48
Asian	18,987	60	61	62	62	58	58	60
Hispanic/Latino	50,091	44	41	43	46	45	48	45
Multi-race/Non-Hispanic	7,350	49	52	49	48	49	49	46
Native American	1,090	47	48	47	46	42	50	52
White	289,352	51	52	50	50	51	50	50
Non-Low Income	277,863	52	54	52	52	52	52	51
Low Income	119,659	44	42	44	45	45	47	46
LEP	13,727	48	40	46	51	53	55	48
Formerly LEP	10,030	52	49	50	55	53	56	52
Female	194,984	50	49	49	51	52	52	49
Male	202,538	50	51	51	49	49	49	51
Students w/ Disabilities	66,303	43	39	41	41	43	45	47
Non-Title 1	298,807	51	54	52	51	51	51	50
Title 1	98,715	46	42	46	47	46	48	49

Tables 1 and 2 help us answer questions such as:

- How did the growth of a subgroup compare to the growth of all students across all grades and in a given grade? For example,
    - The median growth percentile of 48 for African-American students in ELA across grades 3–8 and 10 is very close to the statewide median of 50 for all students.
    - The median growth percentile of 56 for formerly limited English proficient students in mathematics in grade 8 is higher than the corresponding median growth percentile of 50 for white students.
- How did the growth of a subgroup change as they progressed through the grades?
    - Hispanic/Latino students make steady progress from a lower median student growth percentile of 42 in ELA in grade 4 to an more typical median student growth percentile of 51 in grade 8, but then experienced slightly lower growth of 45 in 10^{th} grade.
    - The 8^{th} grade ELA results for LEP students show the typical student at that grade is growing at the 57^{th} percentile when compared to students with similar MCAS scores in 7^{th} grade and before. A reasonable interpretation of this median is that 8^{th} grade LEP students are more than keeping pace with their academic peers.

One more finding of interest is that lower than typical growth in the lower grades increases to typical (or higher) growth in the later grades for many subgroups in ELA. This trend is particularly interesting and warrants further study.

Interpreting School, District and Group-level Growth

Because student growth percentiles are normative (they describe how each student changed relative to what was normal), the medians for all districts, schools, and subgroups will be centered around 50. Therefore, statewide, there should be just about as many schools above 50 as below 50 and this will be true even if achievement levels rise. Depending on the test, between 60 and 65 percent of groups will have a median somewhere between the 40^{th} and 60^{th} percentile.

As with all data driven decision making, educators are advised to use caution and not overemphasize small differences. Always consider the number of students being measured, as scores for small groups are likely to change much more than for larger groups. For this reason, the tables and charts used to display growth and achievement data include an indication of the number of students included in the growth calculations. Median growth percentiles are not calculated for groups smaller than 20.

Best Practices for Using Growth Data

Don't allow growth data to obscure achievement data. Use growth data to complement achievement data.
It is the Department's goal to help every student in the state reach proficiency and beyond. Achievement data, therefore, is still an extremely important measure of how students stand relative to proficiency. Growth data is best used to add context to achievement data.

Use two years of data if it's available.
The Department has gathered two years of growth data for students in grades 4 through 8. The 10th grade results could only be calculated for the first time in 2009; hence, only one year of growth data is available for grade 10.

Look at differences across grades as well as between grades.
Because every student has an equal opportunity to grow at a relatively high or low level, regardless of their grade, it is appropriate to combine grades at the school, district, or group level. However, be sure to look at the growth of groups in schools and grades and by subgroup, because overall growth scores can often mask patterns.

Differences in medians of less than 10 points are not likely to be meaningful.
At the school level there is a correlation[3] between median growth scores in 2008 and median growth scores in 2009. Despite the correlation, the average school saw its medians fluctuate by 10 points from year to year. Therefore, as a rule of thumb, differences in medians of less than 10 are not likely to be educationally meaningful at the school or district level, except in rare cases when those differences occur among particularly large numbers of students (i.e. 1,000 students or more).

Medians above 60 or below 40 are relatively unusual.
Figures 1 and 2 show that roughly one school in five had a median growth percentile higher than 60 and a slightly smaller proporation had medians below 40. About five percent had medians above 70 or below 30 and less than one percent had growth scores higher than 80 or below 20.

[3] Among the 1,304 elementary and middle schools with valid growth scores in 2008 and 2009, the correlation between ELA medians was .561 (R-squared = 32%) and mathematics medians was .527 (R-squared = 28%).

Rethinking Performance

The Department conducted a field test of the growth model with a diverse group of nine districts from April 29th to July 2, 2009. The participating districts were: Community Day Charter Public School, Franklin, Lowell, Malden, Newton, Northampton, Sharon, Springfield, and Winchendon. The field test provided important feedback and recommendations to improve the clarity and usability of growth model reports.

Soon after the start of this growth model field test, we realized that we needed to revisit our notion of student performance. With this added dimension of growth, we concluded that the definition of performance needs to be expanded from solely "achievement" to "achievement plus growth." This concept is illustrated in the following example:

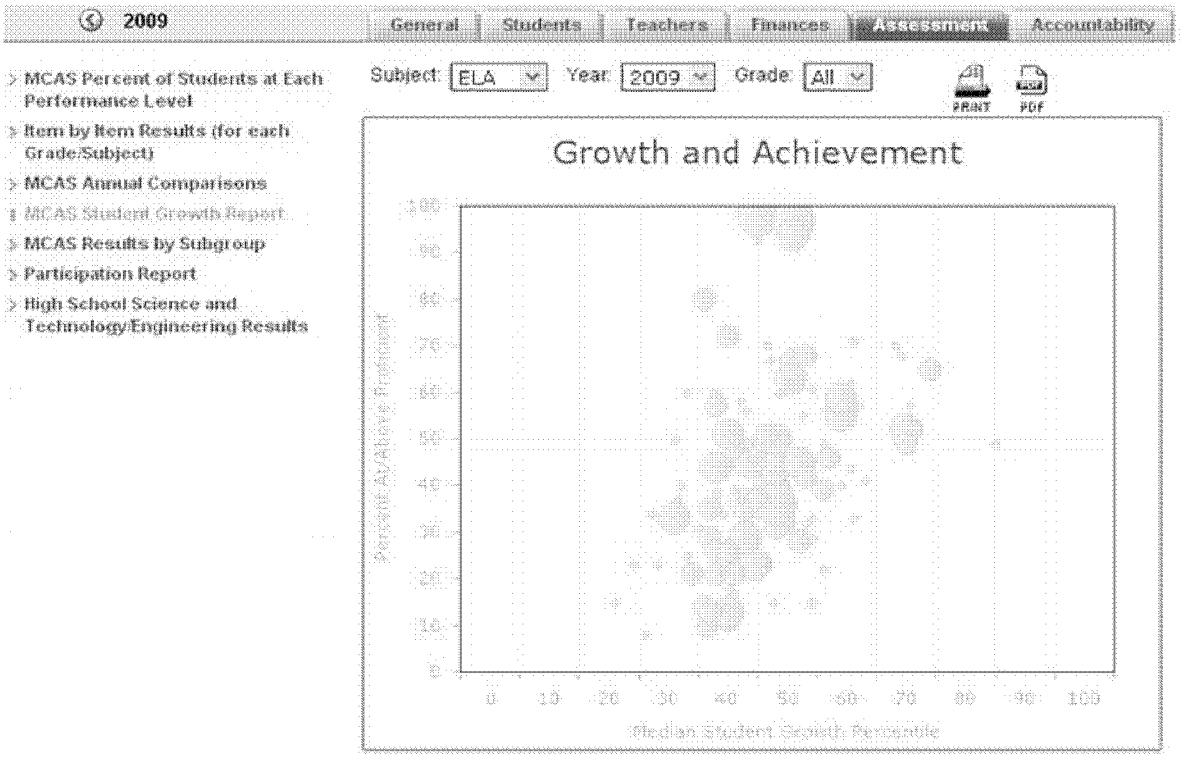
Table 3: ELA MCAS 2009: Grade 10 School Results

	ACHIEVEMENT		GROWTH
	% Proficient or Advanced	CPI	Median Growth Percentile
School A	75%	88.3	63
School B	75%	88.9	32

Schools A and B both had similar achievement profiles. They both saw exactly 75 percent of their students reach *Proficiency* or above, and their Composite Performance Index scores were virtually identical. However, School A had an unusually high median growth percentile of 63, meaning that half of its students grew at or above the 63rd percentile. Meanwhile, School B had an unusually low median growth percentile of 32, meaning that half of its students grew at or below the 32nd percentile. Therefore, while these two schools have extremely similar levels of achievement, School A, due to its high growth, is performing better than School B.

Availability of Growth Data

School and district growth reports are now available online alongside the MCAS test results posted to the Department's "School and District Profiles" (http://profiles.doe.mass.edu/). Tables of results by district, by grade, by school, and by subgroup have also been appended to the 2008 and 2009 MCAS results report (http://profiles.doe.mass.edu/state_report/mcas.aspx). In addition, graphical displays like the figure below are available on each district profile by clicking the "Assessment" then "MCAS Student Growth Report" tabs."



Moving Toward Better Conversations about Teaching and Learning

The advent of a statistically valid growth model in Massachusetts is intended to make it easier for instructional leaders to make inquiries and start meaningful conversations about good teaching and learning at the student and classroom levels, where the information can be most useful. In the Education Data Warehouse, users with access to student level data (mainly school and district administrators) can experience a dynamic interface that allows educators to identify factors associated with high growth rates.

It is important to keep in mind that the student growth percentile is another piece of data that educators may use to better understand their students' performance. There is a personal history behind every student growth percentile, a history that reflects the impact of the curricular and instructional program that the student experienced. The Department hopes that this new measure of student performance provokes high quality conversations about students, programs, schools, curriculum, and the teaching and learning that take place in every classroom across the Commonwealth.

Appendix D8: Teachers Linked to Student Growth Model

MCAS growth (direct)	**16%**	Grades 4 to 8 ELA and math teachers Self-contained classes and middle school subject teachers
MCAS growth (indirect)	**17%**	Grades 9 and 10 ELA and math subject teachers Grades 4 to 8 reading specialists Grades 4 to 8 special education teachers
Teachers with an assessment but no growth	**10%**	Grade 7 history teachers* Grades 10 and 11 US history teachers Middle school science and technology/engineering Grades K to 12 ELL teachers (MEPA) Reading First (DIBELS & GRADE)** AP and IB teachers
Teachers with a curriculum framework but no assessment	**32%**	Vocational education Health Drama Music Foreign language Visual arts Grades 11 and 12 science and technology/engineering Grades PK to 2 Grade 8 history
Teachers without a curriculum framework	**25%**	Business & marketing High school electives Middle and high school computers Special education specialists (other than grades 4 to 10)

* History and Science tests have been suspended

** ESE does not collect data from DIBELS and GRADE

Appendix D9: Student Portfolios as an Alternative Assessment

MCAS Alternate Assessment (MCAS-Alt)

The Massachusetts Comprehensive Assessment System (MCAS) is the Commonwealth's statewide assessment program developed in response to the Education Reform Act of 1993. MCAS, along with other components of education reform, is designed to strengthen public education in Massachusetts and ensure that all students participate in a challenging curriculum based on the Massachusetts Curriculum Frameworks.

All students educated with Massachusetts public funds, including students with disabilities, must participate in MCAS using one of the following formats:

- Routine (standard) MCAS testing
- MCAS testing using one or more test accommodation(s)
- MCAS Alternate Assessment (MCAS-Alt)

The vast majority of students with disabilities take standard paper and pencil MCAS tests, either with or without accommodations, at the grade specified for assessment in that subject. A very small number of students with the most significant disabilities, about 1% statewide, take the MCAS Alternate Assessment.

Each student's IEP or 504 team decides how, not whether, the student will participate in MCAS in the coming year. Guidelines used by IEP Teams to make these decisions can be found in the Department publication, Requirements for the Participation of Students with Disabilities in MCAS which is updated annually.

The MCAS-Alt consists of a portfolio of materials collected annually by the teacher and student. Evidence for the student portfolio may include work samples, instructional data, videotapes, and other supporting information and materials based on the student's performance in the subject being assessed.

Appendix D10: Evaluation of Educators

Policy Direction on Evaluation of Teachers and Administrators

Board of Elementary and Secondary Education Meeting: May 25, 2010
Agenda Item: Policy Direction on Evaluation of Teachers and Administrators

MOVED: that the Board of Elementary and Secondary Education, in accordance with Chapter 69, Section 1B and Chapter 71, Sections 38 of the Massachusetts General Laws, hereby direct the Commissioner to establish a Task Force on Evaluation of Teachers and Administrators. The task force shall review the Board's Regulations on Evaluation of Teachers and Administrators, 603 CMR 35.00, and the Principles of Effective Teaching and Principles of Effective Administrative Leadership incorporated therein, and shall recommend, no later than January 31, 2011, a revised set of regulations and principles ("evaluation framework") consistent with the Board's mission statement: "To strengthen the Commonwealth's public education system so that every student is prepared to succeed in postsecondary education, compete in the global economy, and understand the rights and responsibilities of American citizens."

Further, that the Task Force on Evaluation of Teachers and Administrators shall recommend a state evaluation framework that:

1. provides teachers and principals with honest, fair, and improvement-oriented feedback annually,
2. differentiates by career stage and ensures flexibility for districts to consider additional measures of effectiveness beyond those required in the framework,
3. establishes a two-year cycle of improvement via a formative assessment and summative evaluation based on a Continuous Improvement Plan for every educator.
    a. *For teachers*, the Continuous Improvement Plan will define goals for improving teaching performance and student performance, the professional development to achieve these goals, other professional support such as coaching, and interim benchmarks that may include observations of teacher work, student work, and teacher work products.
    b. *For principals and administrators*, the Continuous Improvement Plan will define goals for improving administrative performance and student performance, the professional development to achieve these goals, other professional support such as coaching, and interim benchmarks that may include observations by supervisors and administrator work products.
4. differentiates performance by *at least* three rating categories based on student growth as a significant factor with other measures of effectiveness for the purpose of establishing the requirements of the Continuous Improvement Plan.

5. incorporates categories of appropriate data and information to be used in evaluations:
    a. Measures of student growth will include trends in the MCAS growth model where they apply, along with state, district, school, and/or teacher-generated assessments that are comparable across subjects and grades, such as beginning- and end-of-year tests, performance tasks, portfolios of student work, and other student work products.
    b. Student performance will be determined through locally-developed and/or publisher-created measures that assess student academic improvement and are reliable and comparable across similar subjects and/or grades in the school and/or district.
    c. Other measures of educator effectiveness might include:
        i. *For teachers:* Supervisor ratings using research-based observational tools and rubrics; evidence of content knowledge, professional skills, cultural competency, professional growth; teacher self-assessments; peer observations; additional student, classroom, team, and school measures including indicators of school culture, climate, and conditions.
        ii. *For principals and administrators:* Supervisor ratings; professional skills in such areas as strategic planning, instructional leadership, evaluation and supervision, cultural competence, human resources and development, management, external development, and micro political leadership; professional growth; principal self-assessments; peer observations; additional student, classroom, team, and school measures including indicators of school culture, climate, and conditions.
6. Links comprehensive evaluation to key personnel decisions, as permitted by law and/or as provided by contract, including:
    a. Professional teaching status (tenure),
    b. Career advancement through a teacher leadership career ladder,
    c. Compensation for additional roles and responsibilities and for hard to staff schools, and
    d. Dismissal and demotion (A teacher or principal identified as ineffective who does not make acceptable progress toward achieving the goals of his/her continuous improvement plan after at least one year of intensive support can be dismissed or demoted.)

Further, that the Task Force on Evaluation of Teachers and Administrators will include:

1. representatives from all MassPartners organizations (the state associations of superintendents, school committees, teachers, elementary and secondary school principals, and parents), and,
2. representatives from statewide counseling and special subject organizations, e.g., guidance, reading, arts, vocational/technical schools

Further, that the Commissioner shall present proposed amendments to the Regulations on Evaluation of Teachers and Administrators, 603 CMR 35.00, and the Principles of Effective Teaching and Principles of Effective Administrative Leadership to the Board for review in February 2011, in accordance with the Administrative Procedure Act.

Appendix D11: Adopted Leadership Standards

On September 23, 2009, on a motion, as amended, duly made and seconded, it was[1]:

VOTED: that the Board of Elementary and Secondary Education, in accordance with Chapter 69, Section 1B and Chapter 71, Section 38G of the Massachusetts General Laws, hereby approve the Policy Standards for Principals, Superintendents, and Other Leadership Roles, as presented by the Commissioner. These policy standards establish the core areas that are applicable to all educational leadership roles and at all stages:

1. **Learning and Instruction: The education leader promotes the success of all students and staff by cultivating a shared vision that makes powerful teaching and learning the central focus of schooling.**

2. **Management and Operations: The education leader promotes the success of all students and staff by ensuring management of the organization, operations, and resources for a safe, efficient, and effective learning environment.**

3. **Family and Community Partnerships: The education leader promotes the success of all students and staff through partnerships with families, community members, and other external stakeholders that support the mission of the school and district.**

4. **Ethical and Reflective Leadership: The education leader promotes the success of all students and staff by providing ethical, culturally proficient, skilled, and reflective leadership.**

Further, that the Board of Elementary and Secondary Education direct the Commissioner to use the policy standards as the foundation for developing:

- **Amendments to the regulations on educator licensure and preparation program approval (603 CMR 7.00)**
- **Role- and stage-specific performance indicators that would be used to approve leadership preparation programs and to license novice and experienced educational leaders**
- **Performance assessments for novice and experienced leaders, based on the performance indicators**
- **Guidelines to be used to strengthen the preparation, recruitment, evaluation, and ongoing professional development of education leaders and their selection as mentors, coaches, and turnaround leaders.**

The commissioner shall ensure that the regulatory amendments and performance indicators reflect the intent of the Board's mission statement: "To strengthen the Commonwealth's public education system so that every student is

[1] Full Board document can be found at http://www.doe.mass.edu/boe/minutes.html .

prepared to succeed in postsecondary education, complete in the global economy, and understand the rights and responsibilities of American citizens."

Further, the Commissioner shall ensure that the regulatory amendments and performance indicators include, for each educational leadership role, as appropriate, the equity standards for administrators that are currently included in 603 CMR 7.10 (2) (c) 1–6:

1. **Assures presence and quality of educational programs that address the needs, interests, and abilities of all students.**
2. **Provides programs or activities that help all students acquire a positive civic identity and see themselves as integral members of our civic communities.**
3. **Fosters understanding that effort is a key factor in achievement.**
4. **Helps all students see themselves as unique individuals responsible for their own actions.**
5. **Assures high academic expectations for all students.**
6. **Holds teachers, students, and self to high standards of performance and behavior.**

The Commissioner will present proposed amendments to the regulations to the Board for review and approval (following a public comment period) in accordance with the Administrative Procedure Act. The Commissioner further will report to the Board on the completed draft performance indicators and professional dispositions as they are developed for each role and stage, and will include an appropriate process of public review and comment period for them.

The vote was unanimous.

Draft Policy Standard Descriptions

Education leaders motivate, inspire, and support staff and students and spur them toward high performance. They work with stakeholders to develop a clear educational vision and mission and help mobilize the fiscal, human, organizational, and community resources necessary to achieve them. They use data and research to inform decision-making and school improvement efforts and encourage staff to do so as well.

Education leaders act strategically and purposefully in pursuit of a clear educational mission, while empowering others to do the same. They foster professional and personal growth in their staff, and focus school improvement efforts on strengthening achievement and improved educational outcomes for all students. They understand and can appropriately apply the laws and regulations governing education in the Commonwealth and the nation, including those designed to ensure equity and prevent discrimination.

Education leaders are culturally proficient and embrace diversity as an essential ingredient to a vibrant school culture. They incorporate student, staff, and community cultures, perspectives, and resources into the fabric of school life. They work actively to ensure learning environments that are free of bias and open to differences in backgrounds, beliefs, cultures, sexual orientation, and learning styles.

As reflective practitioners, education leaders both model and support life-long learning, along with the high expectations and commitment to continuous improvement that are necessary to promote high achievement. They promote positive change and transformation while working collaboratively to create successful learning communities.

I. Learning and Instruction: The education leader promotes the success of all students and staff by cultivating a shared vision that makes powerful teaching and learning the central focus of schooling.

Such leaders create a results-oriented focus on teaching and learning that permeates the culture and organization of their schools. They ensure the systems and opportunities (time and resources) that enable all members of the school community to strive towards high achievement. They use data to plan and implement effective practices that are appropriate for the diverse learning styles, populations, and levels of readiness of their students. In turn, education leaders use evidence to measure the effectiveness of each aspect of the educational program.

Educational leaders promote and foster instructional improvement. They systematically monitor and support student learning through curricula tied to state and district standards, using assessment data and research to inform effective practice. They engage teachers in regular substantive discussions about content, pedagogy, and the use of both formative and summative assessments. They promote collaborative approaches, activities that allow educators to analyze student work in team settings, sharing leadership roles.

Educational leaders promote high-quality professional development that is aligned with district and school priorities and is informed by data on student achievement and research on effective practice. They model, through their use of time and the strategic priorities they set, a clear focus on teaching, learning, high expectations, and high achievement.

II. Management and Operations: The education leader promotes the success of all students and staff by ensuring management of the organization, operations, and resources for a safe, efficient, and effective learning environment.

Education leaders oversee school improvement, including initiatives that sustain and strengthen the learning environment and school culture. They pay particular attention to developing a strategic approach to the development of human capital, including recruitment,

hiring, induction, mentoring, and evaluation of highly qualified and effective staff, whose skills and experience comport with identified student learning needs. They develop budgets that allocate resources equitably to meet critical priorities. They ensure systems and schedules that maximize the time teachers have to focus on student learning --through classroom instruction, lesson planning, and collaboration with colleagues. They incorporate technology as both a management and educational tool that is vital to teaching and learning in the 21st century.

Education leaders work to prevent crises, anticipating potential threats to safe and effective learning environments and work to correct student and staff behavior that is counter productive to the goals and mission of the school/district. Should unavoidable crises arise, education leaders manage them appropriately and effectively. Education leaders also know how to delegate responsibility to ensure their primary focus is on strengthening the teaching and learning environment.

III. Family and Community Partnerships: The education leader promotes the success of all students and staff through partnerships with families, community members, and other external stakeholders that support the mission of the school and district.

Educational leaders incorporate student, staff, and community cultures, perspectives and resources into the fabric of school life. They do this by building mutually beneficial relationships among a school's stakeholders, actively cultivating and sustaining open two-way communication. They use a variety of communication methods to share and promote information about the school. They invite collaboration in educational decision-making, resource allocation, and planning that leads to instructional improvement and greater support for all their students.

Education leaders affirm and recognize excellence and productive effort by students, staff, and community partners in regular and concrete ways. They recognize that the diverse cultures of the students, staff and surrounding school community bring both benefits and challenges to the academic enterprise. They use those benefits and challenges as a fulcrum for cultivating understanding, respect for differences, and a common commitment to improved outcomes for all of their students, and increased esteem for teachers in the communities they serve.

IV. Ethical and Reflective Leadership: The education leader promotes the success of all students and staff by providing ethical, culturally proficient, skilled, and reflective leadership.

Education leaders embrace the ethical, pedagogic, and civic imperatives of public education. Their leadership is grounded in a framework of action and decision-making that reflects this understanding. Educational leaders are culturally proficient and embrace diversity as an essential ingredient to a vibrant school culture. They understand the deleterious impact that discrimination or negative stereotyping based on race, class, gender, disability/exceptionality,

language, sexual orientation, or religion has on students' lives, self perceptions, and opportunities to learn. They work actively to ensure learning environments that are free of bias and open to differences in backgrounds, beliefs, cultures, sexual orientation, and learning styles.

Educational leaders model intellectual curiosity, life-long learning, and professional development, including shared professional learning with colleagues within and outside their own district. They foster an environment of inquiry as well as personal and professional growth, reflecting on their own and others' practice in ways that strengthen student and adult engagement and growth.

Education leaders consistently use data and other evidence to adapt systems, procedures, and practices, where appropriate, to address identified gaps or needs in services, practices, and systems. They encourage reasoned disagreement and dissent, and know how to address conflict constructively while searching for common ground. They encourage shared investment and accountability through collaborative leadership. This includes identifying and fostering leadership skills and capacity in their staff and students. Effective education leaders manage their own time effectively by prioritizing activities, delegating responsibilities, and eliminating any activities that distract from the central focus on teaching, learning, and student growth.

Appendix D12: Overview of Race to the Top Searchable Databases

The Department of Elementary and Secondary Education has compiled a database of public school teacher collective bargaining agreements under the authority of Mass. General Laws c. 15, § 55A, as amended in 2008:

> *Each school district, including regional school districts and charter schools, shall annually file with the office [of school and district accountability within the department], on or before October 1, a copy of its current personnel contracts and collective bargaining agreements in a form and manner prescribed by the commissioner.*

ESE maintains the database a public resource available online. Users can find particular district agreements or search among the agreements for keywords. The database was launched in the fall of 2009, and trainings for district staff were offered around the state. Requests for updated contracts now go out annually, and new contracts are uploaded whenever they are received during the year.

Appendix D13: Teacher Effectiveness & Quality Improvement Plan (TEQIP)

As a result of the USDE approved Revised State Plan, in 2008, the Department implemented an online application used to monitor and provide technical assistance as it relates to teachers in their district who have not met the HQT requirements. Beginning in June 2010, the Department will further expand the TEQIP to incorporate Teacher Effectiveness. Consequently, districts will be asked to provide information on teacher and principal performance evaluations and how the ratings are used. Gathering this information will help to understand how evaluation ratings are distributed among teachers and principals in each district.

- The TEQIP is partly pre-populated with information regarding a district's non-Highly Qualified Teachers, as reported through the district's certified EPIMS data.
- June of each year, districts must complete the plan by entering additional information for each teacher listed, including their licensure information and how the district will use Title IIA, and if applicable, Title I, funds to assist these teachers in meeting the HQ requirements.
- Districts will provide information on evaluation, including use of student achievement and growth data.
- Department reviewers make sure that districts include professional development costs related to its non-highly qualified teachers on Title IIA budget workbooks prior to approval.
- Department reviewers provide technical assistance to districts as it relates to the MA Licensure requirements, MA regulations related to PD, and federal NCLB/HQT requirements.

Including, district Equitable Distribution Plan (EDP)

- As part of the TEQIP, districts are asked to submit an Equitable Distribution Plan (EDP).
- The EDP must describe how the district will continue to implement strategies that will ensure the equitable distribution of Highly Effective teachers.
- The EDP must include a description of how the district will annually measure progress toward the attainment of its goals with respect to assuring the HQ status of its teachers and their equitable distribution.

Appendix D14: Overview of H.425

Overview of H.425, formerly H452-S284

An Act to Ensure Educator Excellence

Massachusetts has made significant progress in improving student learning since Education Reform began in 1993, but there are still too many students who aren't succeeding. Research shows that improving the quality of teaching and school leadership is the most effective way to make sure all students have the knowledge and skills they need to succeed. That wasn't addressed in Ed Reform, and we need to address it now.

This bill - crafted by a working group of dozens of education, business, and policy leaders and drawing on research and national best practices—fills that major hole by developing a comprehensive system to reform personnel policies for teachers and school leaders, from training to orientation to retention. The result? Consistent standards, better support and more rigorous accountability for teachers and school leaders, resulting in improved student performance and long-term cost savings for the Commonwealth. It's time to finish the job we started in 1993.

Appendix D15: Partnership on the Knowledge and Skills of Professional Teaching, WGEE

The WGEE-ESE Partnership on the Knowledge and Skills of Professional Teaching (KSPT)

A Joint Project of the Working Group for Educator Excellence (WGEE) and the Department of Elementary/Secondary Education (ESE)

In October 2008, the Working Group for Educator Excellence (WGEE) met with Commissioner of Education Mitchell Chester to discuss ways to pursue our shared and continued commitment to comprehensive support for educator professionalism in difficult financial times. The outcome was an agreement to pursue a joint project between the Department and the Working Group to define the knowledge and skills of professional teaching practice in a deep and detailed way, a project that would enable clearer communication and coordinated programs and practices (such as preparation, licensure, professional development, etc.) in the "Knowledge and Skills of Professional Teaching Project" was born.

The WGEE-ESE partnership project will create a detailed and specific inventory of the great range of knowledge and skills that might be a part of the teacher's repertoire. Established as a dynamic tool, this ever-expanding resource will be organized by essential domains around which there is professional consensus. These domains include academic content and content-specific pedagogy in each of the major disciplines, generic pedagogy including the use of technology, teaching all students, family and community involvement, and professional culture. This map of professional knowledge is an absolute requirement for guiding policy and giving support and pressure to colleges and other teacher prep programs, and to school districts in their conduct of induction, teacher evaluation, and professional development.

Representing WGEE/Teachers21

Susan Freedman	WGEE Co-Chair President, *Teachers*21
Jon Saphier	WGEE Co-Chair Chairman Emeritus, *Teachers*21
Jill Harrison Berg	WGEE Member Director of Research and Development, *Teachers*21

Mary Ann McKinnon	WGEE Member Assistant Dean, Education, Bridgewater State College
Irwin Blumer	WGEE Member Professor, Educational Administration and Higher Education, Boston College

Representing ESE/EPAC

David Haselkorn	Associate Commissioner, Educator Quality Unit, ESE
Brian Devine	Director of Educator Licensure & Proprietary Schools, ESE
Elizabeth Losee	Acting Director of Educator Preparation and Quality, ESE
Linda Davis-Delano	Director of Educator Preparation & Licensure, Springfield College EPAC Member
Phillip Veysey	Director, Educational Policy and Programs, AFT-MA EPAC Member

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Notes

1.) The **Working Group for Educator Excellence** is a coalition of 24 educator, business, and parent groups that has been collaborating since 2004 to create greater coherence among all the systems that influence the quality of teaching and educational leadership.

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2.) **Major Disciplines**: Math, English Language Arts, Science, History/Social Studies, Arts, PE/Health, and World Languages

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3.) **Educational Personnel Advisory Council**: The Educational Personnel Advisory Council advises the Commissioner and the Board of Education on issues pertaining to all educational personnel. The current focus is on accountability and support for educator quality at every level, specifically in the areas of recruitment and retention, induction and mentoring, preparation program approval, and resources for educators. Advice on the development of programs to prepare new schools leaders will be a priority this year. [Return to roster]
http://www.doe.mass.edu/boe/sac/councils/epac.html

Appendix D16: MASS TeLLs Survey Description

Mass TeLLS
Teaching, Learning and Leading Survey

2008 Massachusetts Teaching, Learning and Leading Survey

"As the Commonwealth embarks on the next chapter in education improvement, we must have the voice of educators in the conversation. This survey is a unique and important opportunity to help shape education policy and practice with the perspective of the very teachers and administrators most involved in making classrooms succeed."
- Governor Deval Patrick

Results

Over 40,000 Massachusetts educators - teachers and administrators - responded to the Massachusetts Teaching, Learning and Leading Survey in March 2008. Educators provided their views about teaching and learning conditions, including leadership, empowerment, facilities and resources, professional development, and time, in their schools. The insights from educators across the Commonwealth provide critical information for making local and state-level decisions to improve Massachusetts schools. The survey data are released only at the school and district levels if a minimum of 40 percent and at least 5 of the school faculty responded to the survey. Click here to access school level data reports.

The Massachusetts Teaching, Learning and Leading Survey: Creating Conditions Where Teachers Stay and Teachers Thrive was released on February 24, 2009 to the Board of Elementary and Secondary Education. The final report of the Mass TeLLS initiative analyzes teaching conditions in the Commonwealth, documents connections to student achievement and future employment plans, and examines how educators view conditions differently. Read the press release and review a powerpoint presentation of findings.

Using the Data

The success of Mass TeLLS depends on the extent to which school communities can use the resulting data to inform real school improvement processes. Toward that end, the New Teacher Center created a resources page to help schools and communities engage in ongoing and meaningful conversations about potential strategies to improve teaching and learning conditions. All members of the Mass TeLLS Coalition are committed to the appropriate use of the Mass TeLLS data to improve student achievement and to support positive working conditions in Massachusetts public schools. Coalition members have described their beliefs about the purpose of the survey and its appropriate use in a Memo of Understanding.

Click here to learn about support opportunities for enhancing teaching conditions.

Partners

A collection of stakeholder groups representing teachers, superintendents, community and business groups (listed on left side of this page) are collectively working with the New Teacher Center (NTC) to conduct the survey. NTC is a nonpartisan organization with a mission to support the development of an effective, dedicated and inspired teaching force. NTC also has extensive experience conducting similar surveys across the country.

Governor Deval Patrick, the Commonwealth of Massachusetts, the Massachusetts Teachers Association, the American Federation of Teachers - Massachusetts, the National Education Association, the Massachusetts Association of School Committees, the Massachusetts Association of School Superintendents, the Massachusetts Secondary School Administrators' Association, the Massachusetts Elementary School Principals Association, the Massachusetts Business Alliance for Education, the Rennie Center for Education Research and Policy, The Boston Foundation, and the Nellie Mae Education Foundation are some of the groups supporting MassTeLLS.

Appendix D17: Overview of MA NISL Training and Coaching Programs

The ESE, in cooperation with the Urban Superintendents Network, has been working with the National Institute for School Leadership (NISL) to provide leadership training to urban school and district leaders. In 2005, Massachusetts became the first state to implement NISL training statewide; the effort is now moving into its fifth year. NISL is a heavily researched and fully field-tested program designed to assist districts across the state with leadership development efforts. The intent of this initiative is to build leadership capacity through distributed leadership, increase recruitment and retention of effective leaders, and most importantly, to improve student achievement. In an effort to support school leaders and districts after the completion of the NISL program, the ESE has developed an instructional leadership coaching program that focuses on implementation of effective leadership skills and strategies that lead to improved student achievement.

The two-year NISL Executive Development for School Leadership curriculum focuses on:

- training in standards-based instructional systems aligned by the Department and NISL staff with the Massachusetts state frameworks,
- training in data analysis skills related to student achievement data,
- capacity to take learning theory into practice, by providing skills and knowledge to enable principals to be instructional leaders in literacy, math, and science in their own schools, and
- training principals in distributed leadership strategies that will assist in developing the professional capacity of school staff.

The ESE is deploying the NISL Executive Leadership Development Program for School Leaders in three ways:

1. training highly qualified, experienced district and school leaders to deliver the NISL curriculum;
2. organizing the delivery of the NISL training program to prepare school leaders to meet the challenges of increased accountability; and
3. providing technical assistance to districts and to other states to tailor and implement the NISL program in their particular context.

To date, the NISL training program has been delivered to over 900 educational leaders from more than 35 districts.

Instructional Leadership Support to Implement NISL Training

Instruction leadership coaching is designed to build the capacity of school and district leaders to guide and direct large scale, sustained improvement of teaching and learning and the conditions in which they occur by:

- Supporting school principals and other district-level administrators to more effectively implement the instructional leadership concepts presented under the NISL Training Program;
- Facilitating the creation of strong action plans by superintendents and school principals to promote their own leadership development and improve their school or district;

- Providing a context that encourages superintendents and school principals to reflect upon and improve their own leadership practices; and
- Encouraging the alignment of district and school improvement goals through the facilitation of high-performing district leadership teams consisting of but not limited to the Superintendent, district leaders, and principals.

Appendix D18: Existing State Efforts to Improving Quality Workforce

Knowledge and Skills of Professional Teaching (KSPT):
KSPT purpose is to define the knowledge and skills of professional teaching practice in a deep and detailed way, a project that would enable clearer communication and coordinated programs and practices

Education Data Warehouse (EDW):
The Education Data Warehouse (EDW) is a collaborative effort of the Massachusetts Department of Elementary and Secondary Education and local school districts to centralize K-12 educational performance data into one state coordinated data repository hosted by the Department.

Educator Licensing and Recruitment Systems (ELAR):
Current and prospective Massachusetts educators to complete most licensure related transactions on the Internet. Within ELAR, individuals may apply for new licenses, renew Professional licenses, check licensure status, edit personal information, post resumes, locate job openings, and more. Click on one of the links on the left to get started.

Education Personnel Information Management System:
PIMS will collect demographic data and work assignment information on individual public school educators for the first time in our state's history. This information will enable Massachusetts to comply fully with the No Child Left Behind Act by accurately reporting on highly qualified teachers. The EPIMS data also will be used to perform greatly needed analysis on our educator workforce that over time will identify high need areas, evaluate current educational practices and programs, and assist districts with their recruiting efforts.

Essential Conditions for District Effectiveness:
ESE developed and implemented the 11 essential conditions for schools to educate their students well. These conditions guide the actions taken by both districts and the Department at all levels of the accountability and assistance system. These conditions are effective school leadership, effective district systems of support, coordinated use of resources and adequate budget authority, aligned curriculum, effective instruction, assessment and tiered instruction, principal's staffing authority, professional development and structures for collaboration, adequate learning time and additional academic support, students' social, emotional, and health needs, and family-school relationships.

Measures of Effective Teaching Project (MET):
The Bill and Melinda Gates Foundation supports the Measures of Effective Teaching (MET) project, whose goal is to ensure that every student has access to high quality instruction. The first step towards achieving this goal is to develop fair measures of teacher effectiveness on student achievement. The MET project seeks to uncover and develop a set of measures that work

together to form a more complete indicator of a teacher's impact on student growth and performance.

Newly Adopted Leadership Standards and Performance Indicators:
In June 2009, The BESE adopted four new leadership standards based on the 2008 ISLLC standards. Further work is underway to "unpack" the policy standards with further development of the performance indicators and guidelines for principals and superintendents.

National Institute of School Leadership (NISL):
To day, The ESE has trained over 1,000 leaders in instructional leadership using the NISL model. Implementation support has been provided through coaching support at the school and district level.

Human Resources and Equitable Distribution Plan:
The ESE's plan is to ensure that poor and minority children throughout the Commonwealth are not taught by inexperienced, unqualified, or out-of-field teachers at higher rates than are other children.

Piloting new outcomes-focused program approval process based on effectiveness indicators with 13 organizations

Appendix D19: Description of the Status of the Educator Workforce report

ESE has made a recent commitment to publish an annual Status of the Educator Workforce Report, which will draw data from multiple sources and provide the Commonwealth with a "data dashboard" regarding educator supply, demand, effectiveness, distribution, and retention issues. The publication of the Report was one of the recommendations included in the Readiness Report, and has also been recommended by the Educational Personnel Advisory Council for the Board of Elementary and Secondary Education (EPAC).

As new effectiveness measures are designed and implemented, the Report will allow for a more robust analysis of the equitable distribution of effective teachers. The proposed linkages between large State-wide data sets will also make analysis of data easier and more intuitive. For 2010, ESE will use proxies of teacher effectiveness, such as:

- % HQT
- % Classes in Core Academic Areas taught by HQTs
- % Teachers licensed in teaching assignment
- # Teachers on a licensure waiver

In addition, the report will provide correlational analysis of teacher demographics (such as years of experience, or age) with district demographics (such as average MCAS scores, % students receiving free/reduced lunch, district retention rates).

The first edition of the Status Report will provide a general view of the educational landscape of Massachusetts. We will be able to conduct some general trend supply/demand analysis and identify some characteristics of districts that have been effective (using the limited data of effectiveness currently on hand). Later editions of the Status Report will incorporate new effectiveness measures and data, which will allow the Report to be used in decision-making processes at the District-level, as well as informing policy decisions at the State level.

Data sources include:

- Education Personnel Information Management System (EPIMS)
- Educator Licensure and Recruitment (ELAR)
- MA Retirement System and Boston Public Schools Retirement System
- ESE Anticipated Program Approval Survey
- Title II Program Reporting
- District profiles
- Massachusetts Teaching, Learning and Leading Survey (Mass TeLLS)
- Readiness Report

About UTeach

at The University of Texas at Austin

SPRING 2010

The UTeach program at the University of Texas at Austin began in 1997 as a new way of introducing undergraduate math and science majors to secondary school teaching. Dr. Mary Ann Rankin, Dean of the College of Natural Sciences, made teacher preparation a strong college priority and initiated a partnership with the College of Education, the College of Liberal Arts, and the Austin Independent School District to improve the program for secondary mathematics and science teacher preparation. UTeach's mission is to recruit, prepare, and retain qualified STEM (science, technology, engineering, and mathematics) teachers.

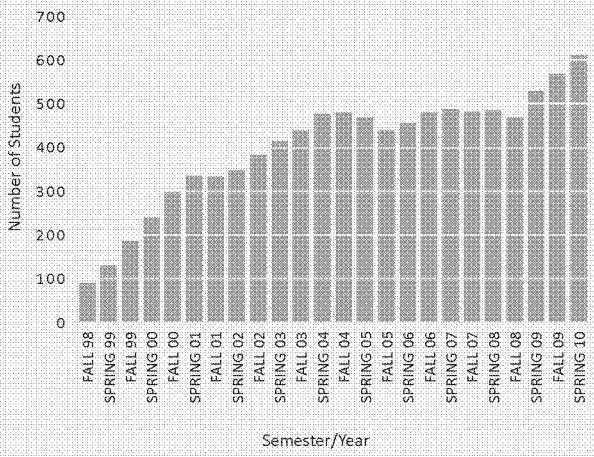
PROGRAM HIGHLIGHTS FOR UTEACH AUSTIN

- 560 students are currently enrolled in the UTeach Austin program.
- Since 2001, over 540 students have graduated from the UTeach Austin program.
- 88% of UTeach graduates enter the teaching profession.
- More than 80% of UTeach graduates who enter the teaching profession are still teaching five years after graduating.
- The Program employs ten full-time, award-winning master teachers as full-time clinical faculty to work with students preparing to be teachers.
- The Program works with 300 mentor teachers in local school districts.
- On average, 100 students per semester receive internships, scholarships, or local school district fellowships.
- Approximately one-quarter (27%) of all UTeach students come from two key underrepresented minority populations (i.e., Hispanic and African American).

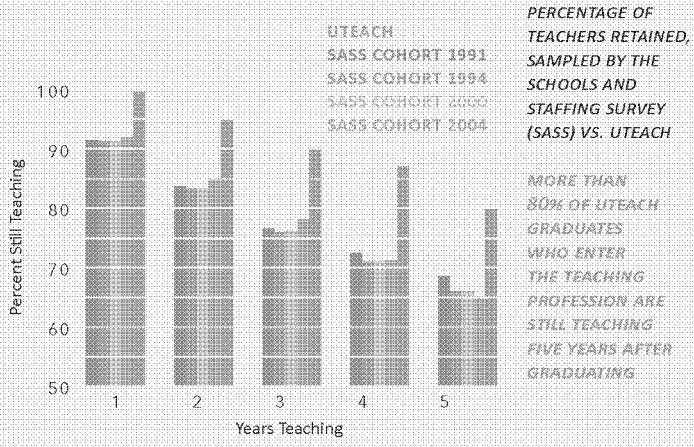
HALLMARKS OF THE UTEACH PROGRAM

- Collaboration between Colleges of Sciences, Education, Liberal Arts, the Austin Independent School District and other area districts.
- Active recruitment of science and mathematics majors to take the two initial one-hour UTeach courses free of charge.
- Early and continuous field experiences throughout the program.
- Compact degree plans that allow most students to graduate with both a degree and teacher certification in four years.
- The UTeach course sequence integrates themes important to STEM education, including technology, equity, assessment, and how students learn mathematics and science.
- Continuous support provided by experienced successful teacher leaders hired as full-time clinical faculty in the program.
- Courses taught by faculty who are actively engaged in research in mathematics and science, history of mathematics and science, and/or in the teaching and learning of mathematics and science.
- Integrated pre-service courses that focus on teaching both mathematics and science and are based on recent research in STEM teaching and learning.
- UTeach offers two years of comprehensive induction support for UTeach graduates.
- UTeach offers a Master's program.

UTEACH AUSTIN ENROLLMENT



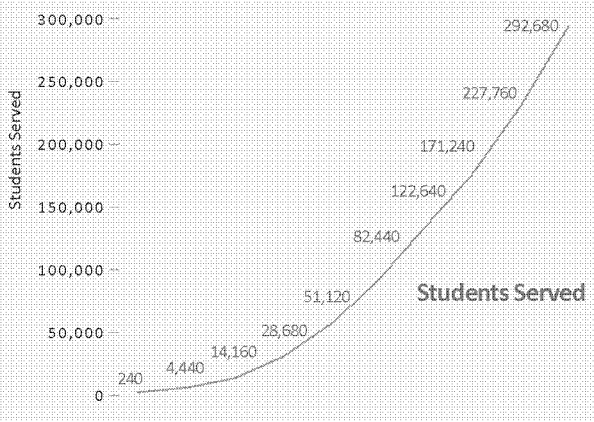
TEACHER RETENTION



PERCENTAGE OF TEACHERS RETAINED, SAMPLED BY THE SCHOOLS AND STAFFING SURVEY (SASS) VS. UTEACH

MORE THAN 80% OF UTEACH GRADUATES WHO ENTER THE TEACHING PROFESSION ARE STILL TEACHING FIVE YEARS AFTER GRADUATING

TEACHERS PRODUCED AND ESTIMATED STUDENTS SERVED UTEACH AUSTIN | 2000–2010



Year	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
# of Graduates	2	33	46	40	66	74	74	70	66	68

Total Number of Graduates: 539

UTeach
College of Natural Sciences | The University of Texas at Austin
1 University Station-G2550 | Austin, TX 78712-0549
www.uteach.utexas.edu | Phone 512 232 2770

UTeach National Replication *SPRING 2010*

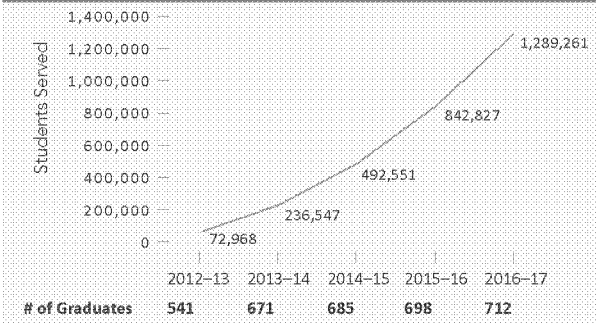
Established in 2006, the UTeach Institute at the University of Texas at Austin provides assistance and direction to institutions of higher education to replicate the UTeach program. The Institute employs a comprehensive approach to ensure full program implementation and sustained, measurable success.

In 2007, the UTeach Institute, in partnership with the National Math & Science Initiative (NMSI) and the Texas High School Project (THSP), selected 13 universities to receive grants to replicate the UTeach teacher preparation program. In just three semesters of program implementation, interest in UTeach among students across this first group of universities has exceeded all expectations with the number of students growing from 519 in the fall of 2008 to over 2,400 in the Spring of 2010.

In January, 2010, a second cohort of eight universities began implementing UTeach, further contributing to a growing national community working to strengthen STEM teacher preparation nationwide.

PROGRAM IMPLEMENTATION | HIGHLIGHTS | SPRING 2010 *(EXCLUDES UTEACH AUSTIN)*

PROJECTION OF TEACHERS PRODUCED AND STUDENTS SERVED FIVE YEARS AFTER GRANT PERIOD – COHORT 1

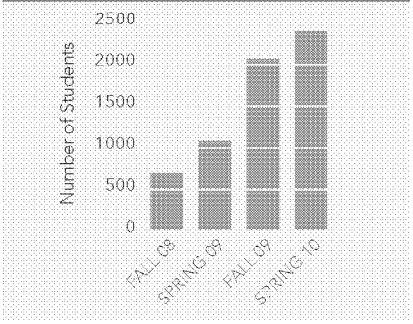


ASSUMPTIONS: 80% OF TEACHERS WILL BE RETAINED FOR AT LEAST FIVE YEARS. EACH TEACHER WILL SERVE 150 STUDENTS ANNUALLY.

# of Graduates	541	671	685	698	712

Total Projected Number of Graduates: 3,307 *(EXCLUDING UTEACH AUSTIN)*

PROGRAM ENROLLMENT



"To continue to cede our leadership in education is to cede our position in the world....America's leadership tomorrow depends on how we educate our students today, especially in science, math and engineering,"

Remarks by President Obama on the "Educate to Innovate" Campaign and Science Teaching and Mentoring Awards. JANUARY 6, 2010.

UTEACH REPLICATION FUNDING

- Funding models include nation-wide, state-level, and local replication initiatives
- A grant of $1.4 million supports program implementation at one university over a five-year period.
- The grant funding structure promotes sustainability, requiring university commitment to fund increasing percentages of program costs over a five-year period, working toward permanent institutional funding of the program.
- National and Texas state-level replication initiatives are funded by NMSI, the Texas High School Project, the Greater Texas Foundation, ExxonMobil, and the Michael and Susan Dell Foundation.
- The Tennessee Higher Education Commission and State Department of Education partnered to allocate federal education block grants to fund a statewide replication initiative.

UNIVERSITIES IMPLEMENTING UTEACH

Cohort 1

Florida State University *FSU-Teach (FSU)*
Louisiana State University *Geaux Teach (LSU)*
Northern Arizona University *NAUTeach (NAU)*
Temple University *TUteach (TU)*
University of California, Berkeley *Cal Teach Berkeley (UCB)*
University of California, Irvine *UCI Cal Teach (UCI)*
University of Colorado at Boulder *CUTeach (CU)*
University of Florida *UFTeach (UF)*
University of Houston *teachHouston (UH)*
University of Kansas *UKanTeach (KU)*
University of North Texas *Teach North Texas (TNT) (UNT)*
University of Texas at Dallas *UTeach Dallas (UTD)*
Western Kentucky University *SKyTeach (WKU)*

Cohort 2

Cleveland State University, *CSUTeach (CSU)*
Middle Tennessee State University, *MTeach (MTSU)*
University of Colorado at Colorado Springs, *UCCS Teach (UCCS)*
University of Memphis *UTeach MEmphis (UM)*
University of Tennessee, Chattanooga *UTeaChattanooga (UTC)*
University of Tennessee, Knoxville, *VolsTeach (UTK)*
University of Texas at Arlington, *UTeach Arlington (UTA)*
University of Texas at Tyler, *UTeach Tyler (UTT)*

THE UTEACH INSTITUTE

The UTeach Institute's mission is to support replication of the UTeach teacher preparation program at universities across the United States and to lead efforts toward continuous improvement of the UTeach program model. The singular goal of these efforts is to increase the number of highly qualified science, technology, engineering, and mathematics (STEM) teachers nationwide.

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Appendix D21: Online ESL Teacher Licensure Program Course Description

Massachusetts Department of Elementary and Secondary Education
Teaching English Learners in Massachusetts (TELM)

Since 2005, the total student enrollment in Massachusetts has decreased while English language learners (ELLs) population has rapidly expanded. ESE has identified a critical shortage of English as a Second Language (ESL) teachers. **Teaching English Learners in Massachusetts (TELM)** will provide an alternative online licensure program for teachers to acquire the skills and knowledge needed for successfully meeting the needs of ELLs.

The TELM ESL Teacher licensure program will be comprised of three 3-credit graduate courses that offer an intensive online program for PreK-6 and 5-12 ESL licensure. Each course will rely on 24 online hours of accessing resources and conferencing media to dialogue, problem solve, respond to text and present/offer feedback on course assignments. In addition, participants will attend a 10-hour Massachusetts English Language Assessment-Oral (MELA-O) training. The MELA-O is the state-mandated annual assessment of listening and speaking skills in English for LEP students in grades K-12. It is one required component of the state's Massachusetts English Proficiency Assessment (MEPA) and may also be used, at local discretion, as a diagnostic tool for assessing a student's progress in learning to speak and understand English.

Upon completion of the TELM program and passing of the required Massachusetts Tests for Educator Licensure (MTEL) - Communications and Literacy and English as a Second Language, teachers will be licensed to teach ESL to students in grades PreK-6 or 5-12.

TELM ESL Teacher Licensure Program (9 Credits)

Draft Course Descriptions:

Course One (3 Credits)
Cultural Diversity and Factors that Influence Language Acquisition

- Sociolinguistics, socio-cultural environmental and individual factors that influence second language learning (regional, socioeconomic, developmental, cultural and linguistic).
- Understanding ELL proficiency levels.
- State and Federal Law that protects ELLs.
- What schools need to provide ELLs.
- American culture, schools and study skills.
- Multiculturalism vs. assimilation.
- Establishing a classroom climate that supports cultural and linguistic diversity.
- First and second language development.
- SLA research and theory.
- Applied Linguistics; phonology, morphology, syntax, semantics, lexicon, rhetorical structures, and pragmatics.
- Other language features (Homonyms, figures of speech, idioms, and colloquialisms).

- Structures of American English.
- Linguistic comparisons: English and commonly spoken languages in MA.

Course Two (3 Credits)

A. PreK-5,
B. 5-12
C. ELLs with special needs, trauma response/support for ELLs.
D. Students with Interrupted Formal Education (SIFE) services.

Strategies for Teaching Content to ELLs

- Home-School Communication.
- Understanding ELLs' proficiency levels.
- Providing a classroom climate that facilitates language acquisition.
- Linking content to students' lives and cultures.
- Examining linguistic demand of literary and expository texts.
- Providing multiple ways for ELLs to acquire skills.
- Analysis of materials, vocabulary, classroom tasks, lesson content and assignments.
- Sheltered Instruction Observation Protocol (SIOP), Cognitive Academic Language Learning Approach (CALLA), and Task-Based English language education.
- Developing Lessons and Units with Scaffolding for ELLs.
- Output correction: impact on student achievement and authentic assessment strategies for students at different proficiency levels.

Course Three (3 Credits)

A. Pre K-2
B. 3-5
C. 6-12
D. ELLs with special needs, trauma response/support for ELLs.
E. Students with Interrupted Formal Education (SIFE) services.

Literacy Skills English Language Learners

- Understanding language development and skills in the first (L1) and additional (L2) languages.
- Differences in teaching reading in L1 and L2 (phonology, phonemic awareness, alphabetic principle).
- Role of first language support in developing English (L2) vocabulary and oral/aural fluency.
- Using linguistic comparisons to facilitate English language learning and literacy skills.
- Eliciting, assessing and responding to physical, oral and written response of ELLs.
- ELL strategies for developing phonemic and phonological awareness, English semantics, oral fluency and the use of figurative language.
- ELL strategies for developing reading comprehension and writing skills.
- Assessment strategies for oral language and literacy skills of ELLs at different proficiency levels.
- Specific literacy support strategies for transitioning and FLEP students.

Hiring (and Keeping) Urban Teachers

A Coordinated Approach to New Teacher Support

(b)(6)

(b)(6)

A Report of the
Boston Plan for Excellence
and the Boston Public Schools
June 2009

Boston Plan for EXCELLENCE IN THE PUBLIC SCHOOLS

FOCUS On Children Boston Public Schools

Authors

Ila Deshmukh Towery

Ila Deshmukh Towery is Director of Policy Analysis and Research at the Boston Plan for Excellence. Beyond her role at BPE, Dr. Deshmukh Towery's research has included an ethnography of a public health/women's empowerment program for female factory workers in South India, an evaluation of a health access program for court system-involved youth, and an evaluation of a teacher professional development program focused on raising awareness of equity issues, such as racism, sexism, classism, and homophobia. Dr. Deshmukh Towery holds a BA in Political Science & Education from Swarthmore College and a PhD in Applied Child Development from Tufts University.

Kenneth Salim

As the Boston Public Schools Director of Teacher Development, Kenneth Salim leads a comprehensive system of induction for the district's beginning teachers. Mr. Salim began his teaching career as a biology teacher in the Boston Public Schools at Brighton High School, where he developed the Advanced Placement Biology program and supervised science instruction. Before returning to BPS, Mr. Salim was a special assistant and policy analyst in the Office of the Superintendent in San Francisco Unified School District. Mr. Salim has also worked as a clinical faculty member for Boston College's Lynch School of Education. He holds a BA in Biology and teacher certification from Brown University and a Master's in Education from the Harvard Graduate School of Education.

Victoria Hom

Victoria Hom is the Senior Program Manager of New Teacher Development, the Boston Public Schools' mentoring program for new teachers. Prior to joining the district, she worked in the New York City Department of Education as a program manager with alternative teacher certification programs including the NYC Teaching Fellows, Peace Corps Fellows, and Teaching Opportunity Program. Ms. Hom also taught English as a Foreign Language as a Peace Corps volunteer in the former Soviet republic of Moldova. Ms. Hom holds a Master of Public Policy from the Johns Hopkins University and a BA in Anthropology from Cornell University.

BARR FOUNDATION
Using KNOWLEDGE, NETWORKS and FUNDING to Build a Better Boston for All

The collaboration of the Boston Public Schools and the Boston Plan for Excellence to improve new teacher support is supported by private funders, including the Barr Foundation.

Hiring (and Keeping) Urban Teachers: A Coordinated Approach to New Teacher Support

Introduction

Over the past six years, the Boston Public Schools (BPS) has collaborated with its local education foundation and partner in reform, the Boston Plan for Excellence (BPE), to improve its support to new teachers. This partnership has resulted in significant improvements in teacher hiring and induction and offers lessons to other districts, district collaborators, and school support organizations that are concerned with hiring and retaining effective teachers.

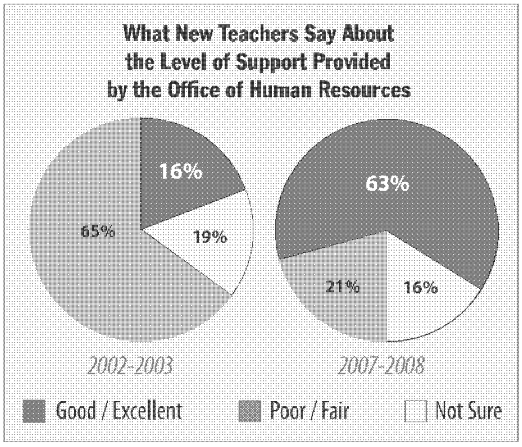
This report tells the story of how the BPS/BPE partnership unfolded – from the design of a research agenda, to collaborative analysis of data, to the overhaul and ongoing revision of hiring and induction activities in Boston. While some of this story is unique to Boston, the approaches these partners have taken could be replicated in other school systems.

Boston Improves New Teacher Retention

- *In the fall of 2006,* ***85.4%*** *of teachers who were new to the BPS returned for a second year, a marked increase from the one-year retention rate of* ***71.8%*** *in 2003.*
- *Over the same period, one-year retention rates for new teachers of color (a priority hiring group for BPS) increased from* ***73.6%*** *to* ***83%***

Teacher Hiring and Retention: Core Issues for Urban Districts

Nothing matters more to student achievement than good teaching, and districts set the foundation for broader improvements when they are able to hire qualified teachers and support them to become effective. New teachers who are hired in a timely fashion, placed in appropriate settings, and receive comprehensive induction are more likely to remain teaching long enough to become effective,[1] so it is in a district's interest to get these early stages of human capital development right.[2] The costs of not doing so are too large.



Teacher turnover is a major resource issue for urban districts. New teachers are frequently in "survival mode" throughout their first year. Becoming an effective teacher typically takes three years or more[3] and, when a new teacher leaves the classroom, only to be replaced with another new teacher, student learning suffers.

The financial costs associated with teacher turnover are also substantial. The National Commission on Teaching and America's Future (NCTAF) estimates that the cost of teacher turnover nationwide may be greater than $7.3 billion per year.[4]

1 Johnson & Birkeland, 2003; Liu & Johnson, 2006.
2 Odden & Kelly, 2008.
3 Curtis & Birkeland, 2006.
4 NCTAF, 2007.

A System in Need of Revision

BPS and its partner, BPE, began to examine the new teacher hiring and support practices in 2002. At the time, half of BPS teachers were leaving within their first three years on the job. It is estimate that the BPS spent over $3 million replacing these teachers: $10,547 for every first-year, $18,617 for every second-year, and $26,687 for every third-year teacher who left.[5] These costs, financial and academic, were too large to ignore. With 400-600 new teachers hired annually, or about 10% of its total teacher workforce, BPS had an enormous human capacity issue to address: how to bring the right teachers into the system and keep them long enough to have a positive impact on student learning. A survey of new teachers administered and analyzed by BPE's research team was the first step in understanding where the biggest problems lay and what to do about them.

New Teacher Survey

- *Conducted annually by BPE.*
- *Gauges perspectives on BPS recruitment, hiring, professional development, mentoring, and other supports.*
- *Some questions are the same from year to year, to track changes over time, while others are revised to reflect an evolving support system.*

Problem #1: A Lengthy, Cumbersome Hiring Process

The majority of new teachers responding to the first survey in the 2002-2003 school year reported being hired in late August or after the start of the school year, leaving them with little or no time to prepare curriculum.[6] They described the hiring process as too long and beginning too late in the summer.

The biggest culprit was the hiring system itself. In Boston, the Office of Human Resources (OHR) completes the initial applicant screening and "on-boarding" process, but school principals/headmasters[7] are primarily responsible for choosing new teachers. Ideally, a decentralized process provides school leaders with flexibility to hire teachers who will be the right fit for a school's culture and its whole-school improvement objectives. However, until recently, the steps involved in this decentralized process were not clear, and some job descriptions asked applicants to send their application materials directly to OHR, while others asked applicants to contact schools directly. Adding to the confusion, though BPS job descriptions were posted online, its application process was entirely paper based, making it extremely difficult to send or review applications electronically or keep track of newly hired employees. This system often resulted in misfiled or lost paperwork and contributed to a lengthy hiring process. Union contract rules about making open positions available first to tenured employees — and the BPS interpretation of those rules — further delayed the process. The delays were not all due to a messy system, but the system exacerbated a complicated hiring schedule.

Problem #2: An Inadequate and Uneven Induction Strategy

Before the reinvention of new teacher support, the only formal induction support for new BPS teachers was the district's mentor teacher program that paired full-time, experienced teachers with novice teachers. However, the mentor program was fraught with technical and financial limitations. One major issue was that the process for selecting mentors was not well defined and had few clear criteria; the only requirement for becoming a mentor was that a teacher had to be designated a lead teacher — a role determined by school

5 Curtis & Birkeland, 2006.
6 McCarthy & Guiney, 2004.
7 Principals of high schools in Boston are called headmasters.

leaders. While some principals assigned lead teacher status to a number of teachers in their schools, others did not, leaving some schools flush with available mentors and others with very few. In addition, the selection of mentors was not ongoing. Over time, the pool of lead teachers who could serve as mentors shrank, leaving mentors stretched thin and many new teachers without mentors. In addition, mentors were full-time teachers themselves and unable to spend significant amounts of time observing and giving feedback to their mentees. Mentors received little professional development on guiding other teachers, limiting their own growth as well as their capacity to influence the practice of their mentees.

Undercutting the work further, the one-on-one design of the program made it costly, and there was insufficient funding to support it. As a result, many mentors were only able to fulfill their roles for a short period. Many new teachers reported mentoring support that did not last throughout the year and an inadequate amount of release time with their mentors. Less than half of new teachers who responded to BPE surveys reported observing a mentor's classroom,[8] a critical component of new teacher induction.

BPS Revamps Hiring & New Teacher Support

In 2004, a new Assistant Superintendent of Human Resources was hired to revamp the district's hiring policies and processes. Responding to data from the new teacher surveys, she saw her charge as reorienting the department to be customer friendly, or as she put it, to create a "red carpet system from contact to contract." Over the next four years, with considerable support from local and national foundations and through changes in central leadership, the OHR made significant revisions to its processes, streamlining hiring and follow-up support with the goal of hiring and keeping more talented teachers. This effort to improve new teacher supports evolved over time, with new components developed and revised and new partnerships forged among BPS central offices, partners, and foundations.

A Customer-Service Approach to Hiring

One of OHR's first steps was to form the Office of New Teacher Support, staffed by a New Teacher Support Team (NTST), that would give a human face to the department and streamline the hiring and induction of new teachers. Since its creation, the NTST has taken on several key support functions.

Red Carpet Treatment for Prospective Teachers

As the first point of contact for potential new hires, the NTST takes responsibility for answering any questions prospective teachers have and helping them to navigate all aspects of the hiring process. Its three staff members are the brokers for all issues pertaining to new and prospective teachers. An additional position was created in OHR to support all teachers (including new hires) with licensure issues, Massachusetts Tests for Educator License (MTEL) preparation, and related one-on-one support.

> *Human Resources is the highest-functioning, best run department in the BPS. Kudos to all who helped modernize all processes pertaining to personnel hiring and management.*
>
> *-BPS principal/headmaster*

Streamlined Online Application Process

In response to survey feedback about the lack of clarity in hiring procedures, BPS launched a new web-based hiring system, which allows applicants to create and store their application information online and to apply to multiple positions at once. The new

8 Amigone et al., 2005.

system separates internal and external job postings, which were formerly in one place, making it easier for prospective new teachers and hiring managers to find the right match. Principals/ headmasters can view applicant data online and communicate via the website with OHR about teachers they wish to hire. The new system also allows OHR to communicate more efficiently with applicants and new hires.

Logistical Support

The new website includes a checklist for new teachers and is a one-stop location for accessing and printing all forms that applicants and new teacher hires must submit. The NTST also holds weekly sessions to assist new teachers with their hiring paperwork and to provide other logisitical information and support. These two steps ensure quick and accurate processing of paperwork so that as many new staff as possible can be on the payroll before the first day of school.

Welcoming and Connecting New Hires

To celebrate and welcome teachers who are successfully hired, the NTST introduced New Teacher Celebrations. These events, held during the summer at prominent public institutions such as the Boston Public Library and the Boston Children's Museum, introduce new teachers to important community resources for educators and offer a chance for new teachers to meet and network with one another before the start of the school year.

Follow-Up Support

The NTST serves as a central point of contact for new teachers throughout the school year. Prior to the OHR overhaul, the majority of new teachers (71%) rated their access to immediate practical support from OHR as "poor" or "fair," and anecdotal evidence suggested that the department was not responsive to teachers' problems with receiving benefits or pay checks and other immediate needs. Now, NTST members make school visits as well as personalized phone and emails, and the team sends monthly email updates to keep teachers informed of upcoming deadlines and professional development events.

The suite of supports offered by the NTST has been received with enthusiasm. Since the adoption of a customer-service orientation to new teacher support, new teachers who complete BPE's annual survey often single out NTST staff by name and commend them for their responsiveness. NTST staff report that they receive numerous calls every year from new BPS teachers who are struck by the team's receptivity to their needs. This is particularly true for new BPS teachers who have taught previously in other districts: when comparing BPS central office support to their prior experiences with large, bureaucratic, anonymous institutions, these teachers find BPS new teacher support to be a refreshing change.

A District-Based Teacher Preparation Program

BPS in partnership with BPE launched its own teacher preparation program in 2003, the Boston Teacher Residency (BTR). BTR was created for the explicit purpose of recruiting and retaining teachers in and for the BPS, particularly in the high-needs areas of math, science, and special education. BTR also aims to increase the diversity of the BPS workforce by recruiting teachers of color. Based on a medical residency model, aspiring teachers — called residents — participate in a year-long program that includes four full days per week working a mentor teacher's classroom and graduate-level coursework tied to the district's instructional priorities and taught by BTR instructors. Residents are clustered in cohorts in "host" schools

and learn to teach at the elbow of effective practitioners who are trained and supported as mentors.

Upon completion of their residency year, BTR graduates receive a master's degree from University of Massachusetts Boston and are fully certified to teach in Massachusetts. In addition, they are partially certified in special education, with the opportunity to complete requirements for dual licensure in special education during their first year of teaching. BTR graduates are given priority in the hiring process, and special efforts are made by the district to place these new teachers strategically, often in clusters with other BTR graduates. Since its inception, BTR has refined its support to graduates and now offers induction support through the first three years of teaching, including course opportunities and classroom-based coaching.

Boston Teacher Residency

BTR increasingly garners national interest for being at the forefront of classroom-based urban teacher preparation. The program has been featured in *Education Week*, *Edutopia*, and recent reports by the Aspen Institute, the Center for American Progress, and the Center for Teaching Quality. In 2008, BTR was a finalist for the Ash Institute's Innovations in Government Award housed at Harvard's John F. Kennedy School of Government.

For more information about BTR, please visit: ***www.bostonteacherresidency.org***

Revamped Induction Support for New Teachers

The first graduates of the Boston Teacher Residency entered teaching just as the district began making changes within OHR. However, it quickly became clear that these changes in new teacher recruitment and hiring needed to be accompanied by changes in the district's approach to developing and supporting new teachers once they were in the classroom. Consistent with findings from BPE's annual survey of new teachers, graduates of this first BTR cohort reported inadequate mentoring and support. With two rich sources of feedback, the BPS understood that its induction support of new teachers needed revision and began to roll out a set of induction supports that build on the BPS's experience with new teacher mentoring and that take that work many steps further.

In the summer of 2006, the BPS created within the Office of Professional Development (OPD) a New Teacher Support System (NTSS) to run parallel to the Office of Human Resources New Teacher Support Team (NTST). The NTSS was charged with redesigning induction supports in collaboration with the Boston Teachers Union (BTU). The NTSS and BTU gave a fresh start to the previously existing mentoring program, naming it the New Teacher Development program and building a substantial 5% salary differential for new teacher developers (NTDs) into the teachers' contract.

> *My new teacher developer has been incredible. She has made the flow of my transition from being a student to a teacher so much easier than it ever could have been without her help.*
>
> *-New BPS teacher*

NTDs are skilled, veteran teachers, identified by BPS and the BTU through a rigorous selection process, who work closely as non-evaluative mentors to new teachers. Full-time NTDs are fully

released from their classroom teaching responsibilities, and each supports about 14 teachers across the district. Part-time NTDs continue to teach full-time while mentoring one or two new teachers in their own schools.

Grounding their work in the district's professional teaching standards, the Dimensions of Effective Teaching, NTDs model lessons, co-teach, observe their mentees, and make time to confer one-on-one. NTDs focus their support in areas that are typically challenging for beginning teachers, such as classroom management, lesson planning, and differentiating instruction.

Beyond their work with individual teachers, NTDs play a role in district-wide support to new teachers, facilitating workshops at the annual New Teacher Institute, seminars for teachers new to BPS, and courses on teacher leadership.

Like all other first-year teachers, BTR graduates are supported by the NTDs in their first year of teaching. In their second and third years, BTR residents continue to receive support from BTR through other course and advancement offerings and from BTR's own induction coaches. BTR induction coaches collaborate throughout the year with NTDs to share ideas and co-construct coaching and feedback tools to create a seamless system of induction support for graduates.

The NTD program is grounded in the idea that teacher professional development should be rich and ongoing. To continue their own professional learning and develop their capacity as mentors, the NTDs participate in intensive professional development provided by the New Teacher Center at the University of California-Santa Cruz.[9] The professional development for NTDs addresses principles of adult learning and effective practices for observing instruction and providing feedback.

Mentoring Support Improves Dramatically

- *Prior to the adoption of the New Teacher Development program,* ***57% of new teachers expressed satisfaction*** *with BPS mentoring support.*
- *After the adoption of the New Teacher Development program,* ***81% of new teachers expressed satisfaction*** *with BPS mentoring support.*
- *New teachers now cite the new teacher developers and the Office of Human Resources New Teacher Support Team as among their greatest sources of support.*

Professional Development Opportunities for New Teachers

The Office of Professional Development's New Teacher Support System (NTSS) coordinates a year-long series of professional development opportunities for teachers new to BPS, differentiated to meet the needs of both experienced and novice teachers.

New Teacher Institute

The NTSS collaborates with other BPS departments and local partners to run a multi-day orientation to the district's instructional priorities and policies. This district-wide summer institute kicks off a year-long series of credit-bearing professional development opportunities for new teachers. During the institute, new teachers engage in workshops in areas in which they typically need support, such as classroom

New Teachers Who Rated BPS Orientation as Good/Excellent

SY 2002-2003: **44%**

SY 2007-2008: **90%**

9 For more information about the New Teacher Center, please visit: http://www.newteachercenter.org/.

management, fostering equity in the classroom, and differentiating instruction. Participants also get tips about living in Boston and learn about resources for educators offered by BPS and the City of Boston.

Beginning Teacher Seminars

These recurring seminars for first-year teachers are differentiated by grade level (elementary, middle, and high school), and their content is aligned with the Dimensions of Effective Teaching. They are taught by new teacher developers.

Advancing Practice Courses

This course series for new hires with prior teaching experience is led in partnership with Boston College's Teach for a New Era initiative. The courses, also differentiated by grade level, are designed for second- and third-year teachers to improve specific areas of their practice, including differentiating instruction for English Language Learners and students with disabilities, using a wide variety of assessments to inform practice, and honing lesson-planning techniques.

Online Technology Courses

These courses, offered in collaboration with the BPS Office of Instructional and Informational Technology, help new teachers master instructional technology skills, including those specific to BPS technology.

Exemplary Teaching Cross-Site Visits

The Office of Professional Development offers structured school visits for groups of new teachers to observe exemplary teachers at work. New teacher developers coordinate the visits and facilitate conversations that help new teachers make connections to their own classrooms.

All of these professional development opportunities are grounded in the district's priorities for accelerating student achievement and are informed by data from BPE's annual survey of new teachers. Through coursework and cross-site visits, the BPS is building networks of support among new teachers, a key strategy for teacher retention and ongoing professional growth.

The BPS Dimensions of Effective Teaching

- Demonstrate excellence, equity, and high expectations for all students
- Reflect on practice and collaborate with peers
- Model professional behavior
- Plan instruction and use strategies that address diverse student needs
- Monitor and assess student progress
- Know content
- Build and maintain partnerships with families and communities
- Establish safe, respectful, and culturally sensitive learning communities

Support for School-Based Induction

Since school administrators are another important source of support for new teachers, the annual New Teacher Institute includes time for new hires to attend school-based orientations led by principals/headmasters. The NTSS designed a "Principal Toolkit for New Teacher Induction" that contains templates for orientation activities and best practices for developing professional learning communities. The induction guide also includes guidelines for the hiring process, a copy of the district's hiring calendar, information about the district's mentoring program, and suggestions about how to support, supervise, and evaluate new teachers.

During the school year, new teacher developers connect regularly with school leaders to ensure their work aligns with the goals of the schools and to discuss targeted supports for their teachers. School leaders are also encouraged to call the NTSS with questions about new teachers and to direct new teachers to these support services when needs emerge.

An Inside/Outside Approach to Building and Refining the System

Over the past six years, the success of BPS new teacher support has relied on partnerships and collaboration. As part of its overhaul of new teacher support, the BPS began convening monthly interdepartmental meetings focused on further coordinating new teacher support. This group consists of representatives from the BPS Office of Human Resources, Office of Professional Development, Office of Instructional and Information Technology, the Boston Teacher Residency, and the Boston Plan for Excellence's research team. These partners co-plan new teacher programming, examine survey and teacher retention data, and oversee ongoing evaluation of their shared work with the goal of continuously refining new teacher support.

A Partnership Driven by Data

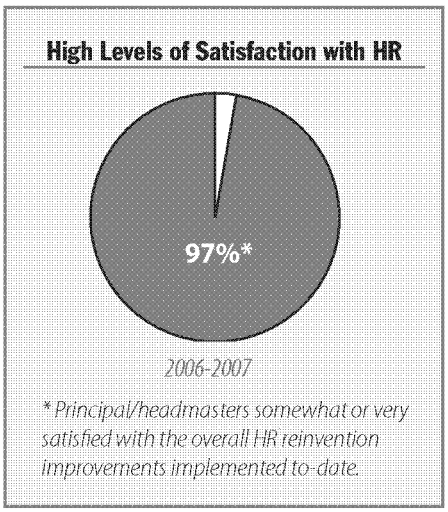
An important component of the partnership has been BPE's annual survey of new teachers. The survey, first launched in 2002-2003 with support from the Barr Foundation, helped uncover areas where new teachers were not receiving adequate support during recruitment, hiring, and induction. BPS took the survey feedback seriously in revamping its work, and that data was at the core of the changes described in this report.

> *The BPS has done a great job of completely rethinking new teacher support, from training to hiring to mentoring to professional development. That is just what we need to recruit the next generation of teachers.*
>
> *-BPS principal/headmaster*

BPS and BPE have worked together to modify the survey over time so that survey items continue to be relevant to changes in the new teacher support system. Once the survey has been administered and data have been analyzed, the partners meet as a group to review the results and discuss possibilities for making changes to new teacher support. For example, feedback from teachers suggested that a four-day New Teacher Institute was too long, so in response, the NTSS shortened the orientation to three days. When new hires with prior teaching experience reported that the institute was too focused on novice teachers, the NTSS began differentiating sessions for novice and experienced teachers.

The use of data has become an integral component of new teacher support, and the partners now look at multiple supplemental data sources, including:

- the new teacher survey conducted by BPE
- monthly hiring and vacancy reports
- feedback from participants in the Beginning Teacher seminars and Advancing Practice courses
- data collected by the New Teacher Center at UC-Santa Cruz on teachers' experiences with new teacher developers
- surveys of principals about new teachers and central office supports



Other Key Partners

The BPS has also drawn on partnerships with area universities, especially those with schools of education, to inform and implement its reform of new teacher support. In one case, a college has partnered with the BPS to deliver courses for new teachers, and in other instances, higher education partners have contributed advice, research capacity, and graduate-level interns.

Local and national foundations, including the Barr Foundation, the Broad Foundation, the Dell Foundation, the Harold Whitworth Pierce Charitable Trust, and Strategic Grant Partners, have provided substantial financial and technical support. The reinvention of the hiring system, BPE's research on new teachers, the launch and ongoing operation of BTR, and the district's professional development initiatives targeting new teachers have all received external funding.

Finally, the Boston Teachers' Union (BTU) has been an integral partner. In its collective bargaining agreement with the district, the BTU agreed to a specific designation for the role of new teacher developers, which includes a pay differential and a course-release agreement. By collaborating on the ongoing development of the New Teacher Developer program, the BTU demonstrates a commitment to support for novice teachers and to veteran teachers who seek to apply their instructional expertise and expand their impact.

Mapping the partnerships

Partner	Recruitment, Hiring, & On-boarding	Orientation & Induction	Program Evaluation
Office of Human Resources (OHR)	Management of web-based hiring system First point of contact for new teacher questions and concerns New Teacher Celebrations	New Teacher Institute Monthly new teacher email updates	Continuous monitoring of district hiring and vacancy reports
Office of Professional Development (OPD)	New Teacher Celebrations	New Teacher Institute Mentoring support for first-year teachers through the New Teacher Developer (NTD) program Beginning Teacher seminars, Advancing Practice courses, and Exemplary Teaching cross-site visits	Engagement with external researchers to assess NTD program impact on classroom practice, student achievement, and teacher retention
Office of Instructional and Information Technology (OIIT)		Management of online courses in technology for new teachers Professional development for teachers on how to use technology in the classroom	
Boston Plan for Excellence (BPE)			Development, implementation, and analysis of surveys, interviews, and focus groups with BPS teachers
Boston Teacher Residency (BTR)	Targeted recruitment of teachers of color and teachers in high-need areas Teacher preparation through residency plus coursework Resident field placement and site-based mentoring	Induction coaching support for 2nd and 3rd year BTR graduates	Internal data collection focused on BTR recruitment and preparation Engagement with external researchers to assess BTR program impact on student achievement
Boston Teachers Union (BTU)		Contractual support of NTD program Participation in hiring of NTDs	
Local and National Foundations	Fellowship opportunities in central offices Programmatic support for OHR reinvention and BTR	Funding to support the NTD program.	Funding for survey development and implementation Funding to conduct focus groups with teachers of color

Lessons Learned

When BPS and its partners first began this work six years ago, they were concerned about the experiences of teachers new to BPS, who reported high levels of dissatisfaction with hiring, recruitment, and induction into BPS. Since then, many changes have been made and overall ratings of school-based and centrally offered hiring and induction supports have improved. The following are lessons BPS and BPE have learned.

A customer-service approach makes a difference. The district demonstrated a significant and symbolic commitment to new teachers by instituting organizational changes that provided them with "go-to" support through the hiring process and their first year teaching in the BPS. The creation of the New Teacher Support Team and a redefined mentoring role through the New Teacher Development program were changes that were immediately visible to new teachers. Responding to the positive feedback to its "red carpet" approach, in the fall of 2008 the OHR absorbed the NTST into its larger staffing team, where its customer-service approach is being integrated into all aspects of hiring. The former New Teacher Support Manager is now the BPS Director of Staffing, signaling how important the work of the NTST has been to BPS' s human resource strategy.

Support happens at multiple levels. New teachers need support at every stage — from hiring to orientation to induction to ongoing classroom support. As such, the district and BTR have developed a recommended sequence of professional development experiences for teachers for the first three years of teaching that enables them to connect and network with teachers throughout the district. Efforts at three levels — classroom, school, and district — now form a comprehensive system of new teacher support.

Differentiation matters. Teachers enter BPS with a variety of experiences and preparation. In order to best support all teachers, BPS has implemented a system of core support with options for differentiation. At the core, all first year novice teachers are paired with a new teacher developer who tailors support to individuals.

Effective new teacher support is made even more effective through collaboration, both internal and external. The development of a data-driven system of support for new teachers would not have been possible without the collaboration of multiple partners, including the Boston Teachers Union and BPE. The monthly convening of partners created an important space for building coherence across departments and organizations.

These lessons have helped to inform the current priorities of the BPS, including Superintendent Carol Johnson's Acceleration Agenda, which is focused on closing achievement gaps and supporting all students to reach proficiency and graduate ready for college and success in life. Human capital development — including the hiring and development of new teachers — is critical to achieving these goals.

The Learning Continues

While significant changes have been made in the hiring and induction of new teachers to BPS, there is still room for improvement and continued learning.

More research is needed on effective classroom-based support to new teachers. Since 2002, new teacher retention in BPS has steadily improved. Further, new teachers express high levels of satisfaction with the classroom-based support they receive from their new teacher developers. However, little is known about the specific impact of the New Teacher Development program on teacher retention or student achievement. In October 2008, Mathematica Policy Research, Inc. released a study evaluating the impact of comprehensive new teacher induction support on teacher retention and student achievement in 17 urban school districts, including Boston. This study found no impact on student test scores or teacher retention. This research suggests that school districts still have a long way to go in improving student achievement and in keeping their teachers; however this study followed data for the 2005-2006 school year, before the NTD program was implemented districtwide. With only one year of data, findings from this study should be interpreted with caution.

New teacher induction must be the responsibility of entire school communities. The current BPS induction model emphasizes the relationship between new teachers and new teacher developers. Integrating this work into a systemic whole-school induction model will be critical. BTR has begun to test such an approach by concentrating the placement of its residents and graduates in a cohort of schools, where BTR continues to support new teachers through their third year of teaching and helps develops the leadership capacity of more experienced teachers.

Teacher retention remains an issue beyond the first three years. Like many urban school districts, BPS faces the challenge of retaining high-quality teachers who are entering the second stage of their career. With four to ten years of experience, many of these teachers have improved their classroom practice but are looking for opportunities for advancement and leadership without leaving teaching. BPS is exploring ways of providing leadership opportunities that have an impact on student learning outcomes and also enable teachers to remain in the classroom. Additional data on the professional needs and career aspirations of these emerging teachers would help the district differentiate supports and roles.

Subpopulations of teachers may need additional support. The BPS intentionally recruits teachers of color for a student population that is largely African American and Latino, but BPS knows little about the specific experiences of BPS teachers of color. To that end, in 2007-2008, the BPE research team began conducting focus groups with teachers of color to understand more strategies for supporting and retaining a key subgroup of teachers. Findings from these focus groups suggest that teachers of color could benefit from formal support networks so that they can share their experiences with one another and the district.

Teachers who leave the BPS are an important source of information. With the development of a cohesive and collaborative system of support for new teachers, the BPS and BPE have asked what can be learned from teachers who, even with these improved supports, choose to leave BPS. In June 2006, BPS and BPE launched a voluntary teacher exit survey to gather information from resigning teachers about why they leave and where they go after teaching in BPS. Findings from this research suggest that school-based issues and relationships with administrators in particular play an important role in teachers' decisions to leave the district. However, the survey's response rate has remained low (~33%), making it difficult to draw any definitive conclusions about teachers' reasons for resignation, in large part because many resigning teachers relocate to other districts or states and leave behind outdated contact information. Solving this problem will be critical for getting accurate, actionable data on teachers' reasons for leaving the school district.

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Boston Plan for Excellence

The Boston Plan for Excellence in the Public Schools is a local education foundation established in 1984 to support the city's schools in raising student achievement. BPE works from the "outside in," acting as both an ally and critical friend to the Boston Public Schools — seeking and supporting innovative solutions to the toughest problems faced by Boston's students, their teachers, and the school district as a whole.

To download a copy of this report, please visit our website:
www.bpe.org

Boston Plan for
EXCELLENCE
IN THE PUBLIC SCHOOLS

Appendix D23: Educator Preparation Annual Report Card

Organization At-A-Glance

ORGANIZATIONAL INFORMATION
Type of Organization (public, private, alternative)
Full-Time Student Enrollment
Part-Time Student Enrollment
# of Staff
# of Full-Time Teaching Faculty
# of Part Time Teaching Faculty
% of Classes with under 30 students

Educator Preparation Program(s) At-A-Glance

Contact Information:

CONTACT INFORMATION	
Admissions/General	Preparation Program
Phone:	Phone:
Email:	Email:
Website:	Website:

General Information:

GENERAL INFORMATION
Average SAT
Average ACT
Average GRE
Average MAT
Average High School GPA
Average Undergraduate GPA
Student/Teacher ratio

Program Effectiveness and District Support:

PROGRAM EFFECTIVENESS AND DISTRICT SUPPORT
Description of collaboration Partner districts Effectiveness in meeting staffing needs as reported by district and state # of completers employed in high poverty districts # of completers employed in high need license areas Effectiveness of program and completers in increasing student achievement/academic success as reported by district and state Retention rate of completers employed in district/school

Faculty:

DEMOGRAPHICS OF FACULTY
Race/Ethniciy (%) African American or Black Asian Hispanic/Latino Multi-race, Non-Latino Native American Native Hawaiian or Pacific Islander White Gender (%) Female Male

Students

DEMOGRAPHICS OF STUDENTS
# of Students who applied % of enrolled admitted % from Massachusetts Race/Ethniciy (%) African American or Black Asian Hispanic/Latino Multi-race, Non-Latino Native American Native Hawaiian or Pacific Islander White Gender (%) Female Male

Program Enrollment Requirements:

PROGRAM ENROLLMENT REQUIREMENTS
Minimum GPA MTEL Field experience Course requirements Other

MTEL Preparation and Pass Rates:

MTEL PREPARATION & PASS RATES
# of Candidates Attempting # of Attempts to Pass Description of Services/Supports in Place to Prepare Candidates Average scaled score # Taking test # Passing test Pass Rate %

Program Offerings:

PROGRAM OFFERINGS
List of approved programs Description of program features and delivery

Field-Based Experience Information:

REQUIREMENTS FOR ADMISSION TO THE PRE-PRACTICUM AND PRACTICUM
Practicum Pre-Practicum

PRACTICUM PROGRAM DATA
Average number of weeks Average number of hours Total number of students enrolled Number of Full Time Faculty members who supervised student teachers Number of Part time Faculty members who supervised student teachers List of practicum settings

PRE-PRACTICUM PROGRAM DATA
Average number of weeks Average number of hours List pre-practicum settings

Program Completion:

PROGRAM COMPLETION REQUIREMENTS
Average # of course required for program completion: Content courses Pedagogy courses MTEL(s) required Field-Based experience Other

PROGRAM COMPLETER INFORMATION
Total # of completers Response rate to follow-up % employed in position of license/program completed % employed in position of license outside of Massachusetts % employed in Massachusetts public school % pursuing additional training % employed in another field

Manner of Exit From Program and Persistence Rate:

MANNER OF EXIT FROM PRORGAM AND PERSISTENCE RATE
students entered the program Total % transferred out of program % transferred to another institution % transferred out of program due to change of career interest % transferred out of program due to inability to pass MTEL # students graduated from the teacher licensure program **Overall Persistence Rate:**

Annual Goals for the Program:

ANNUAL GOALS FOR THE PROGRAM

	Effectiveness Indicator 1			Candidate Attainment and Performance - Content (SMK) Standards	
	Effecti e preparation in sub ect matter nowledge SM standards employment of assessments that enable analysis of candidate mastery of SM and support resources as needed for successful completion of MTE s re uired for licensure.				
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT /SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**
.	Pass Rate on MTE	Report MTE Test Results for SM	Pearson Results State nnual Report	Chart Table with Summary f utcomes for the last years	nalysis of pass rate results
.	Sub ect Matter nowledge SM **Bacc**	Matrices depicting SM Co erage	Syllabi Matrices nalysis	Completed Reporting Templates Matrices for SM	nalysis of the depth of co erage of SM across the program as a whole
			Catalog ebsite	Program of Study isting of Courses including course name number description	dentification of icensure Core and ariety of ields opportunities
			Course E aluations	Course E aluation Rating Summary	nalysis of the Course E aluation Rating Summaries as a whole
			nter iews with aculty Candidates current graduates program super isors super ising	rgani ation nter iew indings	nalysis of rgani ation nter iews
			Candidate Sur eys	Summary of Sur ey Results	nalysis of Summary
			ocus Groups	Summary of indings	nalysis of Summary
.	Sub ect Matter nowledge SM **Post Bacc**	Program ssessment of post bacc content readiness	Candidate transcripts	ocument used to capture findings of transcript re iew	nalysis of indings from transcript re iew process
C.**	Program Specific ssessment of Candidate Performance pertaining to SM	Program Specific	ssessments	Chart Table epicting year by year candidate performance outcomes using a four le el rating system e ceeds meets further de elopment needed insufficient	Candidate performance on program specific assessments
			POSSIBLE SOURCES:		
			Course ssessments		
			Pro ects		
			Portfolio		
			Teacher or Samples		
			Capstone E periences		
			Tests		
			ther		
.	se of the icense Specific uestions PP	Report Rate of tili ation of the assessment instrument	Candidate Records containing epartment ppro ed Performance ssessment nstrument	Chart Table showing aggregate results of se of the icense Specific uestions	nalysis of candidate performance on the performance assessment license specific uestions
			Completed Performance ssessment nstruments		
	** Bold - Pilot Standards				

	Effectiveness Indicator 2A				Candidate Attainment and Performance - Professional Standards for Teachers (PST)				
	Effecti e preparation in professional standards and use of performance assessments to inform instruction								
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT/SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce				
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**	**Organization will submit & ESE will review in advance**	**Organizaton will present during site visit**	**ESE will reference/conduct during site visit**	**Refer to:**
.	Professional Standards Teachers PST Co erage	PST Matri	Syllabi	Completed Matri	nalysis of the depth of co erage across the program as a whole in the analysis				PS Template Reporti ng Matri
.	se of epartment ppro ed Preser ice Performance ssessment nstrument	Report on Rate of tili ation of the assessment instrument	Completed Preser ice Performance ssessments PP **teacher & specialist teacher**	Chart Table showing aggregate candidate performance standard by standard of the epartment ppro ed Performance ssessment nstrument	nalysis of the results of candidate performance on the Professional Standards	o	Through Sampling of Student Records		d isory for Record eeping PP Guidelines
C.	se of epartment s rubric to e aluate candidates performance on the PSTs	Performance ssessment Rubric nalysis	Completed Preser ice Performance ssessment PP teacher specialist teacher	escription of the process and summary of the outcomes of candidates performance using the epartment s rubric	nalysis of the results of candidates performance using the epartment s rubric	o	Through Sampling of Student Records		d isory for Record eeping PP Guidelines
**D.	**100% Use of an organization's rubric to evaluate candidate performance on the PPA**	Performance ssessment Rubric nalysis	Completed Preser ice Performance ssessment PP **teacher & specialist teacher**	escription of the process and summary of the candidates performancethe outcomes of the organi ation s rubric	nalysis of the results of candidates performance using the organi ation s rubric	o	Through Sampling of Student Records		T
	** Bold - Pilot Standards								

	Effectiveness Indicator 2B	Candidate Attainment and Performance - Professional Standards for Administrators							
	Effecti e preparation in professional standards and use of performance assessments to inform instruction								
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT/SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce				
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**	**Organization will submit & ESE will review in advance**	**Organizaton will present during site visit**	**ESE will reference/conduct during site visit**	**Refer to:**
.	Professional Standards for dministrators PS Co erage	PS Matri	Syllabi	Completed Matri	nalysis of the depth of co erage across the program as a whole in the analysis				PS Template Reporting Matri
.	se of epartment ppro ed Performance ssessment nstrument	Report on Rate of tili ation of the assessment instrument	Completed Performance ssessments	Chart Table showing aggregate candidate performance standard by standard	nalysis of the results of candidate performance on the Professional Standards	o	Through Sampling of Student Records		T
C.	se of a rubric to e aluate candidate performance on the PS s	Performance ssessment Rubric nalysis	Completed Performance ssessment	escription of the process and summary of the outcomes of the candidates progress using the organi ation s rubric	nalysis of the results using the rubric	o	Through Sampling of Student Records		T
**D.	**100% Use of an organization's rubric to evaluate candidate performance on the PPA**	Performance ssessment Rubric nalysis	Completed Preser ice Performance ssessment PP	escription of the process and summary of the candidates performancethe outcomes of the organi ation s rubric	nalysis of the results of candidates performance using the organi ation s rubric	o	Through Sampling of Student Records		T
	**** Bold - Pilot Standards**								

	Effectiveness Indicator 3				Program Delivery - Organizational & Program Data and Documentation					
	Effecti e use of data and documentation of program components regulatory proposed standards pilot									
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT /SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce					
	STANDARD	MEASURE	Possible SOURCES of DATA & DOCUMENT(S)	COMPILATION OF EVIDENCE	ANALYSIS OF EVIDENCE Plan limited to 1-2 page	Organization will submit & ESE will review in advance		Organization will present during site visit	ESE will reference/ conduct during site visit	Refer to:
						Education Unit	Program			
A.**	**Outreach and Recruitment to enroll a diverse candidate pool	ocumentation of outreach and recruitment efforts	Materials presentations mailings sur eys	Summary depicting outreach strategies results of outreach and recruitment	Plan for increasing di ersity of candidate pool		n a			T
.	dmissions standards process reflecting regulatory re uirements	ocumentation of a ailability accuracy clarity of admissions re uirements materials	ebsite Catalog egree Program Chec list Sur eys ocus Groups nter iews with students	Compilation of admissions materials	Plan to ensure program admission re uirements are in compliance					Refer to d ising Re uirements for Educator Preparation Programs
C.	d ising process reflecting regulatory re uirements	ocument ion of a ailability accuracy clarity of ad ising re uirements materials	d isment sheets program flow sheets charts program of study catalog web site nter iews with students sur eys	Compilation of ad ising materials	Plan to ensure program ad ising re uirements are in compliance					Refer to d ising Re uirements for Educator Preparation Programs
D.**	**MTEL Support services to increase candidate success in passing required state licensure test(s). SMK(s) & C&L	ocumentation of a ailability and accessibility of organi ational resources committed to candidate success	Supports tutoring courses seminars materials faculty in ol ement sur eys	Compilation of MTE Support Ser ices nformation	Plan to ensure MTE support ser ices is in place and in use					T
E.	Pre Practicum e periences reflecting regulatory re uirements	emonstrate that candidates participate in di erse pre practicum e periences in a ariety of settings related to the role of the license	andboo s Course ame umber Syllabi Candidate Pre practicum logs student files Sur eys nter iews Candidate E aluations of Super ising Practioners Program Super isor	Chart summari ing pre practicum placements number and length of e periences	Plan to address Pre Practicum regulatory re uirements for each candidate					T
F.**	Program DATA - candidates	Persistence Completion ata Manner of E it from Program Completers obtaining education employment in out of M	S R Title Report databases sur eys students files program organi ational resources EP MS							
G.	Practicum Practicum E ui alent e periences reflecting regulatory re uirements	emonstrate that candidates are pro ided a uality practicum e perience that prepares them for the role and license.	andboo s Course Seminar ame umber Syllabi Candidate PP student files Sur eys nter iews Candidate E aluations of Super ising Practioners Program Super isor	Chart summari ing pre practicum placements number length and types of e periences	Plan to address Practicum regulatory re uirements for each candidate					PP Guidelines T dministrators
H.**	**Career Development & Placement Services to support candidate employment and effectiveness	ocument a ailability and accessibility of resources and guidance to assist candidates graduates with securing employment and being effecti e in their role.	ebsite Materials Catalog Staff Resources nter iews with students Sur eys eedbac from school personnel	Compilation of Career e elopment Placement Ser ice materials	Plan to ensure Career e elopment and Placement Ser ices is in place and in use		n a			Refer to d ising Re uirements for Educator Preparation Programs T
	** Bold - Pilot Standards									

	Effectiveness Indicator 4				Progam Review and Improvement			
	Effecti e engagement in a process of self e aluation to foster continuous impro ement at the organi ationation unit and program le el s .							
	REQUIREMENT	**OUTCOME/EXPECTATION**	**LOOK AT /SPEAK TO**	**TALLY & SYNTHESIZE**	**ASSESS - Must Produce**			
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**	**Organization will submit & ESE will review in advance**	**Organizaton will present during site visit**	**ESE will reference/conduct during site visit**	**Refer to:**
A.**	**Organizational Program Review Process that engages the program provider in a periodic, reflective self analysis to support continuous improvement**	escribe the organi ation s process established for program re iew impro ement	Program Self ssessment d isory Committees Councils ocus Groups ata						
B.**	**Education Unit Review Process that engages the program provider in a periodic, reflective self analysis to support continuous improvement**	escribe the Education nit s process established for program re iew impro ement							
C.**	**Licensure Program Review Process that engages the program provider in a periodic, reflective self analysis to support continuous improvement**	escribe the licensure program s process established for program re iew impro ement							
****D**	**Annual Goal Achievement**	eecribe how goals were set and achie ed annually							
	** Bold - Pilot Standards								

	Effectiveness Indicator 5			**District Support and Evaluation of Educator Preparation Programs**	
	Effecti e analysis of district s needs and ability to support district through preparation programs				
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT /SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**
**A.	**Program Alignment to District Needs**	eeds assessments conducted	ocus groups		
**B.	**Program Responsiveness**	igh need licensure areas			
		ow incidence licensure areas			
**C.	**Partnership development**	Sta eholder engagement satisfaction			
**D.	**Production and placement in high need areas**				
	** **Bold - Pilot Standards**				

	Effectiveness Indicator 6			Program Completer Impact on Student Achievement and Success	
	Effecti e e amination on impact of educator preparation progams completers on effecti eness as beginning teachers and impact on student achie ement and success.				
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT /SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**
**A.	**Evaluation of induction/mentoring programs by beginning teachers**	ggregate data pro ided by beginning teachers to determine their le el of satisfaction with the induction and mentoring program	Sur eys	T	T
**B.	**Evaluation of impact on student achievement**	mpact of educators on student achie ement	MC S and ther ormati e ssessments	T	T
**C.	**Impact in student achievement to close the acheivement gap with focus in high need areas**				
	** Bold - Pilot Standards				

Appendix D25: Educator Preparation Program Approval Pilot

In 2006 the Massachusetts Department of Elementary and Secondary Education (ESE) identified and invited representative organizations to participate in the development of a new outcomes-based approach to program approval.

The mission of the work was to develop and implement a statewide system for Educator Preparation Program (EPP) approval that focuses more directly on program and candidate outcomes, to inform program development and improvement and related efforts.

The vision was to create a program approval process with a focus on establishing a:

- Continuous improvement system that examines program effectiveness through the compilation and analysis of data, both quantitative and qualitative
- System that will enable each sponsoring organization to reflect and assess its performance in the delivery of educator preparation programs
- Process for ESE to analyze the effectiveness and impact of programs and program completers in relation to student achievement and other measures

Effectiveness Indicators were developed (see draft in separate appendix) to capture, measure and analyze candidate, program and program completer data.

ESE piloted this new program approval process, using effectiveness indicators, with 12 representative organizations. These reviews began in March 2009 and were completed in April 2010. The following organizations were part of the pilot:

Endicott College
Curry College
Bay Path College
Anna Maria College
Elms College
Emerson College
Emmanuel College
Hellenic College
Lowell Public Schools
Shady Hill School
UMass-Boston
Springfield College

Appendix D26: Massachusetts Department of Elementary and Secondary Education Professional Development Institutes, 2009-2010 and Sample Syllabus from a Writing Institute

Content Area	Region
Arts	
Improving Content Knowledge and Music Pedagogy through the Kodaly Approach: Kodaly Music Institute Levels I, II, and III	Greater Boston
Creating an Active Musical Classroom	Central
Thinking Through Art	Greater Boston
English Language Learners	
Content-Based ESL Curriculum Development and Instruction	Greater Boston and West
Assessing English Language Learners (ELL) with Disabilities	Greater Boston
History/ Social Science	
Defining Freedom	Central and Greater Boston
Social Studies & Literacy	Central
Literacy	
Voyager U Reading Academy - Worcester	Online
Voyager U Reading Academy - Springfield	Online
Scholastic RED Reading Course – Everett	Online
Scholastic RED Reading Course – Lawrence	Online
LETRS Foundations of Reading Instruction	Online
Reading Informational Text (K-5) - Brockton	Southeast
Reading Informational Text (K-5) – Southbridge	Central
Reading in the Content Areas: Middle School	Northeast
Strong Writing and Reading: Lessons Learned from MCAS - Waltham	Greater Boston
Strong Writing and Reading: Lessons Learned from MCAS - Shrewsbury	Central
Strong Writing and Reading: Lessons Learned from MCAS - Holyoke	West
Strong Writing and Reading: Lessons Learned from MCAS - North Adams	West

Strong Writing and Reading: Lessons Learned from MCAS - Fall River	Southeast
Teaching Expository and Persuasive Writing	West
Differentiated Writing Instruction to Close the Achievement Gap	Greater Boston
Reading and Teaching American Literary Nonfiction	West
Topics in Teaching Literacy to Students that are Deaf or Hard of Hearing	Central
Mathematics	
Developing Algebraic Thinking - Framingham	Central
Mathematical Reasoning and Problem Solving	Central
Unlocking Linear Equations and Exploring Their Foundations	Central
Understanding Rational Numbers - Boston	Greater Boston
Understanding Rational Numbers - Stoughton	Greater Boston
Increasing Accessibility to Algebra and Geometry for Special Education Students - Tantasqua	Central
Increasing Accessibility to Algebra and Geometry for Special Education Students - Revere	Northeast
Assessment & Conceptual Mathematics Problems - Norwood	Greater Boston
The Coaching Cycle: An Interactive Online Course for K-8 Mathematics Coaches	Online
Patterns, Polygons, Proportionality… for Special Populations - Holyoke	West
Massachusetts Intel Math Initiative Course (MIMI)	West
Science & Technology/Engineering	
Laboratory-Based Physics (7-12)	Greater Boston
Laboratory-Based Physical Science & Technology/Engineering	Central
Implementing Technology/Engineering Standards (6-12)	Greater Boston
Improving Middle Grades Science through Effective Formative Assessments	Northeast
Teaching High School Biology (9-12)	Online
Science and Literacy (3-8)	Greater Boston
Special Education	
Special Education Leadership Academy I for New Administrators (1-5 years)	Central
Special Education Leadership Academy II for Experienced	Central

Administrators (Over 5 years)	
Occupational Therapy Services in Educational Settings	Greater Boston
Strategies for Students with Sensory Integration Dysfunction in an Inclusive Classroom	Central
Topics in Teaching Literacy to Students who are Deaf or Hard-of-Hearing	Central
Mathematics and/or Science and Technology: American Sign Language (ASL) and Other Signed Systems	Central
Sustaining Braille Proficiency of Licensed Teachers of Students with Visual Impairments	Greater Boston
Assessing English Language Learners (ELL) with Disabilities	Greater Boston
Managing Behavior in an Inclusive Classroom	Greater Boston
Effective Evaluation of Special Education Programs	Greater Boston
Language and Expository Discourse	Northeast
Access to Print: A Framework for All Learners (two sections)	Online
Special Education Leadership Seminar I: Going from Good to Great	Central
Special Education Leadership Seminar II	Central
Other	
Introduction to the Education of Advanced, Talented, and Creative Learners	TBD
Creative and Critical Thinking Strategies in the Classroom with Emphasis on Advanced Learners	Southeast

last updated: May 18, 2009

2010 Professional Development Institutes

Program Information

Content Area
Arts
Creating an Active Musical Classroom
Critical Connections through Visual Arts and Literacy
Drafting the *Common Core Standards for Literacy in the Arts*
English Language Learners
ELL Curriculum Workshop
Health
Talking about Sex Safely: An Advanced Practice Course for Experienced Classroom Sexuality Educators
Literacy
Building World Knowledge through Reading & Writing Informational Texts: What Effective Teachers Know & Do
Critical Connections through Visual Arts and Literacy
Language Essentials for Teachers of Reading and Spelling (LETRS)
Literacy Coaching Institute - Cambridge
Literacy Coaching Institute - Lowell
Strong Writing & Reading: Lessons Learned from MCAS - Amherst
Strong Writing & Reading: Lessons Learned from MCAS - Bridgewater
Strong Writing & Reading: Lessons Learned from MCAS - Haverhill
Strong Writing & Reading: Lessons Learned from MCAS - Worcester
The Massachusetts New Literacies Institute
Word Generation: Building Students' Academic Language and Schools' Internal Coherence
Mathematics
Fractions for Elementary School Teachers
High School Mathematics: The Bird's View and the Frog's View
Middle School Mathematics: The Bird's View and the Frog's View
Reasoning & Problem Solving: Number Sense, Algebra, & Measurement
Teaching Advanced Mathematical Decision Making

Science & Technology/Engineering
Assessing and Addressing Misconceptions in Physical Science
College-Prep Biology - Added 5/13/10
Connecting Science and Literacy
Implementing Technology/Engineering Standards
Improving Middle Grades Science Teaching and Learning Through the Effective Use of Formative Assessments
Interactions in the Sciences: Observe, Investigate, Explain: Exploring wildlife and habitats to examine the flow of energy through ecosystems - Added 5/13/10
Laboratory Based Chemistry Content
Laboratory Based Physics Content
Teaching Earth and Space Science
Teaching High School Biology
Teaching Science through the Inquiry Process (TSIP)
Special Education
Courses to be posted in Mid-May 2010

Writing and the Teaching of Writing

INSTITUTE DESCRIPTION

Location: Springfield Central High School, 1840 Roosevelt Avenue, Springfield, MA
Audience: ELA, grades 4-12, but also appropriate for elementary, content areas, ELL, and SPED
Prerequisites: None

This course is designed for writing teachers and all teachers who use writing as a teaching tool. It will focus on theoretical and practical questions related to the nature of the writing process and the challenges of teaching writing. Its aim will be to provide participants the opportunity to reflect on their own literacy learning and teaching experiences, to explore composition theory and research, and to examine current issues in the teaching of writing. Readings and research projects will focus on the writing process and its linguistic, psychological, socio-cultural, and rhetorical underpinnings. Concepts such as audience, voice, identity, and dialect—as well as practical matters such as incorporating grammar instruction, working with English Language Learners, preparing students for state testing, and teaching with technology—will be considered. A key assumption of this course is that the best way to learn about writing is to *write*—in varied of modes and for varied of purposes—and to reflect on the complex processes involved in that act. Participants can expect to write regularly: low-stakes experiments in varied genres, informal reading responses, reflections, a literacy self-study, and an inquiry project will all be in the mix. Class meetings will include discussions, workshops, response groups, and presentations.

Dates and times: Tuesday/Wednesday/Thursday, July 6-29, 9 a.m. – 12 p.m.; plus follow-up meetings on Saturday, October 2, and another fall date TBD and some online activities
Provider: Western Massachusetts Writing Project, University of Massachusetts Amherst
Credit: 3 graduate credits for English 712 available at $100/credit plus registration fee

FACULTY

Bruce M. Penniman, Ed.D., Adjunct Professor of English, University of Massachusetts Amherst; retired teacher of English, Amherst Regional High School, and former director of WMWP
(Co-facilitator TBD)
Guest presenters: University of Massachusetts faculty and WMWP teacher-consultants

COURSE TEXTS

Introductory text: Finn, Patrick J. *Literacy with an Attitude: Educating Working-Class Children in Their Own Self-Interest*. Albany: SUNY Press, 1999.

Course pack: Selected articles and chapters on literacy and composition theory and pedagogy:

Delpit, Lisa. "The Silenced Dialogue: Power and Pedagogy in Educating Other People's Children." *Other People's Children: Cultural Conflict in the Classroom*. New York: New Press, 1995. 21-47.

Rodriguez, Richard. "Aria." *Hunger of Memory: The Education of Richard Rodriguez.* New York: Bantam, 1983. 7-42.

Council of Chief State School Officers and the National Governors Association Center for Best Practices. *Common Core State Standards for English Language Arts and Literacy in History/Social Studies & Science*. 2010. http://www.corestandards.org/.

Britton, James. "Writing to Learn and Learning to Write." *Prospect and Retrospect: Selected Essays of James Britton*, ed. Gordon M. Pradl. Montclair, NJ: Boynton/Cook, 1982. 94-111.

Moffett, James. "Learning to Write by Writing." *Teaching the Universe of Discourse*. New York: Houghton Mifflin, 1968. 188-210.

Elbow, Peter. "Teaching Two Kinds of Thinking by Teaching Writing." *Embracing Contraries: Explorations in Learning and Teaching*. New York: Oxford U P, 1986. 54-63.

Flower, Linda, and John R. Hayes. "The Cognition of Discovery: Defining a Rhetorical Problem." *College Composition and Communication* 31:1 (February 1980): 21-32.

Perl, Sondra. "Understanding Composing." *College Composition and Communication* 31:4 (December 1980): 363-369.

Rose, Mike. "Rigid Rules, Inflexible Plans, and the Stifling of Language: A Cognitive Analysis of Writer's Block." *College Composition and Communication* 31:4 (December 1980): 389-401.

Devitt, Amy J. Generalizing about Genre: New Conceptions of an Old Concept." *College Composition and Communication* 44:4 (December 1993): 573-586.

Dean, Deborah M. "Muddying Boundaries: Mixing Genres with Five Paragraphs." *English Journal* 90:1 (September 2000): 53-56.

Hartwell, Patrick. "Grammar, Grammars, and the Teaching of Grammar." *College English* 47:2 (February 1985): 105-127.

Weaver, Constance. "Teaching Grammar in the Context of Writing." *English Journal* 85:7 (November 1996): 158-175.

Kolln, Martha. "Rhetorical Grammar: A Modification Lesson." *English Journal* 85:7 (November 1996): 25-31.

hooks, bell. "'when i was a young soldier for the revolution': coming to voice." *Talking Back: Thinking Feminist, Thinking Black*. Boston: South End Press, 1989. 10-18.

Cayton, Mary Kupiec. "What Happens When Things Go Wrong: Women and Writing Blocks." *Journal of Advanced Composition* 10:2 (November 1990): 321-337.

Tobin, Lad. "Car Wrecks, Baseball Caps, and Man-to-Man Defense: The Personal Narratives of Adolescent Males." *College English* 58:2 (February 1996): 158-175.

Ball, Arnetha F. "Evaluating the Writing of Culturally and Linguistically Diverse Students: The Case of the African-American Vernacular Speaker." *Evaluating Writing: The Role of Teachers' Knowledge about Text, Learning, and Culture*, ed. Charles R. Cooper and Lee Odell. Urbana, IL: NCTE, 1999. 225-248.

Valdés, Guadalupe, and Patricia Anloff Sanders. "Latino ESL Students and the

Development of Writing Abilities." *Evaluating Writing: The Role of Teachers' Knowledge about Text, Learning, and Culture*, ed. Charles R. Cooper and Lee Odell. Urbana, IL: NCTE, 1999. 249-278.
Hogue, Dawn, Ted Nellen, Nancy G. Patterson, and Patricia Schulze. "CyberEnglish." E*nglish Journal* 94:2 (November 2004): 70-75.
Kajder, Sara B. "Enter Here: Personal Narrative and Digital Storytelling." *English Journal* 93:3 (January 2004): 64-68.
Herrington, Anne, and Charles Moran. "Challenges for Writing Teachers: Evolving Technologies and Standardized Assessment." *Teaching the New Writing: Technology, Change, and Assessment in the 21st-Century Classroom*. Ed. Anne Herrington, Kevin Hodgson, and Charles Moran. New York: Teachers College Press, 2009. 1-17.
Penniman, Bruce M. "Creating an Assessment System." *Building the English Classroom: Foundations, Support, Success*. Urbana, IL: NCTE, 2009. 60-87.

Choice book: Each participant will select a book on the teaching of writing appropriate to her teaching assignment from the course library to read independently and keep.

STANDARDS EMPHASIS

Writing and the Teaching of Writing will address a range of Massachusetts English Language Arts standards (including the entire Composition Strand), with special emphasis on those listed below. Participants' analysis of the institute readings and engagement in a range of composition tasks will set the stage for development of new or revised writing curricula for their own classes.

GENERAL STANDARD 5: Structure and Origins of Modern English
GENERAL STANDARD 6: Formal and Informal English
6.10: Analyze the role and place of standard American English in speech, writing, and literature. 6.11: Analyze how dialect can be a source of negative or positive stereotypes among social groups.
GENERAL STANDARD 20: Consideration of Audience and Purpose
20.5 Use different levels of formality, style, and tone when composing for different audiences.
20.6 Use effective rhetorical techniques and demonstrate understanding of purpose, speaker, audience, and form when completing expressive, persuasive, or literary writing assignments.
GENERAL STANDARD 21: Revising

GENERAL STANDARD 23: Organizing Ideas in Writing
Students will organize ideas in writing in a way that makes sense for their purposes.
GENERAL STANDARD 24: Research
GENERAL STANDARD 25: Evaluating Writing and Presentations
Students will develop and use appropriate rhetorical, logical, and stylistic criteria for assessing final versions of their compositions or research projects before presenting

them to varied audiences.

Participants will jointly develop rubrics and criteria for the institute assessments and apply their learning from these activities to the assessments they create for their classes.

GENERAL STANDARD 27: Media Production
Students will design and create coherent media productions with a clear controlling idea, adequate detail, and appropriate consideration of audience, purpose, and medium.
27.6: Create media presentations that effectively use graphics, images, and/or sound to present a distinctive point of view on a topic.

Participants will examine the growing importance of digital writing and its implications for instruction, create their own electronic compositions, and discuss applications for the classroom.

NOTE: Besides addressing Massachusetts ELA standards, course participants will examine the public draft of the **Common Core State Standards for English Language Arts and Literacy in History/Social Studies & Science** and discuss its potential impact on writing instruction.

SYLLABUS

Summer Institute (36 hours)

Daily Schedule

9:00 Writing into the Day: An open-ended prompt leading into the day's discussion
9:15 Discussion: Seminar on assigned readings using one of a variety of formats
10:30 Break and informal discussion
10:45 Writing: Workshop related to ongoing writing assignment or current readings
11:45 Business Meeting: Preview of homework and questions about ongoing assignments
12:00 Adjournment and individual conferences as needed

Week 1: Literacy in Social Context

July 6 Course introduction, overview of requirements, pre-assessment
Empowering education vs. domesticating education, intro to multi-genre project
Assignment due: Read Finn (all, including preface).

July 7 Working-class discourse vs. school discourse, race and writing instruction
Assignment due: Read Delpit, Rodriquez

July 8 Empowering working-class students in writing: pedagogies and standards
Assignment due: Read writing portions of Common Core State Standards draft.

The Writing Process Movement

July 13 Foundations of the writing process movement, intro to process writing project
Assignment due: Read Britton, Moffett, and Elbow; complete multi-genre project.

July 14 Early writing process research, practice using invention strategies
Assignment due: Read Flower and Hayes, Perl, and Rose.

July 15 New directions in genre theory, practice using revision strategies
Assignment due: Read Devitt and Dean.

Key Issues in the Teaching of Writing

July 20 Reading of literacy pieces; inquiry project workshop: I-search to develop topic
Assignment due: Respond to multi-genre projects; complete process writing project.

July 21 The problem of teaching grammar and its role in writing instruction, inquiry groups
Assignment due: Read Hartwell, Weaver, and Kolln.

July 22 Writing and difference: African-American Vernacular, English Language Learners
Assignment due: Read Ball (145) and Valdés and Sanders (157).

July 27 Gender and writing: voice, purpose, and genre; inquiry group presentations
Assignment due: Read hooks (119), Cayton (125), and Tobin (135).

July 28 Teaching writing with technology, inquiry group presentations
Assignment due: Read Hogue et al., Kajder, and Herrington and Moran.

July 29 Assessing writing: rubrics, portfolios, and grades; post-assessment
Assignment due: Read Penniman, complete partial draft of inquiry project.

Follow-up Activities (~10 contact hours)

July 30 to August 5: Participants will continue independent work (with e-mail conferences as needed) on inquiry projects and post the final drafts of their essays to the Ning by August 5.

August to September: Participants will draft plans for curriculum units (probably related to their inquiry projects) and research resources needed to implement their plans ($250 in

materials will be provided).

Saturday, October 2: Participants will attend the Western Massachusetts Writing Project's *Best Practices in the Teaching of Writing* conference. In the morning, they will go to sessions at which they will learn strategies they can incorporate into their curriculum units. In the afternoon, they will attend a workshop at which they will present, receive feedback on, and finalize their unit plans.

October to November: Participants will implement their curriculum unit plans and post progress reports on the Ning.

Early December (Date TBD): Participants will gather for a final meeting to present the results of their nonfiction units. The presentations will include sharing and analysis of student work.

ASSESSMENTS

Daily Writing Prompts

Used primarily as formative assessments, open-ended prompts will invite participants to explore their responses to and questions about the assigned readings in a variety of ways. These prompts will encourage participants to develop insights and make connections and serve as discussion starters for each day's seminar. Similarly, post-institute prompts posted on the Ning site will encourage discussion and feedback on the participants' inquiry projects and unit plans.

Personal/Cultural Literacy Multi-Genre Project

The purpose of this first project will be for participants to reflect on their literacy practices: on themselves as writers and readers and the literacy practices of formative groups and institutions (e.g., family, school, church). The process of composing this 3-page collection will develop their self-awareness. The projects as a group will give readers a further understanding of literacy values and practices, as they reflect our uniqueness, our interactions with specific people, and our social/cultural backgrounds. This project will resemble a collage. Like an essay, it will have some overall unity of intention: the overall picture the writer wants to convey about herself as a literate individual shaped by certain social/cultural contexts. Unlike an essay, the collection will include bits from various genres ordered as the writer wishes to create an overall effect with some variation and texture. Finished projects will be published and read on the course Ning.

Process Writing Nonfiction Project

The purpose of the second writing assignment will be to build participants' awareness of their own writing processes and expose them to alternative approaches that may be helpful to them and their students. This project, which will accompany participants' reading and discussion of composition theory and research, will be designed to encourage their experimentation with a variety of invention and revision strategies as they compose short pieces of education-related nonfiction such as teaching narratives, informational texts, or position papers. The project will include collecting and logging all process work

and writing a process reflection letter.

Inquiry Project Exploring a Question on Writing, the Teaching of Writing, or Literacy

For this project, participants will explore questions or issues of interest to them and compose texts of 10-12 pages that have some purpose for teachers or prospective teachers. Exploring means doing research in the published literature and reflecting to make sense of it. Composing a text will involve identifying and achieving a specific purpose. That purpose might be to help readers better understand a given concept by sorting out different ways of conceptualizing it or to help readers better understand different approaches to teaching something. Or it might be to examine an issue, again to understand it better and/or to persuade readers of the nature of an issue. Or it might be to develop an argument for a certain position or pedagogical approach.

Curriculum Unit and Presentation

At the end of the summer session, participants will select topics (probably related to their inquiry projects) around which to build curriculum units for their classrooms. The institute budget will provides $250 per teacher for curriculum materials, which will facilitate implementation. Participants will create and implement standards-based unit plans, collect and assess student work, and share their results with the group in final presentations.

Appendix D27: NSDC Standards for Staff Development
(Revised, 2001)

Source: National Staff Development Council (NSDC) website, http://www.nsdc.org/standards

Context Standards
Staff development that improves the learning of all students:

- Organizes adults into learning communities whose goals are aligned with those of the school and district.
- Requires skillful school and district leaders who guide continuous instructional improvement.
- Requires resources to support adult learning and collaboration.

Process Standards
Staff development that improves the learning of all students:

- Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement.
- Uses multiple sources of information to guide improvement and demonstrate its impact.
- Prepares educators to apply research to decision making.
- Uses learning strategies appropriate to the intended goal.
- Applies knowledge about human learning and change.
- Provides educators with the knowledge and skills to collaborate.

Content Standards
Staff development that improves the learning of all students:

- Prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement.
- Deepens educators' content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately.
- Provides educators with knowledge and skills to involve families and other stakeholders appropriately.

Appendix E1: Applicable Legal Document, Relative to the Achievement Gap

Chapter 12 of the Acts of 2010

AN ACT RELATIVE TO THE ACHIEVEMENT GAP.

Whereas, The deferred operation of this act would tend to defeat its purpose, which is to provide forthwith innovation into school districts and turnaround underperforming schools, therefore it is hereby declared to be an emergency law, necessary for the immediate preservation of the public convenience.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same as follows:

SECTION 1. Chapter 7 of the General Laws is hereby amended by striking out section 22A, as appearing in the 2008 Official Edition, and inserting in place thereof the following section:-

Section 22A. Notwithstanding any general or special law relating to collective purchasing, but subject to all other laws regulating public purchases and competitive bidding, the commonwealth and 1 or more of its cities, towns, districts, counties, authorities or commonwealth or Horace Mann charter schools, or 2 or more cities, towns, districts, counties, authorities or commonwealth or Horace Mann charter schools, hereinafter called political subdivisions, may make purchases of materials, supplies, equipment or services through the state purchasing agent subject to such rules, regulations and procedures as may be established from time to time by the purchasing agent; provided, however, that the political subdivision shall accept sole responsibility for any payment due the vendor for its share of such purchase.

SECTION 2. Chapter 40 of the General Laws is hereby amended by striking out section 4E, as so appearing, and inserting in place thereof the following section:-

Section 4E. Two or more school committees of cities, towns and regional school districts and boards of trustees of charter schools may enter into a written agreement to conduct education programs and services which shall complement and strengthen the school programs of member school committees and charter schools and increase educational opportunities for children. The school committees and boards of trustees of charter schools shall collaborate to offer the programs and services; provided, however, the association of school committees and board of trustees of charter schools which is formed to deliver the programs and services shall be known as an education collaborative.

The education collaborative shall be managed by a board of directors which shall be comprised of 1 person appointed by each member school committee and 1 person appointed by each member charter board of trustees. All appointed persons shall be either a school committee member or his designee, the superintendent of schools or his designee or a member of the charter board of trustees. Members of the board of directors shall be entitled to a vote according to the terms of the education collaborative agreement. The department of education shall appoint an individual to serve in an advisory capacity to the education collaborative board of directors. The individual shall not be entitled to vote on any matter which comes before the board of directors

of the education collaborative.
The written agreement which shall form the basis of the education collaborative shall set forth the purposes of the program or service, the financial terms and conditions of membership of the education collaborative, the method of termination of the education collaborative and of the withdrawal of member school committees and charter schools, the procedure for admitting new members and for amending the collaborative agreement, the powers and duties of the board of directors of the education collaborative to operate and manage the education collaborative and any other matter not incompatible with law which the member committees and charter schools consider advisable. The agreement shall be subject to the approval of the member school committees and the commissioner of education.
Each board of directors of an education collaborative shall establish and manage a trust fund, to be known as an Education Collaborative Trust Fund, and each such fund shall be designated by an appropriate name. All monies contributed by the member municipalities and charter schools and all grants or gifts from the federal government, state government, charitable foundations, private corporations or any other source shall be paid to the board of directors of the education collaborative and deposited in the fund.
The board of directors of the education collaborative shall appoint a treasurer who may be a treasurer of a city, town or regional school district belonging to the collaborative. The treasurer may, subject to the direction of the board of directors of the education collaborative, receive and disburse all monies of the trust fund without further appropriation. The treasurer shall give bond annually for the faithful performance of his duties as collaborative treasurer in a form approved by the department of revenue and in the sum, not less than the amount established by the department, as shall be fixed by the board of directors of the education collaborative. The board of directors of the education collaborative in its discretion may pay compensation to the treasurer for his services. No member of the board of directors of the education collaborative shall be eligible to serve as treasurer of the collaborative.
The treasurer of the education collaborative board of directors shall have the authority to make appropriate investments of the monies of the Education Collaborative Trust Fund consistent with section 54 of chapter 44.
The board of directors of an educational collaborative may borrow money, enter into long-term or short-term loan agreements or mortgages and apply for state, federal or corporate grants or contracts to obtain funds necessary to carry out the purpose for which such collaborative is established; provided, however, that the board of directors has determined that any borrowing, loan or mortgage is cost-effective and in the best interest of the collaborative and its member municipalities and charter schools. The borrowing, loans or mortgages shall be consistent with the written agreement and articles of incorporation, if any, of the educational collaborative and shall be consistent with standard lending practices.
The board of directors of the education collaborative may employ an executive officer who shall serve under the general direction of the board and who shall be responsible for the care and supervision of the education collaborative.
The board of directors of the education collaborative shall be considered to be a public employer and have the authority to employ personnel, including teachers, to carry out the purposes and functions of the education collaborative. No person shall be eligible for employment by the board of directors as an instructor of children with severe special needs, teacher of children with special needs, teacher, guidance counselor or school psychologist unless the person has been granted a certificate by the board of education under section 38G of chapter 71 or section 6 of

chapter 71A or an approval under the regulations promulgated by the board of education under chapter 71B or chapter 74 with respect to the type of position for which he seeks employment; provided, however, that nothing herein shall be construed to prevent a board of directors of an education collaborative from prescribing additional qualifications. A board of directors of an education collaborative may, upon its request, be exempted by the board of education for any 1 school year from the requirements of this section to employ certified or approved personnel when compliance therewith would in the opinion of the board constitute a great hardship.
The education collaborative shall be considered to be a public entity and shall have standing to sue and be sued to the same extent as a city, town or regional school district. An education collaborative, acting through its board of directors, may enter into contracts for the purchase of supplies, materials and services and for the purchase or leasing of land, buildings and equipment as considered necessary by the board of directors.
A school committee of a city, town or regional school district or board of trustees of a charter school may authorize the prepayment of monies for an educational program or service of the education collaborative to the treasurer of an education collaborative, and the city, town or regional school district or charter school treasurer shall be required to approve and pay the monies in accordance with the authorization of the school committee or board of trustees.

SECTION 3. Chapter 69 of the General Laws is hereby amended by striking out sections 1J and1K, as so appearing, and inserting in place thereof the following 2 sections:-

Section 1J. (a) The commissioner of elementary and secondary education may, on the basis of student performance data collected pursuant to section 1I, a school or district review performed under section 55A of chapter 15, or regulations adopted by the board of elementary and secondary education, designate 1 or more schools in a school district other than a Horace Mann charter school as underperforming or chronically underperforming. The board shall adopt regulations establishing standards for the commissioner to make such designations on the basis of data collected pursuant to section 1I or information from a school or district review performed under section 55A of chapter 15. Upon the release of the proposed regulations, the board shall file a copy thereof with the clerks of the house of representatives and the senate who shall forward the regulations to the joint committee on education. Within 30 days of the filing, the committee may hold a public hearing and issue a report on the regulations and file the report with the board. The board, pursuant to applicable law, may adopt final regulations making revisions to the proposed regulations as it deems appropriate after consideration of the report and shall forthwith file a copy of the regulations with the chairpersons of the joint committee on education and, not earlier than 30 days of the filing, the board shall file the final regulations with the state secretary. Schools that score in the lowest 20 per cent statewide among schools serving common grade levels on a single measure developed by the department that takes into account student performance data and, beginning on July 1, 2011, improvement in student academic performance, shall be deemed eligible for designation as underperforming or chronically underperforming. Not more than 4 per cent of the total number of public schools may be designated as underperforming or chronically underperforming at any given time.
In adopting regulations allowing the commissioner to designate a school as underperforming or chronically underperforming, the board shall ensure that such regulations take into account multiple indicators of school quality in making determinations regarding underperformance or chronic underperformance, such as student attendance, dismissal rates and exclusion rates,

promotion rates, graduation rates or the lack of demonstrated significant improvement for 2 or more consecutive years in core academic subjects, either in the aggregate or among subgroups of students, including designations based special education, low-income, English language proficiency and racial classifications.

Before a school is designated chronically underperforming by the commissioner, a school must be designated underperforming and fail to improve.

An underperforming or chronically underperforming school described in the following subsections shall operate in accordance with laws regulating other public schools, except as such provisions may conflict with this section or any turnaround plans created thereunder. A student who is enrolled in a school at the time it is designated as underperforming or chronically underperforming shall retain the ability to remain enrolled in the school while remaining a resident of the district if the student chooses to do so.

(b) Upon the designation of a school as an underperforming school in accordance with regulations developed pursuant to this section, the superintendent of the district, with approval by the commissioner, shall create a turnaround plan for the school, under subsections (b) to (e), inclusive. The commissioner may allow for an expedited turnaround plan for schools that have been previously designated as underperforming and where the district has a turnaround plan that has had a public comment period and approval of the local school committee.

Before the superintendent creates the turnaround plan required in this subsection, the superintendent shall convene a local stakeholder group of not more than 13 individuals, for the purpose of soliciting recommendations on the content of such plan to maximize the rapid academic achievement of students at the school. The superintendent shall provide due consideration to the recommendations of the stakeholder group. The group shall include: (1) the commissioner, or a designee; (2) the chair of the school committee, or a designee; (3) the president of the local teacher's union, or a designee; (4) an administrator from the school, who may be the principal, chosen by the superintendent; (5) a teacher from the school chosen by the faculty of the school; (6) a parent from the school chosen by the local parent organization; (7) representatives of applicable state and local social service, health and child welfare agencies, chosen by the superintendent; (8) as appropriate, representatives of state and local workforce development agencies, chosen by the superintendent; (9) for elementary schools, a representative of an early education and care provider chosen by the commissioner of the department of early education and care and, for middle schools or high schools, a representative of the higher education community selected by the secretary; and (10) a member of the community appointed by the chief executive of the city or town. If the school or district does not have a parent organization or if the organization does not select a parent, the superintendent shall select a volunteer parent of a student from the school. The superintendent shall convene such group within 30 days of the commissioner designating a school as underperforming and the group shall make its recommendations to the superintendent within 45 days of its initial meeting. Meetings of the local stakeholder group shall be open to the public and the recommendations submitted to the superintendent under this subsection shall be publicly available immediately upon their submission.

(c) In creating the turnaround plan in subsection (b) the superintendent shall include, after considering the recommendations of the local stakeholder group, provisions intended to maximize the rapid academic achievement of students at the school and shall, to the extent practicable, base the plan on student outcome data, including, but not limited to: (1) data collected pursuant to section 1I or information from a school or district review performed under

section 55A of chapter 15; (2) student achievement on the Massachusetts Comprehensive Assessment System; (3) other measures of student achievement, approved by the commissioner; (4) student promotion and graduation rates; (5) achievement data for different subgroups of students, including low-income students as defined in chapter 70, limited English-proficient students and students receiving special education; and (6) student attendance, dismissal rates and exclusion rates.

The superintendent shall also include in the creation of the turnaround plan, after considering the recommendations of the local stakeholder group, the following: (1) steps to address social service and health needs of students at the school and their families, to help students arrive and remain at school ready to learn; provided, however, that this may include mental health and substance abuse screening; (2) steps to improve or expand child welfare services and, as appropriate, law enforcement services in the school community, in order to promote a safe and secure learning environment; (3) steps to improve workforce development services provided to students and their families at the school, to provide students and families with meaningful employment skills and opportunities; (4) steps to address achievement gaps for limited English-proficient, special education and low-income students; and (5) alternative English language learning programs for limited English proficient students, notwithstanding chapter 71A; and (6) a financial plan for the school, including any additional funds to be provided by the district, commonwealth, federal government or other sources.

The secretaries of health and human services, labor and workforce development, public safety and other applicable state and local social service, health and child welfare officials shall coordinate with the superintendent regarding the implementation of strategies under clauses (1) to (3), inclusive, of the second paragraph that are included in a final turnaround plan and shall, subject to appropriation, reasonably support such implementation consistent with the requirements of state and federal law applicable to the relevant programs that each such official is responsible for administering. The secretary of education and the commissioner of elementary and secondary education shall assist the superintendent in facilitating the coordination.

To assess the school across multiple measures of school performance and student success, the turnaround plan shall include measurable annual goals including, but not limited to: (1) student attendance, dismissal rates and exclusion rates; (2) student safety and discipline; (3) student promotion and graduation and dropout rates; (4) student achievement on the Massachusetts Comprehensive Assessment System; (5) progress in areas of academic underperformance; (6) progress among subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; (7) reduction of achievement gaps among different groups of students; (8) student acquisition and mastery of twenty-first century skills; (9) development of college readiness, including at the elementary and middle school levels; (10) parent and family engagement; (11) building a culture of academic success among students; (12) building a culture of student support and success among school faculty and staff and; (13) developmentally appropriate child assessments from pre-kindergarten through third grade, if applicable.

(d) Notwithstanding any general or special law to the contrary, in creating the turnaround plan required in subsection (b), the superintendent may, after considering the recommendations of the group of stakeholders: (1) expand, alter or replace the curriculum and program offerings of the school, including the implementation of research-based early literacy programs, early interventions for struggling readers and the teaching of advanced placement courses or other rigorous nationally or internationally recognized courses, if the school does not already have

such programs or courses; (2) reallocate the uses of the existing budget of the school; (3) provide additional funds to the school from the budget of the district, if the school does not already receive funding from the district at least equal to the average per pupil funding received for students of the same classification and grade level in the district; (4) provide funds, subject to appropriation and following consultation with applicable local unions, to increase the salary of any administrator, or teacher in the school, to attract or retain highly-qualified administrators, or teachers or to reward administrators, or teachers who work in underperforming schools that achieve the annual goals set forth in the turnaround plan; (5) expand the school day or school year or both of the school; (6) for an elementary school, add pre-kindergarten and full-day kindergarten classes, if the school does not already have such classes; (7) following consultation with applicable local unions, require the principal and all administrators, teachers and staff to reapply for their positions in the school, with full discretion vested in the superintendent regarding his consideration of and decisions on rehiring based on the reapplications. (8) limit, suspend or change 1 or more provisions of any contract or collective bargaining agreement, as the contract or agreement applies to the school; provided, that the superintendent shall not reduce the compensation of an administrator, teacher or staff member unless the hours of the person are proportionately reduced; (9) limit, suspend or change 1 or more school district policies or practices, as such policies or practices relate to the school; (10) include a provision of job-embedded professional development for teachers at the school, with an emphasis on strategies that involve teacher input and feedback; (11) provide for increased opportunities for teacher planning time and collaboration focused on improving student instruction; (12) establish a plan for professional development for administrators at the school, with an emphasis on strategies that develop leadership skills and use the principles of distributive leadership; (13) establish steps to assure a continuum of high-expertise teachers by aligning the following processes with a common core of professional knowledge and skill: hiring, induction, teacher evaluation, professional development, teacher advancement, school culture and organizational structure; (14) develop a strategy to search for and study best practices in areas of demonstrated deficiency in the school; (15) establish strategies to address mobility and transiency among the student population of the school; and (16) include additional components based on the reasons why the school was designated as underperforming and the recommendations of the group of stakeholders in subsection (b).

If the superintendent does not approve a reapplication submitted by an employee pursuant to clause (7) for a position in the school or if an employee does not submit a reapplication for a position in the school, the employee shall retain such rights as may be provided under law or any applicable collective bargaining agreement in relation to the employee's ability to fill another position in the district; provided, however, that the employee shall not have the right to displace any teacher with professional teacher status in any other school during a school year.

A teacher with professional teacher status in a school declared underperforming or chronically underperforming may be dismissed for good cause; provided, however, that the teacher receives 5 days written notice of the decision to terminate which shall include, without limitation, an explanation of the reason why the superintendent is not retaining the teacher in the school; provided, further, that the teacher may seek review of a termination decision within 5 days after receiving notice of the teacher's termination by filing a petition for expedited arbitration with the commissioner; provided, further, that except as otherwise provided herein section 42 of chapter 71 shall apply to a petition filed pursuant to this section; provided, further, that the commissioner shall cause an arbitrator to be selected pursuant to the procedures in section 42 of chapter 71

within 3 days of receipt of petition and shall conduct and complete a hearing within 10 days of receipt of the petition; provided, further, that in reviewing dismissal decisions, the arbitrator shall consider the components of the turnaround plan and shall also consider any personnel evaluations conducted that are consistent with the guidelines established pursuant to section 1B; and provided, further, that the arbitrator's decision shall be issued within 10 days from the completion of the hearing.

For a school with limited English-proficient students, the professional development and planning time for teachers and administrators identified in clauses (10) to (12), inclusive, shall include specific strategies and content designed to maximize the rapid academic achievement of limited English-proficient students at the school.

(e) Within 30 days of the local stakeholder group making recommendations under subsection (b), the superintendent shall submit a turnaround plan to the local stakeholder group, the school committee and the commissioner, all of whom may propose modifications to the plan. The superintendent shall make such plan immediately available to the public upon the submission. The stakeholder group, the school committee and the commissioner shall submit any proposed modifications to the superintendent not more than 30 days after the date of submission of the turnaround plan and the proposed modifications shall be made public immediately upon their submission to the superintendent. The superintendent shall consider and may incorporate the modifications into the plan if the superintendent determines that inclusion of the modifications would further promote the rapid academic achievement of students at the school or may alter or reject the proposed modifications submitted under this subsection. Within 30 days of receiving any proposed modifications under this subsection, the superintendent shall issue a final turnaround plan for the school and the plan shall be made publicly available.

(f) Within 30 days of the issuance of a final turnaround plan under subsection (e) a school committee or local union may appeal to the commissioner regarding 1 or more components of the plan, including the absence of 1 or more modifications proposed under subsection (e). The commissioner may, in consultation with the superintendent, modify the plan if the commissioner determines that: (1) such modifications would further promote the rapid academic achievement of students in the applicable school; (2) a component of the plan was included, or a modification was excluded, on the basis of demonstrably-false information or evidence; or (3) the superintendent failed to meet the requirements of subsections (b) to (e), inclusive. The decision of the commissioner regarding an appeal under this subsection shall be made within 30 days and shall be final. (g) If, after considering the recommendations of the group of stakeholders, the superintendent considers it necessary to maximize the rapid academic achievement of students at the applicable school by altering the compensation, hours and working conditions of the administrators, teachers, principal and staff at the school or by altering other provisions of a contract or collective bargaining agreement applicable to the administrators, teachers, principal and staff, the superintendent may request that the school committee and any union bargain or reopen the bargaining of the relevant collective bargaining agreement to facilitate such achievement. The bargaining shall be conducted in good faith and completed not later than 30 days from the point at which the superintendent requested that the parties bargain. The agreement shall be subject to ratification within 10 business days by the bargaining unit members in the school. If the parties are unable to reach an agreement within 30 days or if the agreement is not ratified within 10 business days by the bargaining unit members of the school, the parties shall submit remaining unresolved issues a joint resolution committee for dispute resolution process on the next business day following the end of the 30-day bargaining period or failure to

ratify.
The joint resolution committee shall be comprised of 3 members, 1 of whom shall be appointed by the employee organization within 3 business days following the submission of unresolved issues to the joint resolution committee, 1 of whom shall be appointed by the school committee within 3 business days following the submission of unresolved issues to the joint resolution committee and 1 who shall be selected through the American Arbitration Association who shall forthwith forward to the parties a list of 3 conciliators, each of whom shall have professional experience in elementary and secondary education, from which the parties may agree upon a single conciliator provided, however, that if the parties cannot select a conciliator from among the 3 within 3 business days, the American Arbitration Association shall select a conciliator from the remaining names. The joint resolution committee shall conduct a dispute resolution process to be concluded within 10 business days of selection. This process shall be conducted in accordance with the rules of the American Arbitration Association and consistent with this section. The fee for the process shall be shared equally between the 2 parties involved.
The joint resolution committee shall consider the positions of the parties, the designation of the school as underperforming and the needs of the students in the school. Notwithstanding any other provision of this chapter, the decision of the joint resolution committee shall be dispositive of all the issues in dispute and shall be submitted to the parties within 10 business days of the completion of the process. Under no circumstance, shall a time extension be granted beyond 10 business days of the completion of the process. If a decision is not submitted to the parties within 10 business days, the commissioner will resolve all outstanding issues.
(h) The superintendent may select an external receiver to operate the school and implement the turnaround plan or to assist the superintendent with the implementation. The superintendent may appoint the receiver if the superintendant determines that conditions exist in the district that are likely to negatively affect his ability to implement the plan successfully. A school committee may appeal to the commissioner the decision of the superintendent to appoint an external receiver. The commissioner may reverse such decision only if he determines that the superintendent made the decision on the basis of demonstrably-false information or evidence. A receiver shall be a non-profit entity or an individual with a demonstrated record of success in improving low-performing schools or the academic performance of disadvantaged students. A receiver shall be subject to section 11A ½ of chapter 30A and chapter 66. A receiver who is an individual shall also be subject to chapter 268A.
(i) An external receiver selected by the superintendent to operate a school shall have full managerial and operational control over the school as provided in the turnaround plan. For all other purposes, the school district in which the school is located shall remain the employer of record.
(j) Each turnaround plan shall be authorized for a period of not more than 3 years, subject to subsection (k). The superintendent or external receiver, as applicable, may develop additional components of the turnaround plan pursuant to subsections (b) to (g) inclusive and shall develop annual goals for each component of the plan, in a manner consistent with subsections (b) to (g), inclusive. The superintendent or external receiver, as applicable, shall be responsible for meeting the goals of the plan.
(k) Each school designated by the commissioner as underperforming under subsection (a) shall be reviewed by the superintendent, in consultation with the principal of the school, at least annually. The purpose of the review shall be to determine whether the school has met the annual goals in its turnaround plan and to assess the overall implementation of the turnaround plan. The

review shall be in writing and shall be submitted to the commissioner and the relevant school committee not later than July 1 for the preceding school year. The review shall be submitted in a format determined by the department of elementary and secondary education.
If the commissioner determines that the school has met the annual performance goals stated in the turnaround plan, the review shall be considered sufficient and the implementation of the turnaround plan shall continue. If the commissioner determines that the school has not met 1 or more goals in the turnaround plan and that the failure to meet the goals may be corrected through reasonable modification of the plan, the superintendent may amend the turnaround plan in a manner consistent with the provisions of subsection (b) to (g) inclusive. If the commissioner determines that the school has substantially failed to meet 1 or more goals in the plan, the commissioner may appoint an examiner to conduct an evaluation of the school's implementation of the turnaround plan.
If the commissioner determines that the school has substantially failed to meet multiple goals in the plan, the commissioner may require changes to the turnaround plan to be implemented by the superintendent in the following year or the appointment of an external partner to advise and assist the superintendent in implementing the plan the following year. If the changes to the turnaround plan require changes in a collective bargaining agreement applicable to administrators, teachers or staff in the school, the bargaining procedure in subsection (g) shall be used. If an underperforming school is operated by an external receiver, the commissioner may require the superintendent to terminate the receiver and develop a new turnaround plan; provided, however, that the superintendent shall not terminate the receiver before the completion of the first full school year of the operation of the underperforming school.
(l) Upon the expiration of a turnaround plan, the commissioner shall conduct a review of the school to determine whether the school has improved sufficiently, requires further improvement or has failed to improve. On the basis of such review, the commissioner may determine that: (1) the school has improved sufficiently for the designation of the school as underperforming to be removed; (2) the school has improved, but the school remains underperforming, in which case the superintendent may, with the approval of the commissioner, renew the plan or create a new or modified plan for an additional period of not more than 3 years, consistent with the requirements of subsections (a) to (g); or (3) consistent with the requirements of subsection (a),the school is chronically underperforming. The commissioner may recommend the appointment of an external receiver by the superintendent if the commissioner believes that a new or modified turnaround plan implemented by the superintendent will not result in rapid improvement. In carrying out this subsection, the superintendent shall: (1) in the case of a renewal of a turnaround plan, determine subsequent annual goals for each component of the plan with the input of the local stakeholder group as defined in subsection (b); or (2) create a new or modified turnaround plan as necessary, consistent with the requirements of this section.
(m) Upon the designation of a school as a chronically underperforming school in accordance with the regulations developed under this section, the commissioner shall create a turnaround plan for the school under this subsection and subsections (n) to (p), inclusive.
Before creating the turnaround plan required in this subsection, the commissioner shall convene a local stakeholder group of not more than 13 individuals for the purpose of soliciting recommendations on the content of such plan in order to maximize the rapid academic achievement of students. The commissioner shall provide due consideration to the recommendations of the stakeholder group. The group shall include: (1) the superintendent, or a designee; (2) the chair of the school committee, or a designee; (3) the president of the local

teacher's union, or a designee; (4) an administrator from the school, who may be the principal, chosen by the superintendent; (5) a teacher from the school chosen by the faculty of the school; (6) a parent from the school chosen by the local parent organization; (7) representatives of applicable state and local social service, health and child welfare agencies, chosen by the commissioner; (8) as appropriate, representatives of state and local workforce development agencies, chosen by the commissioner; (9) for elementary schools, a representative of an early education and care provider chosen by the commissioner of the department of early education and care and, for middle schools or high schools, a representative of the higher education community selected by the secretary of education; and (10) a member of the community appointed by the chief executive of the city or town. If the school or district does not have a parent organization or if the organization does not select a parent, the commissioner shall select a volunteer parent of a student from the school. The commissioner shall convene the group within 30 days of the designation of a school as chronically underperforming and the group shall make its recommendations to the commissioner within 45 days of its initial meeting. Meetings of the local stakeholder group shall be open to the public and the recommendations submitted to the commissioner under this subsection shall be publicly available immediately upon their submission.

(n) In creating the turnaround plan required in subsection (m), the commissioner shall include, after considering the recommendations of the local stakeholder group, provisions intended to maximize the rapid academic achievement of students at the school and shall, to the extent practicable, base the plan on student outcome data, including, but not limited to: (1) data collected under section 1I or information from a school or district review performed under section 55A of chapter 15; (2) student achievement on the Massachusetts Comprehensive Assessment System; (3) other measures of student achievement, approved by the commissioner, as appropriate; (4) student promotion and graduation rates; (5) achievement data for different subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; and (6) student attendance ,dismissal rates and exclusion rates.

The commissioner shall include in the creation of the turnaround plan, after considering the recommendations of the local stakeholder group, the following: (1) steps to address social service and health needs of students at the school, and their families, in order to help students arrive and remain at school ready to learn; provided, however, that this may include mental health and substance abuse screening; (2) steps to improve or expand child welfare services and, as appropriate, law enforcement services in the school community, in order to promote a safe and secure learning environment; (3) steps to improve workforce development services provided to students at the school, and their families, in order to provide students and families with meaningful employment skills and opportunities; (4) steps to address achievement gaps for limited English-proficient, special education and low-income students; (5) alternative English language learning programs for limited-English proficient students, notwithstanding chapter 71A; and (6) a financial plan for the school, including any additional funds to be provided by the district, commonwealth, federal government or other sources.

The secretaries of health and human services, labor and workforce development, public safety and other applicable state and local social service, health and child welfare officials shall coordinate with the secretary of education and the commissioner regarding the implementation of strategies under clauses (1) to (3), inclusive, of the second paragraph that are included in a final turnaround plan and shall, subject to appropriation, reasonably support the implementation

consistent with the requirements of state and federal law applicable to the relevant programs that each official is responsible for administering.

In order to assess the school across multiple measures of school performance and student success, the turnaround plan shall include measurable annual goals including, but not limited to, the following: (1) student attendance ,dismissal rates and exclusion rates; (2) student safety and discipline; (3) student promotion and graduation and dropout rates; (4) student achievement on the Massachusetts Comprehensive Assessment System; (5) progress in areas of academic underperformance; (6) progress among subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; (7) reduction of achievement gaps among different groups of students; (8) student acquisition and mastery of 21st-century skills; (9) development of college readiness, including at the elementary and middle school levels; (10) parent and family engagement; (11) building a culture of academic success among students; (12) building a culture of student support and success among school faculty and staff; and (13) developmentally appropriate child assessments from pre-kindergarten through third grade, if applicable.

(o) Notwithstanding any general or special law to the contrary, in creating the turnaround plan required in subsection (m), the commissioner may, after considering the recommendations of the group of stakeholders: (1) expand, alter or replace the curriculum and program offerings of the school, including the implementation of research-based early literacy programs, early interventions for struggling readers and the teaching of advanced placement courses or other rigorous nationally or internationally recognized courses, if the school does not already have such programs or courses; (2) reallocate the uses of the existing budget of the school; (3) provide additional funds to the school from the budget of the district, if the school does not already receive funding from the district at least equal to the average per pupil funding received for students of the same classification and grade level in the district; (4) provide funds, subject to appropriation, to increase the salary of an administrator ,or teacher in the school, in order to attract or retain highly-qualified administrators or teachers or to reward administrators,. or teachers who work in chronically underperforming schools that achieve the annual goals set forth in the turnaround plan; (5) expand the school day or school year or both of the school; (6) for an elementary school, add pre-kindergarten and full-day kindergarten classes, if the school does not already have such classes; (7) limit, suspend, or change 1 or more provisions of any contract or collective bargaining agreement, as the contract or agreement applies to the school; provided, however, that the commissioner shall not reduce the compensation of an administrator, teacher or staff member unless the hours of the person are proportionately reduced; and provided further, that the commissioner may require the school committee and any applicable unions to bargain in good faith for 30 days before exercising authority pursuant to this clause; (8) following consultation with applicable local unions, require the principal and all administrators, teachers and staff to reapply for their positions in the school, with full discretion vested in the superintendent regarding his consideration of and decisions on rehiring based on the reapplications; (9) limit, suspend or change 1 or more school district policies or practices, as such policies or practices relate to the school; (10) include a provision of job-embedded professional development for teachers at the school, with an emphasis on strategies that involve teacher input and feedback; (11) provide for increased opportunities for teacher planning time and collaboration focused on improving student instruction; (12) establish a plan for professional development for administrators at the school, with an emphasis on strategies that develop leadership skills and use the principles of distributive leadership; (13) establish steps to assure a

continuum of high expertise teachers by aligning the following processes with the common core of professional knowledge and skill: hiring, induction, teacher evaluation, professional development, teacher advancement, school culture and organizational structure; (14) develop a strategy to search for and study best practices in areas of demonstrated deficiency in the school; (15) establish strategies to address mobility and transiency among the student population of the school; and (16) include additional components, at the discretion of the commissioner, based on the reasons the school was designated as chronically underperforming and the recommendations of the local stakeholder group in subsection (m).

If the commissioner does not approve a reapplication submitted by an employee pursuant to clause (7) for a position in the school or if an employee does not submit a reapplication for a position in the school, the employee shall retain such rights as may be provided under law or any applicable collective bargaining agreement, in relation to the employee's ability to fill another position in the district; provided, however, that the employee shall not have the right to displace any teacher with professional teacher status in any other school during a school year.

A teacher with professional teacher status in a school declared underperforming or chronically underperforming may be dismissed for good cause; provided, however, that the teacher receives 5 days written notice of the decision to terminate which shall include without limitation an explanation of the reason why the commissioner or superintendent is not retaining the teacher in the school; provided, further, that the teacher may seek review of a termination decision within 5 days after receiving notice of the teacher's termination by filing a petition for expedited arbitration with the commissioner; provided further, that except as otherwise provided herein section 42 of chapter 71 shall apply to a petition filed pursuant to this section; provided further, that the commissioner shall cause an arbitrator to be selected pursuant to the procedures in section 42 of chapter 71 within 3 days of receipt of petition and shall conduct and complete a hearing within 10 days of receipt of the petition; provided, further, that in reviewing dismissal decisions, the arbitrator shall consider the components of the turnaround plan and shall also consider any personnel evaluations conducted that are consistent with the guidelines established pursuant to section 1B; and provided, further, that the arbitrator's decision shall be issued within 10 days from the completion of the hearing.

For a school with limited English-proficient students, the professional development and planning time for teachers and administrators identified in clauses (10) to (12), inclusive, shall include specific strategies and content designed to maximize the rapid academic achievement of the limited English-proficient students.

If the commissioner proposes to reallocate funds to the school from the budget of the district under clause (3), the commissioner shall notify the school committee, in writing, of the amount of and rationale for the reallocation.

(p) Within 30 days of the local stakeholder group making recommendations under subsection (m), the commissioner shall submit a turnaround plan to the local stakeholder group, the superintendent and the school committee, all of whom may propose modifications to the plan. The commissioner shall make the plan immediately available to the public upon submission. The stakeholder group, the superintendent and the school committee shall submit any proposed modifications to the commissioner within 30 days after the date of submission of the turnaround plan and the proposed modifications shall be made public immediately upon their submission to the commissioner. The commissioner shall consider and incorporate the modifications into the plan if the commissioner determines that inclusion of the modifications would further promote the rapid academic achievement of students at the applicable school. The commissioner may

alter or reject modifications submitted pursuant to this subsection. Within 30 days of receiving any proposed modifications, the commissioner shall issue a final turnaround plan for the school and the plan shall be made publicly available.

(q) Within 30 days of the issuance of a final turnaround plan under subsection (p), a superintendent, school committee or local union may appeal to the board of elementary and secondary education regarding 1 or more components of the plan, including the absence of 1 or more modifications proposed under subsection (p). A majority of the board, may vote to modify the plan if the board determines that: (1) such modifications would further promote the rapid academic achievement of students in the applicable school; (2) a component of the plan was included, or a modification was excluded, on the basis of demonstrably-false information or evidence; or (3) the commissioner failed to meet the requirements of subsections (m) to (p), inclusive. The decision of the board regarding an appeal under this subsection shall be made within 30 days and shall be final.

(r) In the case of a chronically underperforming school, the commissioner may, under the circumstances described in this subsection, send a targeted assistance team to the school to assist the superintendent with the implementation of the turnaround plan, require the superintendent to implement the turnaround plan, or select an external receiver to operate the school and implement the turnaround plan. The commissioner may appoint such receiver if the commissioner determines that: (1) the superintendent is unlikely to implement the plan successfully; or (2) conditions exist in the district that are likely to negatively affect the ability of the superintendent to implement such plan successfully. A receiver shall be a non-profit entity or an individual with a demonstrated record of success in improving low performing schools or the academic performance of disadvantaged students. A receiver shall be subject to section 11A½ of chapter 30Aand chapter 66. A receiver who is an individual shall also be subject to chapter 268A.

The commissioner may select the external receiver upon the designation of a school as chronically underperforming. The external receiver may serve as the commissioner's designee for the purpose of creating a school's turnaround plan under subsections (m) to (p), inclusive.

(s) An external receiver selected by the commissioner to operate a chronically underperforming school shall have full managerial and operational control over the school as provided in the turnaround plan. For all other purposes, the school district in which the school is located shall remain the employer of record.

(t) Each turnaround plan shall be authorized for a period of not more than 3 years, subject to subsection (v). The superintendent or external receiver, as applicable, may develop additional components of the plan and shall develop annual goals for each component of the plan in a manner consistent with subsection (n), all of which must be approved by the commissioner. The superintendent or external receiver, as applicable, shall be responsible for meeting the goals of the turnaround plan.

(u) The commissioner or external receiver, as applicable, shall provide a written report to the school committee on a quarterly basis to provide specific information about the progress being made on the implementation of the school's turnaround plan. One of the quarterly reports shall be the annual evaluation under subsection (v).

(v) The commissioner shall evaluate each chronically underperforming school at least annually. The purpose of the evaluation shall be to determine whether the school has met the annual goals in its turnaround plan and assess the implementation of the plan at the school. The review shall be in writing and shall be submitted to the superintendent and the school committee not later than

July 1 for the preceding school year. The review shall be submitted in a format determined by the department of elementary and secondary education.
If the commissioner determines that the school has met the annual performance goals stated in the turnaround plan, the review shall be considered sufficient and the implementation of the turnaround plan shall continue. If the commissioner determines that the school has not met 1 or more goals in the plan, the commissioner may modify the plan in a manner consistent with subsection (n).
If the commissioner determines that the school has substantially failed to meet multiple goals in the plan, the commissioner may: (1)if the school is operated by a superintendent, appoint an external receiver, as defined in subsection (r), to operate the school; or (2) if the school is operated by an external receiver terminate the contract of the external receiver; provided, however, that the commissioner shall not terminate the receiver before the completion of the first full school year of the operation of the chronically underperforming school.
(w) Upon the expiration of a turnaround plan for a chronically underperforming school, the commissioner shall conduct a review of the school to determine whether the school has improved sufficiently, requires further improvement or has failed to improve. On the basis of such review, the commissioner may: (1) on the basis of a superintendent's or external receiver's success in meeting the terms of the plan, renew the plan with the superintendent or external receiver for an additional period of not more than 3 years; (2) if a school that is operated by a superintendent and remains chronically underperforming, appoint an external receiver, as defined in subsection (r), to operate the school; (3) if a chronically underperforming school that is operated by an external receiver and remains chronically underperforming, transfer the operation of the school from the receiver to the applicable superintendent or to another external receiver; or (4) determine that the school has improved sufficiently for the designation of chronically underperforming to be removed. The commissioner shall: (1) in the case of a renewal of an turnaround plan, jointly determine subsequent annual goals for each component of the plan with the superintendent or external receiver, as applicable; or (2) create a new or modified turnaround plan as necessary, consistent with the requirements of this section.
(x) Notwithstanding any general or special law to the contrary, any underperforming or chronically underperforming school operating a limited-English proficient program or programs for limited English proficient students in any 1 language group shall establish a limited English proficient parent advisory council. The parent advisory council shall be comprised of parents or legal guardians of students who are enrolled in limited English proficient programs within the school. Each parent advisory council shall have at least 1 representative from every language group in which a program is conducted in a given school. Membership shall be restricted to parents or legal guardians of students enrolled in limited English proficient programs within the school. The duties of the parent advisory council shall include, but not be limited to, advising the school on matters that pertain to the education of students in limited English proficient programs, meeting regularly with school officials to participate in the planning and development of a plan to improve educational opportunities for limited English proficient students, and to participate in the review of school improvement plans established under section 59C of chapter 71 as they pertain to limited English proficient students. Any parent advisory council may, at its request, meet at least once annually with the school council. The parent advisory council shall establish by-laws regarding officers and operational procedures. In the course of its duties under this section, the parent advisory council shall receive assistance from the director of limited English proficient programs for the district or other appropriate school personnel as designated by the

superintendent.
(y) The board of elementary and secondary education shall adopt regulations regarding: (1) the conditions under which an underperforming or chronically underperforming school shall no longer be designated as an underperforming or chronically underperforming school; and (2) the transfer of the operation of an underperforming or a chronically underperforming school from a superintendent or an external receiver, as applicable, to the school committee. The regulations shall include provisions to allow a school to retain measures adopted in an turnaround plan for a transitional period if, in the judgment of the commissioner, the measures would contribute to the continued improvement of the school. Such regulations shall also include provisions that clearly identify the conditions under which such a transitional period shall end and the powers granted to the commissioner and board under this section shall cease to apply to a district previously designated as chronically underperforming.
(z) The commissioner shall report annually to the joint committee on education, the house and senate committees on ways and means, the speaker of the house of representatives and the senate president on the implementation and fiscal impact of this section and section 1K. The report shall include, but not be limited to, a list of all schools currently designated as underperforming or chronically underperforming, a list of all districts currently designated as chronically underperforming, the plans and timetable for returning the schools and districts to the local school committee and strategies used in each of the schools and districts to maximize the rapid academic achievement of students.
Section 1K. (a) A district shall be deemed eligible for designation as chronically underperforming upon a determination by the board of elementary and secondary education, pursuant to regulations adopted by the board, that a school district, other than a single school district, has scored in the lowest 10 per cent statewide when compared to other districts of the same grade levels based on a single measure developed by the department that takes into account student achievement data collected pursuant to 1I, and, beginning on July 1, 2011, improvement over time in student academic achievement. Following such determination, the commissioner shall appoint a district review team pursuant to section 55A of chapter 15 to assess and report on the reasons for the underperformance and the prospects for improvement, unless such an assessment has been completed by a district review team within the previous year that the commissioner considers adequate. The district review team shall include at least 1 person with expertise in the academic achievement of limited English-proficient students. Upon review of the findings of the district review team, the board may declare the district chronically underperforming.
Following such a declaration, the board shall designate a receiver for the district with all the powers of the superintendent and school committee. The receiver shall be a non-profit entity or an individual with a demonstrated record of success in improving low-performing schools or districts or the academic performance of disadvantaged students who shall report directly to the commissioner. An external receiver designated by the board to operate a district under this subsection shall have full managerial and operational control over such district; provided, however, that the school district shall remain the employer of record for all other purposes. A receiver shall be subject to section 11A ½ of chapter 30A and chapter 66. A receiver who is an individual shall also be subject to chapter 268A.
Not more than 2.5 per cent of the total number of school districts may be designated as chronically underperforming at any given time.
In adopting regulations allowing the board to designate a district as chronically underperforming,

the board must ensure that the regulations account for multiple indicators of district quality including student attendance, dismissal rates, exclusion rates, student promotion and graduation rates in the district, or the lack of demonstrated significant improvement for 2 or more consecutive years in core academic subjects, either in the aggregate or among subgroups of students, including designations based on special education classification, low-income, English language proficiency and racial classifications.

(b) The commissioner and the receiver shall jointly create an turnaround plan to promote the rapid improvement of the chronically underperforming district. The plan shall specifically focus on the school or schools in the district that have been designated as chronically underperforming under section 1J and the district policies or practices that have contributed to chronic underperformance.

Before creating the turnaround plan required in this subsection, the commissioner and receiver shall convene a local stakeholder group of not more than 13 individuals for the purpose of soliciting recommendations on the content of such plan in order to maximize the rapid improvement of the academic achievement of students. The commissioner shall provide due consideration to the recommendations of the local stakeholder group. The group shall include: (1) the superintendent, or a designee; (2) the chair of the school committee, or a designee; (3) the president of the local teacher's union, or a designee; (4) a selection of administrators from the district, chosen by the commissioner from among volunteers from the district; (5) a selection of teachers from the district, chosen by the local teacher's union; (6) a selection of parents from the district chosen by the local parent organization; (7) representatives of applicable state and local social service, health, and child welfare agencies chosen by the commissioner; (8) as appropriate, representatives of state and local workforce development agencies chosen by the commissioner; (9) a representative of an early education and care provider chosen by the commissioner of the department of early education and care, or for middle or high schools, a representative of the higher education community selected by the secretary of education; and (10) a member of the community appointed by the chief executive of the city or town. If the district does not have a parent organization or if the organization does not select a parent, the commissioner shall select a volunteer parent of a student from the district. The commissioner and receiver shall convene the group within 30 days of the board designating a district as chronically underperforming and the group shall make its recommendations to the commissioner and receiver within 45 days of its initial meetings. Meetings of the local stakeholder group shall be open to the public and the recommendations submitted to the commissioner and receiver shall be publicly available immediately upon their submission.

(c) In creating the turnaround plan, the commissioner and receiver shall include measures intended to maximize the rapid improvement of the academic achievement of students in the district and shall, to the extent practicable, base the plan on student outcome data, including, but not limited to: (1) data collected pursuant to section 1I, or information from a school or district review performed under section 55A of chapter 15; (2) student achievement on the Massachusetts Comprehensive Assessment System; (3) other measures of student achievement, approved by the commissioner,; (4) student promotion and graduation rates; (5) achievement data for different subgroups of students, including low-income students as defined in chapter 70, limited English-proficient students and students receiving special education; and (6) student attendance, dismissal rates and exclusion rates. In creating the turnaround plan required in subsection (b), the commissioner and receiver shall include, after considering the recommendations of the local stakeholder group, the following: (1) steps to address social

service and health needs of students in the district and their families in order to help students arrive and remain at school ready to learn; provided, however, that this may include mental health and substance abuse screening; (2) steps to improve or expand child welfare services and, as appropriate, law enforcement services in the school district community, in order to promote a safe and secure learning environment; (3) as applicable, steps to improve workforce development services provided to students in the district and their families in order to provide students and families with meaningful employment skills and opportunities; (4) steps to address achievement gaps for limited English-proficient, special education and low-income students, as applicable; (5) alternative English language learning programs for limited-English proficient students, notwithstanding chapter 71A; and (6) a budget for the district including any additional funds to be provided by the commonwealth, federal government or other sources.

The secretaries of health and human services, public safety, labor and workforce development and other applicable state and local social service, health and child welfare officials shall coordinate with the secretary of education and the commissioner regarding the implementation of strategies pursuant to clauses (1) to (3), inclusive, of this subsection that are included in an turnaround plan and shall, subject to appropriation, reasonably support the implementation consistent with the requirements of state and federal law applicable to the relevant programs that each such official is responsible for administering.

In order to assess the district across multiple measures of district performance and student success, the turnaround plan shall include measurable annual goals including, but not limited to, the following: (1) student attendance , dismissal rates and exclusion rates; (2) student safety and discipline; (3) student promotion and graduation and dropout rates; (4) student achievement on the Massachusetts Comprehensive Assessment System; (5) progress in areas of academic underperformance; (6) progress among subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; (7) reduction of achievement gaps among different groups of students; (8) student acquisition and mastery of 21st-century skills; (9) development of college readiness, including at the elementary and middle school levels; (10) parent and family engagement; (11) building a culture of academic success among students; (12) building a culture of student support and success among faculty and staff; and (13) developmentally appropriate child assessments from pre-kindergarten through third grade, if applicable.

(d) Notwithstanding any general or special law to the contrary, in creating the turnaround plan under subsection (b), the commissioner and the receiver may, after considering the recommendations of the group of stakeholders: (1) expand, alter or replace the curriculum and program offerings of the district or of a school in the district, including the implementation of research-based early literacy programs, early interventions for struggling readers and the teaching of advanced placement courses or other rigorous nationally or internationally recognized courses, if the district or schools in the district do not already have such programs or courses; (2) reallocate the uses of the existing budget of the district; (3) provide funds, subject to appropriation, to increase the salary of an administrator, or teacher in the district working in an underperforming or chronically underperforming school, in order to attract or retain highly-qualified administrators, or teachers or to reward administrators or teachers who work in chronically underperforming districts that achieve the annual goals set forth in the turnaround plan; (4) expand the school day or school year or both of schools in the district; (5) limit, suspend or change 1 or more provisions of any contract or collective bargaining agreement in the district, including the adoption of model provisions identified by the commissioner from among

existing contracts or collective bargaining agreements in the commonwealth; provided, however, that the commissioner shall not reduce the compensation of an administrator, teacher or staff member unless the hours of the person are proportionately reduced; (6) add pre-kindergarten and full-day kindergarten classes, if the district does not already have the classes; (7) following consultation with applicable local unions, require the principal and all administrators, teachers and staff to reapply for their positions in the district, with full discretion vested in the receiver regarding any such reapplications. turnaround plan; (8) limit, suspend or change 1 or more school district policies or practices, as such policies or practices relate to the underperforming schools in the district; (9) include a provision of job-embedded professional development for teachers in the district, with an emphasis on strategies that involve teacher input and feedback; (10) provide for increased opportunities for teacher planning time and collaboration focused on improving student instruction; (11) establish a plan for professional development for administrators in the district, with an emphasis on strategies that develop leadership skills and use the principles of distributive leadership; (12) establish steps to assure a continuum of high expertise teachers by aligning the following processes with the common core of professional knowledge and skill: hiring, induction, teacher evaluation, professional development, teacher advancement, school culture and organizational structure; (13) develop a strategy to search for and study best practices in areas of demonstrated deficiency in the district; (14) establish strategies to address mobility and transiency among the student population of the district; and (15) include additional components, at the discretion of the commissioner and the receiver, based on the reasons the district was designated as chronically underperforming and based on the recommendations of the local stakeholder group in subsection (b).

If the commissioner does not approve a reapplication submitted by an employee pursuant to clause (7) for a position in a school or if an employee does not submit a reapplication for a position in a school, the employee shall retain such rights as may be provided under law or any applicable collective bargaining agreement in relation to the employee's ability to fill another position in the district; provided, however, that the employee shall not have the right to displace any teacher with professional teacher status in any other school during a school year.

A teacher with professional teacher status in a school declared underperforming or chronically underperforming may be dismissed for good cause; provided, however, that the teacher receives 5 days written notice of the decision to terminate which shall include without limitation an explanation of the reason why the commissioner/superintendent is not retaining the teacher in the school; provided, further, that the teacher may seek review of a termination decision within 5 days after receiving notice of the teacher's termination by filing a petition for expedited arbitration with the commissioner; provided, further, that except as otherwise provided herein section 42 of chapter 71 shall apply to a petition filed pursuant to this section; provided further, that the commissioner shall cause an arbitrator to be selected pursuant to the procedures in section 42 of chapter 71 within 3 days of receipt of petition and shall conduct and complete a hearing within 10 days of receipt of the petition; provided further, that in reviewing dismissal decisions, the arbitrator shall consider the components of the turnaround plan and shall also consider any personnel evaluations conducted that are consistent with the guidelines established pursuant to section 1B; and provided, further, that the arbitrator's decision shall be issued within 10 days from the completion of the hearing.

For a district with limited English-proficient students, the professional development and planning time for teachers and administrators identified in clauses (9) to (11), inclusive, shall include specific strategies and content designed to maximize the rapid academic achievement of limited

English-proficient students in the district.
(e) if, after considering the recommendations of the group of stakeholders, pursuant to subsection (d) the commissioner considers it necessary to maximize the rapid academic achievement of students at an underperforming or chronically underperforming school by altering the compensation, hours and working conditions of the administrators, teachers, principals and staff at the school or by altering other provisions of a contract or collective bargaining agreement applicable to the administrators, teachers, principals and staff, the commissioner may request that the school committee and any union bargain or reopen the bargaining of the relevant collective bargaining agreements to facilitate such achievement. The bargaining shall be conducted in good faith and completed not later than 30 days from the point at which the commissioner requested that the parties bargain. The agreement shall be subject to ratification within 10 business days by the bargaining unit members in the school. If the parties are unable to reach an agreement within 30 days or if the agreement is not ratified within 10 business days by the bargaining unit members of the school, the parties shall submit remaining unresolved issues to a joint resolution committee for dispute resolution process on the next business day following the end of the 30 day bargaining period or failure to ratify.
The joint resolution committee shall be comprised of 3 members, 1 of whom shall be appointed by the employee organization within 3 business days following the submission of unresolved issues to the joint resolution committee, 1 of whom shall be appointed by the school committee within 3 business days following the submission of unresolved issues to the joint resolution committee and 1 who shall be selected through the American Arbitration Association who shall forthwith forward to the parties a list of three conciliators, each of whom shall have professional experience in elementary and secondary education, from which the parties may agree upon a single conciliator; provided, however, that if the parties cannot select a conciliator from among the 3 within 3 business days, the American Arbitration Association shall select a conciliator from the remaining names. The joint resolution committee shall conduct a dispute resolution process to be concluded within 10 business days of selection. This process shall be conducted in accordance with the rules of the American Arbitration Association and consistent with this section; provided however, that all members of the joint resolution committee must agree to any resolution. The fee for the process shall be shared equally between the 2 parties involved.
The joint resolution committee shall consider the positions of the parties, the designation of the school as underperforming or chronically underperforming, the designation of the district as chronically underperforming, and the needs of the students in the school. Notwithstanding any other provision of this chapter, the unanimous decision of the joint resolution committee shall be dispositive of all the issues in dispute and shall be submitted to the parties within 10 business days of the close of the hearing. Under no circumstance, shall a time extension be granted beyond 10 business days of the close of the hearing. In the event that a unanimous decision is not submitted to the parties within 10 business days, the commissioner will resolve all outstanding issues.
(f) The turnaround plan shall be authorized for a period of not more than 3 years, subject to subsection (g). The commissioner and receiver may jointly develop additional components of the plan and shall jointly develop annual goals for each component of the plan in a manner consistent with the provisions of subsection (d). The receiver shall be responsible for meeting the goals of the turnaround plan.
(g) The commissioner and receiver shall provide a written report to the school committee on a quarterly basis to provide specific information about the progress being made on the

implementation of the district's turnaround plan. One of the quarterly reports shall be the annual evaluation required in subsection (g).
(h) The commissioner shall evaluate the performance of the receiver on not less than an annual basis. The purpose of such evaluation shall be to assess the implementation of the turnaround plan and determine whether the district has met the annual goals contained in the turnaround plan. The evaluation shall be in writing and submitted to the board and the local school committee no later than July 1 for the preceding school year.
If the commissioner determines that the district has met the annual performance goals stated in the turnaround plan, the evaluation shall be considered sufficient and the implementation of the turnaround plan shall continue.
If the commissioner determines that the receiver has not met 1 or more goals in the plan and the failure to meet the goals may be corrected through reasonable modification of the plan, the commissioner may amend the turnaround plan, as necessary. After assessing the implementation of the turnaround plan in the district, the commissioner may amend the plan if the commissioner determines that the amendment is necessary in view of subsequent changes in the district that affect 1 or more components of the plan, including, but not limited to, changes to contracts, collective bargaining agreements, or school district policies, in manner consistent with the provisions of subsection (d). If the commissioner determines that the receiver has substantially failed to meet multiple goals in the turnaround plan, the commissioner may terminate such receiver; provided, however, that the termination shall not occur before the completion of the first full school year of the receivership of the district.
(i) After the period of receivership, there shall be a reevaluation of a district's status under this section. The board of elementary and secondary education shall adopt regulations providing for: (1) the removal of a designation of a district as chronically underperforming; and (2) the transfer of the operation of a chronically underperforming district from an external receiver to the superintendent and school committee, based on the improvement of the district. The regulations shall include provisions to allow a district to retain measures adopted in a turnaround plan for a transitional period if, in the judgment of the commissioner, the measures would contribute to the continued improvement of the district. Such regulations shall also include provisions that clearly identify the conditions under which such a transitional period shall end and the powers granted to the commissioner and board under this section shall cease to apply to a district previously designated as chronically underperforming. At any time after a chronically underperforming district has been placed in receivership, the school committee of the district may petition the commissioner for a determination as to whether the turnaround plan adopted under subsection (b) should be modified or eliminated and whether the school district shall no longer be designated as chronically underperforming. The decision of the commissioner shall be based on regulations adopted by the board. A school committee may seek review by the board of elementary and secondary education of an adverse determination.
(j) If, on the basis of the regulations adopted by the board pursuant to subsection (h), a district has not improved sufficiently to remove the designation of the district as chronically underperforming, the commissioner may: (1) jointly determine subsequent annual goals for each component of the turnaround plan with the receiver and renew the turnaround plan for an additional period of not more than 3 years; or (2) create a new turnaround plan, consistent with the requirements of this section.
(k) If a municipality has failed to fulfill its fiscal responsibilities pursuant to chapter 70, the commissioner may declare the school district as chronically underperforming, subject to the

approval of the board. The municipality's mayor or chairman of the board of selectmen shall have the opportunity to present evidence to the board. A vote by the board that a school district is chronically underperforming for fiscal reasons shall authorize the commissioner to petition the commissioner of revenue to require an increase in funds for the school district, alleging that the amount necessary in the municipality for the support of public schools has not been included in the annual budget appropriations. The commissioner of revenue shall determine the amount of any deficiency pursuant to the sums required pursuant to chapter 70, if any, and issue an order compelling the municipality to provide a sum of money equal to such deficiency. If the municipality does not provide a sum of money equal to such deficiency, the commissioner of revenue, pursuant to section 23 of chapter 59, shall not approve the tax rate of the municipality for the fiscal year until the deficiency is alleviated. Nothing in this subsection shall be construed as creating a cause of action for educational malpractice by students or their parents, guardians or persons acting as parents.

If the district is designated as chronically underperforming pursuant to this subsection, the provisions of this subsection shall supersede those in subsections (a) to (j), inclusive.

SECTION 4. Subsection (b) of section 15 of chapter 70B of the General Laws, as so appearing, is hereby amended by adding the following paragraph:-
Before the sale or lease of an assisted structure or facility or a portion of that structure or facility, the school district in control of the structure or facility shall submit to the authority a district-wide school facility use plan that shall include, but not be limited to, a listing of all school facilities under the control of the school district, a detailed description of both the current use and proposed use of each school facility, the most recent enrollment data, by school facility, then available to the school district, a detailed floor plan of each school facility that shows and labels each space in the facility and whether it is used as a classroom or has some other use and any other information that may be required by the authority to understand the district's school facility use plan. If the plan includes the closure, sale or lease of a school facility or any part of a school facility, the authority may conduct, with the full cooperation of the district, an analysis of district-wide enrollment capacity and future enrollment trends for the district. If the capacity analysis and enrollment projection indicate an extended period of significant excess capacity within the district's educational facilities, the district may, prior to consideration of any other disposition of the identified excess capacity, make a good faith offer to sell or lease at fair market value the identified excess capacity to a commonwealth charter school established pursuant to section 89 of chapter 71 or an applicant for a commonwealth charter school pursuant to said section 89 of said chapter 71 that serves or is seeking to serve students who live in the school district. The authority shall not recapture commonwealth and authority assistance for any such excess capacity that is sold or leased to a commonwealth charter school or applicant for a commonwealth charter school.

SECTION 5. Section 2 of chapter 71 of the General Laws, as so appearing, is hereby amended by inserting after the word "government", in line 4, the following words:- and a program relating to the flag of the United States of America, including, but not limited to, proper etiquette, the correct use and display of the flag ,the importance of participation in the electoral process and the provisions of 36 U.S.C. 170 to 177, inclusive.

SECTION 6. Section 61 of said chapter 71, as so appearing, is hereby amended by adding the following paragraph:-
A town may terminate its participation in a union by a majority vote of the school committee of the town; provided, however, that said termination shall only be for the purpose of forming an innovation school pursuant to section 92 or establishing different school governance structures. Termination shall be independent of any pending votes regarding dissolution of the union or pending votes by another town regarding its participation.

SECTION 7. Said chapter 71 is hereby further amended by striking out section 89, as so appearing, and inserting in place thereof the following section:-

Section 89. (a) As used in this section the following words shall, unless the context clearly requires otherwise, have the following meanings:-
"Board", the board of elementary and secondary education.
"Charter school", commonwealth charter schools and Horace Mann charter schools unless specifically stated otherwise.
"Commissioner", the commissioner of elementary and secondary education.
"Department", the department of elementary and secondary education.
"District", or "school district", the school department of a city, town, regional school district, or county agricultural school.
"Superintendent", the superintendent of the district.
(b) The purposes of establishing charter schools are: (i) to stimulate the development of innovative programs within public education; (ii) to provide opportunities for innovative learning and assessments; (iii) to provide parents and students with greater options in selecting schools within and outside their school districts; (iv) to provide teachers with a vehicle for establishing schools with alternative, innovative methods of educational instruction and school structure and management; (v) to encourage performance-based educational programs; (vi) to hold teachers and school administrators accountable for students' educational outcomes; and (vii) to provide models for replication in other public schools.
(c) A commonwealth charter school shall be a public school, operated under a charter granted by the board, which operates independently of a school committee and is managed by a board of trustees. The board of trustees of a commonwealth charter school, upon receiving a charter from the board, shall be deemed to be public agents authorized by the commonwealth to supervise and control the charter school.
A Horace Mann charter school shall be a public school or part of a public school operated under a charter approved by the school committee and the local collective bargaining unit in the district in which the school is located; provided that all charters shall be granted by the board of elementary and secondary education. A Horace Mann charter school shall have a memorandum of understanding with the school committee of the district in which the charter school is located which, at a minimum, defines the services and facilities to be provided by the district to the charter school and states the funding of the charter school by the district. A Horace Mann charter school established as a conversion of an existing public school shall not require approval of the local collective bargaining unit, but shall require a memorandum of understanding agreement regarding any waivers to applicable collective bargaining agreements; provided further, that the memorandum of understanding shall be approved by a majority of the school faculty; provided further, that Horace Mann charter schools that are conversion of existing public schools shall not

be subject to clause (1) of subsection (i). A vote by the school faculty shall be held and finalized within 30 days of submission of the charter school application to the board of elementary and secondary education. A Horace Mann charter school shall be operated and managed by a board of trustees independent of the school committee which approved the school. The board of trustees may include a member of the school committee.

(d) Persons or entities eligible to submit an application to establish a charter school shall include, but not be limited to: (i) a non-profit business or corporate entity; (ii) 2 or more certified teachers; or (iii) 10 or more parents; provided, however, that for profit business or corporate entities shall be prohibited from applying for a charter. The application may be filed in conjunction with a college, university, museum or other similar non-profit entity. Private and parochial schools shall not be eligible for charter school status. The board may authorize a single board of trustees to manage more than 1 charter school; provided, however, that each school is issued its own charter. The commissioner shall provide technical assistance to public school districts to assist in the development of proposals for Horace Mann charter schools.

(e) The board shall establish the information needed in an application for the approval of a charter school; provided that the application shall include, but not be limited to, a description of: (i) the mission, purpose, innovation and specialized focus of the proposed charter school; (ii) the innovative methods to be used in the charter school and how they differ from the district or districts from which the charter school is expected to enroll students; (iii) the organization of the school by ages of students or grades to be taught, an estimate of the total enrollment of the school and the district or districts from which the school will enroll students; (iv) the method for admission to the charter school; (v) the educational program, instructional methodology and services to be offered to students, including research on how the proposed program may improve the academic performance of the subgroups listed in the recruitment and retention plan; (vi) the school's capacity to address the particular needs of limited English-proficient students, if applicable, to learn English and learn content matter, including the employment of staff that meets the criteria established by the department; (vii) how the school shall involve parents as partners in the education of their children; (viii) the school governance and bylaws; (ix) a proposed arrangement or contract with an organization that shall manage or operate the school, including any proposed or agreed upon payments to such organization; (x) the financial plan for the operation of the school; (xi) the provision of school facilities and pupil transportation; (xii) the number and qualifications of teachers and administrators to be employed; (xiii) procedures for evaluation and professional development for teachers and administrators; (xiv) a statement of equal educational opportunity which shall state that charter schools shall be open to all students, on a space available basis, and shall not discriminate on the basis of race, color, national origin, creed, sex, ethnicity, sexual orientation, mental or physical disability, age, ancestry, athletic performance, special need, proficiency in the English language or academic achievement; (xv) a student recruitment and retention plan, including deliberate, specific strategies the school will use to ensure the provision of equal educational opportunity as stated in clause (xiv) and to attract, enroll and retain a student population that, when compared to students in similar grades in schools from which the charter school is expected to enroll students, contains a comparable academic and demographic profile; and (xvi) plans for disseminating successes and innovations of the charter school to other non-charter public schools.

(f) The student recruitment and retention plan required under clause (xv) of subsection (e) shall include, but not be limited to, a detailed description of deliberate, specific strategies the school will use to maximize the number of students who successfully complete all school requirements

and prevent students from dropping out. The student recruitment and retention plan shall be updated annually and shall include annual goals for: (i) recruitment activities; (ii) student retention activities; and (iii) student retention.

(g) To ensure that a commonwealth charter school shall fulfill its obligations under its recruitment and retention plan, the school district or districts from which the commonwealth charter school is expected to enroll students shall annually provide, at the request of a commonwealth charter school, to a third party mail house authorized by the department, the addresses for all students in the district eligible to enroll in the school, unless a student's parent or guardian requests that the district withhold that student's information; provided, however, that the department may require the charter school to send the mailing in the most prevalent languages of the district or districts that the charter school is authorized to serve.

At the request of a school district from which a commonwealth charter school enrolls students, the charter school shall provide to a third party mail house the addresses for all students currently enrolled in the commonwealth charter school from the district; provided, however, that the information shall not be provided if a student's parent or guardian requests that the school withhold that student's information. Each district shall be permitted to supply a mailing to the third party mail house and pay for it to be copied and mailed to families of students from said district enrolled in the commonwealth charter school.

(h) An application submitted for the establishment of a commonwealth charter school shall: (i) be submitted to the board for approval under this section; and (ii) be filed with the local school committee for each school district from which the charter school is expected to enroll students. Before final approval to establish a commonwealth charter school, the board shall hold a public hearing on the application in the school district in which the proposed charter school is to be located and solicit and review comments on the application from the local school committee of each school district from which the charter school is expected to enroll students and any contiguous districts. At least 1 member of the board shall attend the public hearing. A comprehensive written summary of all materials prepared by the department or its administrative subdivisions, which evaluates or recommends approval or disapproval of a charter application must be delivered to the members of the board, the applicant, in support of, or in opposition to, the school submitted not later than 3 days before any board vote on the charter application. All material in support of, or in opposition to, the school submitted to the department or the board shall be made available to the applicant and affected school districts before a vote by the board on a commonwealth charter school application.

(i) (1) Not more than 120 charter schools shall be allowed to operate in the commonwealth at any time, excluding those approved pursuant to paragraph (3); provided, however, that of the 120 charter schools, not more than 48 shall be Horace Mann charter schools; provided, however, notwithstanding subsection (c) the 14 new Horace Mann charter schools shall not be subject to the requirement of an agreement with the local collective bargaining unit prior to board approval; provided, further, that after the charter for these 14 new Horace Mann charter schools have been granted by the board, the schools shall develop a memorandum of understanding with the school committee and the local union regarding any waivers to applicable collective bargaining agreements; provided, further, that if an agreement is not reached on the memorandum of understanding at least 30 days before the scheduled opening of the school, the charter school shall operate under the terms of its charter until an agreement is reached; provided, further, that not less 4 of the new Horace Mann charter schools shall be located in a municipality with more than 500,000 residents; and not more than 72 shall be commonwealth charter schools. The board

shall not approve a new commonwealth charter school in any community with a population of less than 30,000 as determined by the most recent United States Census estimate, unless it is a regional charter school.
Applications to establish a charter school shall be submitted to the board annually by November 15. The board shall review the applications and grant new charters in February of the following year.
(2) In any fiscal year, no public school district's total charter school tuition payment to commonwealth charter schools shall exceed 9 per cent of the district's net school spending; provided, however, that a public school district's total charter tuition payment to commonwealth charter schools shall not exceed 18 per cent of the district's net school spending if the school district qualifies under paragraph (3). The commonwealth shall incur charter school tuition payments for siblings attending commonwealth charter schools to the extent that their attendance would otherwise cause the school district's charter school tuition payments to exceed 9 per cent of the school district's net school spending or 18 per cent for those districts that qualify under said paragraph (3).
Not less than 2 of the new commonwealth charters approved by the board in any year shall be granted for charter schools located in districts where overall student performance on the statewide assessment system approved by the board under section 1I of chapter 69 is in the lowest 10 per cent statewide in the 2 years preceding the charter application.
In any fiscal year, the board shall approve only 1 regional charter school application of any commonwealth charter school located in a school district where overall student performance on the statewide assessment system is in the top 10 per cent in the year preceding charter application. The board may give priority to applicants that have demonstrated broad community support, an innovative educational plan, a demonstrated commitment to assisting the district in which it is located in bringing about educational change and a record of operating at least 1 school or similar program that demonstrates academic success and organizational viability and serves student populations similar to those the proposed school seeks to serve.
(3) In any fiscal year, if the board determines based on student performance data collected pursuant to section 1I, said district is in the lowest 10 per cent of all statewide student performance scores released in the 2 consecutive school years before the date the charter school application is submitted, the school district's total charter school tuition payment to commonwealth charter schools may exceed 9 per cent of the district's net school spending but shall not exceed 18 per cent. For a district qualifying under this paragraph whose charter school tuition payments exceed 9 per cent of the school district's net school spending, the board shall only approve an application for the establishment of a commonwealth charter school if an applicant, or a provider with which an applicant proposes to contract, has a record of operating at least 1 school or similar program that demonstrates academic success and organizational viability and serves student populations similar to those the proposed school seeks to serve, from the following categories of students, those: (i) eligible for free lunch; (ii) eligible for reduced price lunch; (iii) that require special education; (iv) limited English-proficient of similar language proficiency level as measured by the Massachusetts English Proficiency Assessment examination; (v) sub-proficient, which shall mean students who have scored in the "needs improvement", "warning" or "failing" categories on the mathematics or English language arts exams of the Massachusetts Comprehensive Assessment System for 2 of the past 3 years or as defined by the department using a similar measurement; (vi) who are designated as at risk of dropping out of school based on predictors determined by the department; (vii) who have

dropped out of school; or (viii) other at-risk students who should be targeted to eliminate achievement gaps among different groups of students. For a district approaching its net school spending cap, the board shall give preference to applications from providers building networks of schools in more than 1 municipality.

The recruitment and retention plan of charter schools approved under this paragraph shall, in addition to the requirements under subsections (e) and (f), include, but not limited to: (i) a detailed description of deliberate, specific strategies the charter school shall use to attract, enroll and retain a student population that, when compared to students in similar grades in schools from which the charter school shall enroll students, contains a comparable or greater percentage of special education students or students who are limited English-proficient of similar language proficiency as measured by the Massachusetts English Proficiency Assessment examination and 2 or more of the following categories: students eligible for free lunch; (ii) students eligible for reduced price lunch; students who are sub-proficient, those students who have scored in the "needs improvement", "warning" or "failing" categories on the mathematics or English language arts exams of the Massachusetts Comprehensive Assessment System for 2 of the past 3 years or as defined by the department using a similar measurement; (iii) students who are determined to be at risk of dropping out of school based on predictors determined by the department; (iv) students who have dropped out of school; or (v) other at-risk students who should be targeted in order to eliminate achievement gaps among different groups of students. A charter school approved under this section shall supply a mailing in the most prevalent languages of the district the charter is authorized to serve to a third party mail house and pay for it to be copied and mailed to eligible students. If a school is or shall be located in a district with 10 per cent or more of limited English-proficient students, the recruitment strategies shall include a variety of outreach efforts in the most prevalent languages of the district. The recruitment and retention plan shall be updated each year to account for changes in both district and charter school enrollment.

If a district is no longer in the lowest 10 per cent, the net school spending cap shall be 9 per cent, unless the district net school spending was above 9 per cent in the year prior to moving out of the lowest 10 per cent in which case the net school spending cap shall remain at the higher level plus enrollment previous approved by the board. The department shall determine and make available to the public a list of the school districts in said lowest 10 per cent.

(j) The board shall make the final determination on granting charter school status and may condition charters on the applicant's taking certain actions or maintaining certain conditions. The board shall establish criteria for the approval of a charter application and recommendations to the board shall be based upon and reference those criteria.

If a final application is deemed inadequate by the department, the department may provide feedback to the applicant and invite it to submit a stronger application subsequently. Once a final application has been filed, only minor, non-substantive amendments shall be allowed. The department shall maintain a written detailed summary of interviews it conducts with final charter applicants and include that summary with the final application materials that are provided to the board, local school officials and the public.

(k) A charter school established under a charter granted by the board shall be a body politic and corporate with all powers necessary or desirable for carrying out its charter program, including, but not limited to, the power to:

(1) adopt a name and corporate seal; provided that any name selected must include the words "charter school";

(2) sue and be sued, but only to the same extent and upon the same conditions that a municipality can be sued;
(3) acquire real property, from public or private sources, by lease, lease with an option to purchase or by gift, for use as a school facility; provided, however, in the case of a Horace Mann charter school, the approval of the local school committee shall be obtained before acquisition of any such real property owned or controlled by the body;
(4) receive and disburse funds for school purposes;
(5) make contracts and leases for the procurement of services, equipment and supplies; provided, however, that if the charter school intends to procure substantially all educational services under contract with another person, the terms of such a contract must be approved by the board either as part of the original charter or by way of an amendment thereto; provided, further that the board shall not approve any such contract terms, the purpose or effect of which is to avoid the prohibition of this section against charter school status for private and parochial schools;
(6) incur temporary debt in anticipation of receipt of funds; provided that a Horace Mann school shall obtain the approval of the local school committee and appropriate local appropriating authorities and officials relative to any proposed lien or encumbrance upon public school property or relative to any financial obligation for which the local school district shall become legally obligated; and provided further, that notwithstanding any general or special law to the contrary, the terms of repayment of any charter school's debt shall not exceed the duration of the school's charter without the approval of the board;
(7) solicit and accept grants or gifts for school purposes; and
(8) have such other powers available to a business corporation formed under chapter 156B that are not inconsistent with this chapter.
(l) Charter schools shall not charge a public school for the use or replication of a part of their curriculum subject to the prescriptions of a contract between the charter schools and any third party providers.
(m) Charter schools shall be open to all students, on a space available basis, and shall not discriminate on the basis of race, color, national origin, creed, sex, ethnicity, sexual orientation, mental or physical disability, age, ancestry, athletic performance, special need, or proficiency in the English language or a foreign language or academic achievement. Charter schools may limit enrollment to specific grade levels and may structure curriculum around particular areas of focus such as mathematics, science or the arts. There shall be no application fee for admission to a charter school. There shall be no tuition charge for students attending charter schools.
(n) Preference for enrollment in a commonwealth charter school shall be given to students who reside in the city or town in which the charter school is located. Priority for enrollment in a Horace Mann charter school shall be given first to students actually enrolled in the school on the date that the application is filed with the board and to their siblings; second to other students actually enrolled in the public schools of the district where the Horace Mann charter school is to be located; and third to other resident students.
If the total number of students who are eligible to attend and apply to a charter school and who reside in the city or town in which the charter school is located or are siblings of students already attending said charter school, is greater than the number of spaces available, an admissions lottery, including all eligible students applying, shall be held to fill all of the spaces in that school from among the students. If there are more spaces available than eligible applicants from the city or town in which the charter school is located and who are siblings of current students and

more eligible applicants than spaces left available, a lottery shall be held to determine which of the applicants shall be admitted; provided, however, that a lottery conducted for Horace Mann charter schools shall reflect the enrollment priorities of this section. Notwithstanding this subsection, upon application by the board of trustees of a charter school or by the persons or entities seeking to establish a charter school, the board may amend or grant a charter designating such school a regional charter school; provided, however, that such regional charter school shall be exempt from the local preference provision of this paragraph; provided further, that such regional charter school shall continue to grant a preference of siblings of currently enrolled students; and provided further, that if the number of applicants remaining is greater than the number of spaces available, such regional charter school shall conduct a single lottery to determine which applicants shall be admitted.

In any instance where a charter school approved after January 1, 2011 enrolls more than 20 per cent of its total enrollment from school districts not included in its original charter pursuant to subsection (h) for 2 consecutive years, the charter school shall submit an application to the board for an amendment to its charter that reflects its actual enrollment patterns; provided further that upon renewal of a charter school approved prior to January 1, 2011, the board shall establish a timeline of not less than 5 years for the charter to comply with this requirement.

Nothing in this section shall be construed to require a charter school to unenroll any student currently in attendance at the time this act takes effect.

When a student stops attending a charter school for any reason, the charter school shall fill the vacancy with the next available student on the waitlist for the grade in which the vacancy occurs and shall continue through the waitlist until a student fills the vacant seat. If there is no waitlist, a charter school shall publicize an open seat to the students of the sending district or districts and make attempts to fill said vacant seat. Charter schools shall attempt to fill vacant seats up to February 15, provided, however, that charter schools may but are not required to fill vacant after February 15. If a vacancy occurs after February 15, such vacancy shall remain with the grade cohort and shall be filled in the following September if it has not previously been filled. A vacancy occurring after February 15 shall not be filled by adding a student to a lower grade level. Charter schools shall attempt to fill vacant seats up to February 15, excluding seats in the last half of the grades offered by the charter school, and grades 10, 11 and 12. Within 30 days of a vacancy being filled, the charter school shall send the name of the student filling such vacancy to the department for the purposes of the department updating its waitlist.

The names of students who entered the lottery but did not gain admission shall be maintained on a waitlist, which shall be forwarded to the department not later than June 1 in the year in which the lottery is held. In addition to the names of students, the school shall supply to the department each student's home address, telephone number, grade level and other information the department deems necessary. The department shall maintain a consolidated waitlist for each municipality in order to determine the number of individual students in each municipality seeking admission to charter schools.

(o) Each charter school shall annually, not later than April 1, notify each public school district in writing of the number and grade levels of students who will be attending the charter school from that district the following September as well as the number of new students who will be transferring from that district to the charter school in the following September. Tuition for charter school students shall only be paid for the number of students for whom notification has been reported by April 1. Tuition for charter school students shall be paid only for students actually enrolled in the school.

(p) A student may withdraw from a charter school at any time and enroll in another public school where the student resides.
A student may be expelled from a charter school based on criteria determined by the board of trustees, and approved by the board, with the advice of the principal and teachers; provided, however, that charter school policies shall be consistent with sections 37H and 37H½.
(q) A charter school may be located in part of an existing public school building, in space provided on a private work site, in a public building or any other suitable location; provided, however, that no school building assistance funds authorized under chapter 70B shall be awarded to a commonwealth charter school for the purpose of constructing, reconstructing or improving a commonwealth charter school.
(r) The school committee of each district where a Horace Mann charter school is located shall develop a plan to disseminate innovative practices of the charter school to other public schools within the district subject to the provisions of any contract between the Horace Mann charter school and any third party provider.
The commissioner shall facilitate the dissemination of successful innovation programs of charter schools and provide technical assistance for other school districts to replicate such programs. Each charter school shall collaborate with its sending district on the sharing of innovative practices.
(s) A charter school shall operate in accordance with its charter and the provisions of law regulating other public schools; provided, however, that sections 41 and 42 shall not apply to employees of commonwealth charter schools. Charter schools shall comply with the chapters 71A and 71B; provided, however, that the fiscal responsibility of a special needs student currently enrolled in or determined to require a private day or residential school shall remain with the school district where the student resides. If a charter school expects that a special needs student currently enrolled in the charter school may be in need of the services of a private day or residential school, it shall convene an individual education plan team meeting for the student. Notice of the team meeting shall be provided to the special education department of the school district in which the child resides at least 5 days in advance. Personnel from the school district in which the child resides shall be allowed to participate in the team meeting concerning future placement of the child.
(t) Horace Mann charter schools shall be exempt from local collective bargaining agreements to the extent provided by the terms of its charter; provided, however, that employees of the Horace Mann charter school shall continue to be members of the local collective bargaining unit and shall accrue seniority and shall receive, at a minimum, the salary and benefits established in the contract of the local collective bargaining unit where the Horace Mann charter school is located. Employees of Horace Mann charter schools shall be exempt from all union and school committee work rules to the extent provided by the school's charter. Employees in Horace Mann charter schools shall be required to work the full work day and work year to the extent provided by the terms of the school's charter.
(u) Notwithstanding this section or any other general or special law to the contrary, for the purposes of chapter 268A: (i) a charter school shall be deemed to be a state agency; and (ii) the appointing official of a member of the board of trustees of a charter school shall be deemed to be the commissioner. Members of boards of trustees of charter schools operating under the this section shall file a disclosure annually with the state ethics commission, the department and the city or town clerk wherein such charter school is located. The disclosure is in addition to the requirements of said chapter 268A and a member of a board of trustees must also comply with

the disclosure and other requirements of said chapter 268A. The form of the disclosure shall be prescribed by the ethics commission and shall be signed under penalty of perjury. Such form shall be limited to a statement in which members of the board of trustees shall disclose any financial interest that they or a member of their immediate families, as defined in section 1 of said chapter 268A, have in any charter school located in the commonwealth or in another state or with a person doing business with a charter school.

Each member of a board of trustees of a charter school shall file such disclosure for the preceding calendar year with the commission within 30 days of becoming a member of the board of trustees, by September 1 of each year thereafter that the person is a member of the board and by September 1 of the year after the person ceases to be a member of the board; provided, however, that no member of a board of trustees shall be required to file a disclosure for the year in which he ceases to be a member of the board if he served less than 30 days in that year.

(v) Students in charter schools shall be required to meet the same performance standards, testing and portfolio requirements set by the board for students in other public schools.

(w) The board of trustees, in consultation with the teachers, shall determine the school's curriculum and develop the school's annual budget. The board of trustees of each Horace Mann charter school shall annually submit to the superintendent and school committee of the district in which the school is located a budget request for the following fiscal year. The school committee shall act on the budget request in conjunction with its actions on the district's overall budget. Each Horace Mann charter school shall receive in response to the budget request not less than it would have under the district's budgetary allocation rules. The board of trustees may appeal any disproportionate budgetary allocation to the commissioner, who shall determine an equitable funding level for the school and shall require the school committee to provide the funding. Following the appropriation of the district's operating budget for the fiscal year, the amount approved by the local appropriating authority for the operation of each Horace Mann charter school shall be available for expenditure by the board of trustees of the school for any lawful purpose without further approval by the superintendent or the school committee. A Horace Mann charter school shall not expend or incur obligations in excess of its budget request; provided, however, that a Horace Mann charter school may spend federal and state grants and other funds received independent of the school district not accounted for in the charter school's budget request without prior approval from the superintendent or the school committee.

(x) Upon approval of a Horace Mann charter school by the board, the superintendent where the Horace Mann charter school is to be located shall reassign, to the extent provided by the terms of its charter, any faculty member who wishes to be reassigned to another school located within the district.

(y) Employees of charter schools shall be considered public employees for purposes of tort liability under chapter 258 and for collective bargaining purposes under chapter 150E. The board of trustees shall be considered the public employer for purposes of tort liability under said chapter 258 and for collective bargaining purposes under said chapter 150E; provided, however, that in the case of a Horace Mann charter school, the school committee of the school district in which the Horace Mann charter school is located shall remain the employer for collective bargaining purposes under said chapter 150E. Teachers employed by a charter school shall be subject to the state teacher retirement system under chapter 32 and service in a charter school shall be creditable service within the meaning thereof.

A charter school shall recognize an employee organization designated by the authorization cards of 50 per cent of its employees in the appropriate bargaining unit as the exclusive representative

of all the employees in such unit for the purpose of collective bargaining.
(z) Each local school district shall be required to grant a leave of absence to any teacher in the public schools system requesting such leave to teach in a commonwealth charter school. A teacher may request a leave of absence for up to 2 years.
At the end of the second year, the teacher may either return to his former teaching position or, if he chooses to continue teaching at the commonwealth charter school, resign from his school district position.
(aa) Notwithstanding section 59C, the internal form of governance of a charter school shall be determined by the school's charter.
(bb) A charter school shall comply with all applicable state and federal health and safety laws and regulations.
(cc) The students who reside in the school district in which the charter school is located shall be provided transportation to the charter school by the resident district's school committee on similar terms and conditions as transportation is provided to students attending local district schools if the transportation is requested by the charter school. In providing the transportation, the school committee shall accommodate the particular school day and school year of the charter school; provided, however, that in the event that a school committee limits transportation for district school students, the school district shall not be required to provide transportation to any commonwealth charter school beyond the limitations. A charter school and the sending district shall meet to plan bus routes and charter school starting and ending times in order to assist the district with cost effective means of transportation. Schools operating under a charter granted after January 1, 1997, and all charter schools operating during fiscal year 1999 and thereafter, shall not receive funds for transportation above the amount actually required by such charter school for the provision of transportation services to eligible students. If the sending district provides an alternative method of transportation for students enrolled in the sending district's public schools, it shall not be assessed for transportation costs which exceed the per pupil cost of said alternative. Costs for transportation shall be included only if transportation is provided for students in the same program and grade level as those in the charter school. Students who do not reside in the district in which the charter school is located shall be eligible for transportation in accordance with section 12B of chapter 76. A regional charter school as designated by the board, and whose charter provides for transportation of all students from charter municipalities shall also be reimbursed by the commonwealth under section 16C of chapter 71 for transportation provided to pupils residing outside the municipality where the charter school is located, but no reimbursement for transportation between the charter school and home shall be made on account of any pupil who resides less than 1.5 miles from the charter school, measured by a commonly traveled route. If a charter school provides its own transportation, the school shall coordinate and collaborate with the sending district to provide cost effective means of transportation. All such transportation shall be determined in advance of the approval of the district's final budget for a fiscal year; provided, however, that a commonwealth charter school shall be required to determine such transportation in the first year of its operation as soon as practicable.
(dd) A charter granted by the board shall be for 5 years. The board shall develop procedures and guidelines for revocation and renewal of a school's charter; provided, however, that a charter for a Horace Mann charter school shall not be renewed by the board without a majority vote of the school committee and local collective bargaining unit in the district where said charter school is located; provided, however, that a commonwealth charter shall not be renewed unless the board of trustees of the charter school has documented in a manner approved by the board that said

commonwealth charter school has provided models for replication and best practices to the commissioner and to other public schools in the district where the charter school is located. When deciding on charter renewal, the board shall consider progress made in student academic achievement, whether the school has met its obligations and commitments under the charter, the extent to which the school has followed its recruitment and retention plan by using deliberate, specific strategies towards recruiting and retaining the categories of students enumerated in paragraph (3) of subsection (i) and the extent to which the school has enhanced its plan as necessary. The board may impose conditions on the charter school upon renewal if it fails to adhere to and enhance its recruitment and retention plan as required. When deciding on charter renewal, the board shall take into account the annual attrition of students. The board shall also consider innovations that have been successfully implemented by the charter school and the evidence that supports the effectiveness of these practices. Upon renewal of its charter, a school shall update and enhance its recruitment and retention plan as necessary to account for changes in enrollment.

(ee) The board may revoke a school's charter if the school has not fulfilled any conditions imposed by the board in connection with the grant of the charter or the school has violated any provision of its charter. The board may place conditions on a charter or may place a charter school on a probationary status to allow the implementation of a remedial plan after which, if said plan is unsuccessful, the charter may be summarily revoked.

(ff) Commonwealth charter schools shall be funded as follows: the commonwealth shall pay a tuition amount to the charter school, which shall be the sum of the tuition amounts calculated separately for each district sending students to the charter school. Tuition amounts for each sending district shall be calculated by the department using the formula set forth herein, to reflect, as much as practicable, the actual per pupil spending amount that would be expended in the district if the students attended the district schools. The tuition amount shall be calculated separately for each district sending students to a charter school, and for each charter school to which a district sends students. Each district's per pupil tuition amount for each charter school to which it sends students shall include a per pupil foundation budget component, adjusted to reflect the actual net school spending in the sending district.

In calculating the per pupil foundation budget component, the department shall calculate a foundation budget for the students from each sending district attending the charter school in the previous fiscal year, pursuant to the provisions of section 2 of chapter 70; provided, that the department shall not include in said calculation the assumed tuitioned-out special education enrollment, nor any amounts generated by said assumed enrollment, as defined by said section 2. The per pupil foundation budget component shall be the district's foundation budget for the charter school, as so calculated, divided by the number of students attending the charter school from the sending district in the previous fiscal year. The per pupil foundation budget component shall be calculated separately for each charter school to which a district sends students. The foundation budget for a charter school shall be the sum of the foundation budgets for the charter school for each district sending students to the charter school.

In adjusting the per pupil foundation budget component, the department shall calculate for each sending district an above foundation spending percentage, which shall be the percentage by which the district's actual net school spending exceeds the foundation budget for the district, as calculated pursuant to the provisions of chapter 70. The department shall further calculate the percentage of actual net school spending reported by the sending district associated with tuition costs for tuitioned-out special education students, including education that occurs in educational

collaboratives, and with spending on health care costs for retired employees, for any district for which such costs are included in net school spending, and shall reduce the district's above foundation spending percentage proportionately. The per pupil foundation budget component for each charter school to which the sending district sends students shall be increased by said adjusted above foundation spending percentage.

The total tuition amount owed by a sending district to a charter school shall be the per pupil tuition amount as defined above, multiplied by the total number of students attending the charter school from that district in the current fiscal year. The sending district's total charter school tuition amount for purposes of the following paragraphs shall be the sum of the district's tuition amounts for each charter school to which the district sends students, calculated using the provisions of this section. The receiving charter school's total charter school tuition amount shall be the sum of the tuition amounts calculated for the charter school for each district sending students to the charter school.

If a charter school student previously attended a private or parochial school or was home schooled, the commonwealth shall assume the first year cost for that student and shall not reduce the sending district's chapter 70 aid for that student's tuition in that fiscal year.

The state treasurer is hereby authorized and directed to deduct a district's total charter school tuition amount, as calculated herein, from the total state school aid, as defined in section 2 of said chapter 70, of the district in which the student resides prior to the distribution of said aid. In the case of a child residing in a municipality which belongs to a regional school district, the charter school tuition amount shall be deducted from said chapter 70 education aid of the school district appropriate to the grade level of the child. If, in a single district, the total of all such deductions exceeds the total of said education aid, this excess amount shall be deducted from other aid appropriated to the city or town. If, in a single district, the total of all such deductions exceeds the total state aid appropriated, the commonwealth shall appropriate this excess amount; provided, however, that if said district has exempted itself from the provisions of said chapter 70 by accepting section 14 of said chapter 70, the commonwealth shall assess said district for said excess amount.

The state treasurer is hereby further authorized and directed to disburse to the charter school an amount equal to the charter school's total charter school tuition amount as defined above.

If more than 1 charter school is managed by a single network or board of trustees, funding shall not be transferred among individual schools within the network unless such schools are located in the same school district.

The department shall, subject to appropriation, provide funding to charter schools for a portion of the per pupil capital needs component included in the charter tuition amount and shall reimburse the sending school districts for said costs. In fiscal year 2011 and thereafter, such funding shall not be less than the per pupil amount provided in fiscal year 2010.

(gg) Any district whose total charter school tuition amount is greater than its total charter school tuition amount for the previous year shall be reimbursed by the commonwealth in accordance with this paragraph and subject to appropriation; provided, however, that no funds for said reimbursements shall be deducted from funds distributed pursuant to chapter 70. The reimbursement amount shall be equal to 100 per cent of the increase in the year in which the increase occurs and 25 per cent in the second, third, fourth, fifth and sixth years following.

(hh) If the unencumbered amount of cumulative surplus revenue from tuition held by a charter school at the end of a fiscal year, less (i) the amount of the fourth quarter tuition payment, (ii) the amount held in reserve for the purchase or renovation of an academic facility pursuant to a

capital plan, and (iii) any reserve funds held as security for bank loans, exceeds 20 per cent of its operating budget and its budgeted capital costs for the succeeding fiscal year as is reported in a capital plan to be submitted in the school's most recent annual report, the amount in excess of said 20 per cent shall be returned by the charter school to the sending district or districts and the state in proportion to their share of tuition paid during the fiscal year. At the end of each fiscal year, the commissioner shall certify the amounts described above and the amount, if any, by which it exceeds 20 per cent of the school's operating budget and its budgeted capital costs for the succeeding fiscal year, and shall report such amount to the school committee of the sending district or districts and the applicable board of selectmen or city council by December 1 of each year. A charter school shall annually make any payment required by this subsection no later than December 31.

(ii) No teacher shall be hired by a commonwealth charter school who is not certified pursuant to section 38G unless the teacher has successfully passed the state teacher test as required in said section 38G.

(jj) Each charter school shall submit an annual report, no later than August 1, to the board, the local school committee, each parent or guardian of its enrolled students and each parent or guardian contemplating enrollment in that charter school. The annual report shall be in such form as may be prescribed by the board and shall include, but not be limited to: (i) discussion of progress made toward the achievement of the goals set forth in the charter; and (ii) a financial statement setting forth by appropriate categories the revenue and expenditures for the year just ended and a balance sheet setting forth the charter school's assets, liabilities and fund balances or equities.

The department shall promulgate regulations creating a reporting requirement for a charter school's net asset balance at the end of the fiscal year; provided, however, that said regulations shall require, without limitation, the following: the revenue and expenditures for the year just ended with a specific accounting of the uses of public and private dollars; how the capital needs component of the charter school's tuition was spent; compensation and benefits for teachers, staff, administrators, executives, and board of trustees; the amount of any and all funds transferred to a management company; the sources of any surplus funds, specifically whether they are private or public; how any surplus funds were used in the previous fiscal year; and the planned use of any surplus funds in the upcoming fiscal year on in future fiscal years.

Each charter school shall keep an accurate account of all its activities and all its receipts and expenditures and shall annually cause an independent audit to be made of its accounts. Such audit shall be filed annually on or before January 1 with the department and the state auditor and shall be in a form prescribed by the state auditor. The state auditor may investigate the budget and finances of charter schools and their financial dealings, transactions and relationships, and shall have the power to examine the records of charter schools and to prescribe methods of accounting and the rendering of periodic reports.

(kk) The commissioner shall collect data on the racial, ethnic and socio-economic make-up of the student enrollment of each charter school in the commonwealth. The commissioner shall also collect data on the number of students enrolled in each charter school who have individual education plans pursuant to chapter 71B and those requiring English language learners programs under chapter 71A. The commissioner shall file said data annually with the clerks of the house and senate and the joint committee on education not later than December 1.

(ll) Individuals or groups may complain to a charter school's board of trustees concerning any claimed violations of the provisions of this section by the school. If, after presenting their

complaint to the trustees, the individuals or groups believe their complaint has not been adequately addressed, they may submit their complaint to the board which shall investigate such complaint and make a formal response.
(mm) The board shall promulgate regulations for implementation and enforcement of this section.

SECTION 8. Said chapter 71 is hereby further amended by adding the following section:-

Section 92. (a) An Innovation School shall be a public school, operating within a public school district, that is established for the purpose of improving school performance and student achievement through increased autonomy and flexibility. An Innovation School may be established as a new public school or as a conversion of an existing public school. A student who is enrolled in a school at the time it is established as an Innovation School shall retain the ability to remain enrolled in the school if the student chooses to do so.
(b) An Innovation School may establish an advisory board of trustees. An Innovation School shall have increased autonomy and flexibility in 1 or more of the following areas: (i) curriculum; (ii) budget; (iii) school schedule and calendar; (iv) staffing policies and procedures, including waivers from or modifications to, contracts or collective bargaining agreements; (v) school district policies and procedures; and (vi) professional development. An Innovation School shall receive each school year from the school committee the same per pupil allocation as any other district school receives. An Innovation School may retain any unused funds and use the funds in subsequent school years. An Innovation School may establish a non-profit organization that may, among other things, assist the school with fundraising. A district shall not reduce its funding to an Innovation School as a result of the school's fundraising activities.
(c) An Innovation School established under this section shall be authorized by the local school committee and shall operate according to an innovation plan, which shall articulate the areas of autonomy and flexibility under subsection (b). To the extent practicable, the innovation plan shall be based on student outcome data, including, but not limited to: (i) student achievement on the Massachusetts Comprehensive Assessment System; (ii) other measures of student achievement, approved by the commissioner, as appropriate; (iii) student promotion, graduation rates and dropout rates; (iv) achievement data for different subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; and (v) student attendance, dismissal rates and exclusion rates.
An Innovation School shall operate in accordance with the law regulating other public schools, except as the law conflicts with this section or any innovation plans created thereunder.
(d) An Innovation School is a school in which: (i) faculty and leadership are primarily responsible for developing the innovation plan under which the school operates and leadership is responsible for meeting the terms of the innovation plan; or (ii) an external partner is primarily responsible for developing the innovation plan under which the school operates and the external partner is responsible for meeting the terms of the innovation plan.
(e) Nothing in this section shall be construed to prohibit: (i) the establishment of an Innovation School as an academy within an existing public school; (ii) the establishment of an Innovation School serving students from 2 or more school districts; provided, however, that all of the provisions of this section are met by each school district; (iii) the simultaneous establishment of 2 or more Innovation Schools as an Innovation Schools Zone within a school district; or (iv) the establishment of an Innovation School as a virtual public school that provides instruction to

students through distance learning, including online learning programs and courses, subject to regulations adopted by the board of elementary and secondary education.

(f) The following shall be eligible applicants for the purposes of establishing an Innovation School: (i) parents; (ii) teachers; (iii) parent-teacher organizations; (iv) principals; (v) superintendents; (vi) school committees; (vii) teacher unions; (viii) colleges and universities; (ix) non-profit community-based organizations; (x) non-profit business or corporate entities; (xi) non-profit charter school operators; (xii) non-profit education management organizations; (xii) educational collaboratives; (xiv) consortia of these groups; and (xv) non-profit entities authorized by the commissioner. Private and parochial schools shall not be eligible to operate an Innovation School.

(g) The local school committee, local teacher's union and superintendent of the district shall follow a process, consistent with this subsection and subsections (h) to (o), inclusive, for which an existing district school may be converted to an Innovation School or by which a new Innovation School may be established within the district. This process shall require that an eligible applicant proposing to establish an Innovation School prepare a prospectus regarding the proposed school. The prospectus shall include, but not be limited to, a description of: (i) whether the school will be a new school or a conversion of an existing school; (ii) if the school is a new school, the proposed location of the school; (iii) if the school is a conversion of an existing school, the school that is being proposed for conversion; (iv) the external partners, if any, that will be involved in the school; (v) the number of students the school is anticipated to serve and the number of staff expected to be employed at the school; (vi) the overall vision for the school, including improving school performance and student achievement; (vii) specific needs or challenges the school shall be designed to address; (viii) a preliminary assessment of the autonomy and flexibility under subsection (b) that the school will seek; (ix) why such flexibility is desirable to carry out the objectives of the school; (x) anticipated components of the school's innovation plan; (xi) a preliminary description of the process that shall be used to involve appropriate stakeholders in the development of the innovation plan; and (xii) a proposed timetable for development and establishment of the proposed school.

(h) Upon completion of the prospectus under subsection (g), an eligible applicant shall submit the prospectus to the superintendent, who shall within 30 days convene a screening committee consisting of the superintendent or a designee, a school committee member or a designee selected by the school committee and a representative from the leadership of the local teacher's union.

The screening committee shall review the prospectus for the purpose of determining whether the prospectus: (i) presents a sound and coherent plan for improving school performance and student achievement; (ii) supports or enhances existing educational efforts in the district; and (iii) reasonably can be expanded into a comprehensive innovation plan. In the case of a new school, the committee will prepare an impact statement describing how the new school will affect the children and faculty in the district. Within 30 days of receiving a prospectus, the screening committee shall decide, on the basis of a two-thirds vote, to accept or reject the prospectus, or return the prospectus to the eligible applicant for revisions. If a prospectus is rejected or returned, the screening committee shall submit a detailed explanation for the decision to the applicant. A prospectus that is rejected or returned may be revised and resubmitted for subsequent consideration.

(i) Upon the acceptance of a prospectus by the screening committee under subsection (h), the applicant shall form an innovation plan committee of not more than 11 individuals within 30

days. The purpose of the innovation plan committee shall be to: (i) develop the innovation plan described in subsection (c); (ii) assure that appropriate stakeholders are represented in the development of the proposed Innovation School; and (iii) provide meaningful opportunities for the stakeholders to contribute to the development of such school. The size and composition of the innovation plan committee shall be determined by the applicant; provided, however, that the committee shall include: (i) the applicant; (ii) the superintendent or a designee; (iii) a school committee member or a designee; (iv) a parent who has 1 or more children enrolled in the school, or in the case of a new school, from the district; (v) a principal employed by the district; and (vi) 2 teachers employed by the district. The applicant shall select the parent from among nominees submitted by parent-teacher organizations in the district. If the district does not contain a parent-teacher organization or if the organization does not submit nominees, the applicant shall select the parent from among volunteers in the area or community the proposed school is expected to serve. The applicant shall select the principal and 1 teacher from among volunteers in the district and 1 teacher from among nominees submitted by the local teacher's union.

(j) Upon the formation of the innovation plan committee in subsection (i), the committee shall develop the innovation plan for the proposed Innovation School. The purpose of the innovation plan shall be to comprehensively articulate the areas of autonomy and flexibility under subsection (b) that the proposed school will use. The innovation plan shall include, but not be limited to: (i) a curriculum plan, which shall include a detailed description of the curriculum and related programs for the proposed school and how the curriculum is expected to improve school performance and student achievement; (ii) a budget plan, which shall include a detailed description of how funds shall be used differently in the proposed school to support school performance and student achievement; (iii) a school schedule plan, which shall include a detailed description of the ways, if any, the program or calendar of the proposed school will be enhanced or expanded; (iv) a staffing plan, which shall include a detailed description of how the school principal, administrators, faculty and staff will be recruited, employed, evaluated and compensated in the proposed school and any proposed waivers or modifications of collective bargaining agreements; (v) a policy and procedures plan, which shall include a detailed description of the unique operational policies and procedures to be used by the proposed school and how the procedures shall support school performance and student achievement; and (vi) a professional development plan, which shall include a detailed description of how the school may provide high-quality professional development to its administrators, teachers and staff.

In order to assess the proposed school across multiple measures of school performance and student success, the innovation plan shall include measurable annual goals including, but not limited to, the following: (i) student attendance; (ii) student safety and discipline; (iii) student promotion and graduation and dropout rates; (iv) student achievement on the Massachusetts Comprehensive Assessment System; (v) progress in areas of academic underperformance; and (vi) progress among subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; (7) reduction of achievement gaps among different groups of students.

A majority vote of the innovation plan committee shall be required for approval of the innovation plan.

(k) The provisions of the collective bargaining agreements applicable to the administrators, teachers and staff in the school shall be considered to be in operation at an Innovation School, except to the extent the provisions are waived or modified under the innovation plan and such

waivers or modifications are approved under subsections (l) and (m).
(l) In the case of a school conversion, upon completion of the innovation plan in subsection (j), , the applicant shall submit the innovation plan to teachers in the school that is proposed for conversion for approval by secret ballot within 30 days. A two-thirds vote of the teachers shall be required to approve the plan. Upon approval of an innovation plan by the applicable union members the plan shall, within 7 days, be submitted to the schoolcommittee. If a two-thirds vote is not achieved, the innovation plan committee may revise the innovation plan as necessary and submit the revised plan to the teachers for a subsequent vote.
In the case of a new school, upon the completion of the innovation plan in subsection (j), the applicant, a local union and the superintendent shall negotiate waivers or modifications to the applicable collective bargaining agreement necessary for the school to implement the innovation plan. Upon the conclusion of the negotiations, the innovation plan shall be submitted immediately to the school committee. If the negotiations have not resulted in an agreement within 40 days, either party may petition the division of labor relations for the selection of an arbitrator. The division shall select an arbitrator within 3 days of the petition from a list submitted by the parties. The arbitrator shall conduct a hearing within 14 days of the arbitrator's selection. The arbitrator shall consider the parties' positions and the needs of the students in the district. The arbitrator's decision shall be consistent with the contents of the innovation plan developed by the applicant. The arbitrator shall, within 14 days of the close of the hearing, submit a decision which shall be final and binding on the parties.
(m) Upon receipt of an innovation plan regarding an Innovation School, a school committee shall hold at least 1 public hearing on the innovation plan. After the public hearing, but not later than 60 days after the receipt of the innovation plan, the school committee shall, on the basis of the quality of the plan and in consideration of comments submitted by the public, undertake a final vote to authorize the Innovation School for a period of not more than 5 years, subject to subsection (n). Approval of the majority of the school committee as fully constituted shall be required to authorize an Innovation School. If the approval is not obtained, an innovation plan committee may revise the innovation plan and: (i) in the case of a new school, submit the revised plan to the school committee for a subsequent vote; or (ii) in the case of a conversion, submit the revised plan to the teachers in the school that is proposed for conversion for a vote, pursuant to subsection (l); provided, however, that the plan meets the requirements for approval under subsection (l), submit the revised plan to the school committee for a subsequent vote. A school committee shall vote on a revised plan submitted pursuant to this subsection within 60 days of the receipt of such plan and contract.
(n) All Innovation Schools authorized under subsection (m) shall be evaluated by the superintendent at least annually. The superintendent shall transmit the evaluation to the school committee and the commissioner of elementary and secondary education. The purpose of the evaluation shall be to determine whether the school has met the annual goals in its innovation plan and assess the implementation of the innovation plan at the school. If the school committee determines, on the advice of the superintendent, that the school has not met 1 or more goals in the innovation plan and that the failure to meet the goals may be corrected through reasonable modification of the plan, the school committee may amend the innovation plan as necessary. After the superintendent assesses the implementation of the innovation plan at the school, the school committee may, on the advice of the superintendent, amend the plan if the school committee determines that the amendment is necessary in view of subsequent changes in the district that affect 1 or more components of the plan, including, but not limited to, changes to

contracts, collective bargaining agreements or school district policies; provided, however, that an amendment involving a subsequent change to a teacher contract shall first be approved by teachers at the school under the procedures in subsection (l).
If the school committee determines, on the advice of the superintendent, that the school has substantially failed to meet multiple goals in the innovation plan, the school committee may: (i) limit 1 or more components of the innovation plan; (ii) suspend 1 or more components of the innovation plan; or (iii) terminate the authorization of the school; provided, however, that the limitation or suspension shall not take place before the completion of the second full year of the operation of the school and the termination shall not take place before the completion of the third full year of the operation of the school.
(o) At the end of the period of authorization of an Innovation School approved under subsection (m), the leadership of the school may petition the school committee to extend the authorization of the school for an additional period of not more than 5 years. Before submitting the petition, the leadership of the school shall convene a selection of school stakeholders, including, but not limited to, administrators, teachers, other school staff, parents and external partners, as applicable, to discuss whether the innovation plan at the school requires revision and to solicit recommendations as to the potential revisions. After considering the recommendations of the stakeholder group, the leadership of the school and the applicable superintendent shall jointly update the innovation plan as necessary; provided, however, that a proposal regarding a new waiver or exemption from the local teacher's union contract shall be approved by teachers at the school, under subsection (l). Approval of the majority of the school committee as fully constituted shall be required to extend the period of authorization of an Innovation School. If the approval is not obtained, the leadership of the school and superintendent may jointly revise the innovation plan and submit the revised plan to the school committee for a subsequent vote. If the school committee does not extend the authorization of the school, the leadership of the school may seek the authorization from the board of elementary and secondary education. The board shall vote on the requested extension within 60 days of its receipt for approval of such extension.
(p) The commissioner of elementary and secondary education shall, to the extent practicable, be responsible for the following: (i) the provision of planning and implementation grants to eligible applicants to establish Innovation Schools; (ii) provision of technical assistance and support to eligible applicants; (iii) the collection and publication of data and research related to the Innovation Schools initiative; (iv) the collection and publication of data and research related to successful programs serving limited English-proficient students attending Innovation Schools; and (v) the collection and dissemination of best practices in Innovation Schools that may be adopted by other public schools. The board of elementary and secondary education shall promulgate regulations necessary to carry out this section. Annually, the commissioner shall report to the joint committee on education, the house and senate committees on ways and means, the speaker of the house of representatives and the senate president on the implementation and fiscal impact of this section.

SECTION 9. For the school districts in which net school spending on charter school tuition does not exceed 18 per cent as set forth in subsection (i) of section 89 of chapter 71, the following shall apply: (1) in fiscal year 2011, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 12 per cent of the district's net school spending; (2) in fiscal year 2012, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 13 per cent of the district's net

school spending; (3) in fiscal year 2013, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 14 per cent of the district's net school spending; (4) in fiscal year 2014, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 15 per cent of the district's net school spending; (5) in fiscal year 2015, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 16 per cent of the district's net school spending; (6) in fiscal year 2016, a public school district's total charter tuition payment to commonwealth charter schools shall be limited to 17 per cent of the district's net school spending; and (7) in fiscal year 2017, a public school district's total charter tuition payment to commonwealth charter schools shall be limited to 18 per cent of the district's net school spending.

SECTION 10. Within 6 months of the receipt of any federal funding through Race to the Top program realized through the adoption of this act, the executive office of education shall report to the house and senate committees on ways and means and the joint committee on education a detailed plan providing for the use and potential future uses of the funding along with an accounting therein.

SECTION 11. Notwithstanding any general or special law to the contrary, the department of elementary and secondary education shall draft a model policy for school districts regarding the grade placement and eligibility for high school graduation of students leaving a commonwealth charter school and seeking to enroll in a district school. In drafting the model policy, the department shall confer with school districts and commonwealth charter schools. The model policy shall be made available not later than December 31, 2010. Until a school district adopts a policy regarding the grade placement or eligibility for high school graduation of students leaving a commonwealth charter school, when determining the appropriate grade placement or eligibility for high school graduation of a student leaving a commonwealth charter school and enrolling in a district school, a district shall examine the course of study and level of academic attainment of the student.

SECTION 12. Notwithstanding any general or special law to the contrary, a charter school whose charter was granted before January 1, 2010 shall have a recruitment and retention plan required under subsection (f) of section 89 of chapter 71 of the General Laws in effect for the 2011-2012 school year or at the time of its next charter renewal, whichever occurs first.

SECTION 13. Notwithstanding subsection (gg) of section 89 of chapter 71 of the General Laws, any district that incurred an increase in commonwealth charter tuition costs between July 1, 2008 and June 30, 2010 shall be reimbursed in an amount equal to 100 per cent of the increase in the year in which the increase occurs, 60 per cent of that amount in the first year following and 40 per cent of that amount in the second year following.

SECTION 14. Notwithstanding any special or general law to the contrary, the department of elementary and secondary education shall study the possibility of allowing students living outside of the commonwealth who are eligible to attend public schools operating in the same geographic area as a charter school or a regional charter school to be eligible to attend the charter or regional charter school. The department shall examine the rules and regulations necessary to

implement this change which shall include, but not be limited to, collection of out-of-state tuition from students living outside of the commonwealth and attending a commonwealth charter school, collection of tuition from foreign exchange students attending a commonwealth charter school and reimbursement of commonwealth charter schools for services rendered to foreign exchange students and students living outside of the commonwealth. The department shall issue its report and its recommendations, if any, together with drafts of legislation necessary to carry those recommendations into effect to the joint committee on education not later than August 15, 2010.

SECTION 15. Notwithstanding any general or special law to the contrary, regional school transportation payments made by the state in any fiscal year through the general appropriations act shall not be lowered by a greater percentage than any reduction made to state chapter 70 payments in that fiscal year.

SECTION 16. Notwithstanding any general or special law to the contrary, the department of elementary and secondary education shall prepare a report on the current status of the public education financing system in the commonwealth as it currently exists. The report shall include, but shall not be limited to, the following: (1) the source of and potential remedies for any existing discrepancies between the fiscal demands placed upon and the fiscal assistance provided to municipalities and school districts with similar fiscal capacity and educational responsibilities, including those placed and provided pursuant to chapter 70; (2) a consideration and evaluation of all the financial resources made available to schools and districts, from all sources, and how they relate to student learning and educational opportunity; and (3) a review of successful educational programs in schools and school districts that achieve their success at relatively lower per pupil costs when compared with schools and districts serving student populations with similar academic and socio-economic characteristics and an assessment of the possibility of replicating such programs in other schools and school districts. In compiling the report, the department shall consult with various education personnel, advocacy organizations, and economic experts. The department shall file said report not later than December 31, 2011 to the joint committee on education.

SECTION 17. By January 1, 2011, the commissioner of elementary and secondary education shall make a report to the house and senate chairs of the joint committee on education on the department's plan to implement the inclusion of improvement in student academic achievement data, as required under sections 1J and1K of chapter 69 of the General Laws.

Approved, January 19, 2010.

Appendix E2: Applicable Legal Document, Amendments to Regulations on Underperforming Schools and School Districts

AMENDMENTS TO REGULATIONS ON UNDERPERFORMING SCHOOLS AND SCHOOL DISTRICTS, 603 CMR 2.00

Presented to the Board of Elementary and Secondary Education for initial review and vote to solicit public comment: February 23, 2010
Period of public comment: through April 9, 2010
Adopted by the Board of Elementary and Secondary Education: April 27, 2010

603 CMR 2.00, Underperforming Schools and School Districts Regulations, is hereby:

RENAMED

ACCOUNTABILITY AND ASSISTANCE FOR SCHOOL DISTRICTS AND SCHOOLS REGULATIONS

603 CMR 2.00
Accountability and Assistance for School Districts and Schools

Section:
2.01: Authority, Scope, and Purpose
2.02: Definitions
2.03: Accountability and Assistance for Districts and Schools in All Levels
2.04: Accountability and Assistance for Districts and Schools in Levels 1 - 3
2.05: Accountability and Assistance for Districts and Schools in Level 4
2.06: Accountability and Assistance for Districts and Schools in Level 5
2.07: Mathematics Content Assessments at Level 4 and Level 5 Schools

2.01: Authority, Scope, and Purpose

(1) 603 CMR 2.00 is promulgated pursuant to the authority of the Board of Elementary and Secondary Education under M.G.L. c. 69, §§ 1B, 1J, and 1K, and c. 71, § 38G.

(2) 603 CMR 2.00 governs the review of the educational programs and services provided by the Commonwealth's public schools and the assistance to be provided by districts and the Department to improve them; it identifies the circumstances under which a school may be declared underperforming (placed in Level 4) and those under which a school or school district may be declared chronically underperforming (placed in Level 5), resulting in accountability and assistance in accordance with M.G.L. c. 15, §55A and c. 69, §§ 1J and 1K.

(3) The purpose of 603 CMR 2.00 is to hold districts and schools accountable for educating their students well and to assist them in improving the education they provide.

2.02: Definitions

Accountability status shall mean the category to which a school or district is assigned, based on its Adequate Yearly Progress (AYP) determinations over multiple years in accordance with the federal Elementary and Secondary Education Act (ESEA). The category defines the required course of school, district and/or state action that must be taken to improve student performance. Accountability status categories include Identified for Improvement, Corrective Action, and Restructuring. Schools that make AYP in a subject for all student groups for two or more consecutive years are assigned to the No Status category. Districts that make AYP for all student groups in one or more gradespans in a subject for two or more consecutive years are also assigned to the No Status category. A district or school may be placed in an accountability status on the basis of the performance and improvement profile of students in the aggregate or of one or more student subgroups over two or more years in English language arts and/or mathematics.

Adequate Yearly Progress or AYP shall mean adequate annual district, grade level, school, or student subgroup performance and improvement, as determined by the Department relative to performance and improvement targets in English language arts and mathematics established by the Board in accordance with the federal Elementary and Secondary Education Act (ESEA).

Behavioral health and public schools framework shall mean the framework developed by the Task Force on Behavioral Health and Public Schools pursuant to St. 2008, c. 321, s. 19, to "promote[ ] collaboration between schools and behavioral health services and promote[ ] supportive school environments where children with behavioral health needs can form relationships with adults and peers, regulate their emotions and behaviors, and achieve academic and nonacademic school success and reduce[ ] truancy and the numbers of children dropping out of school."

Benchmark assessment shall mean an assessment that is given at regular and specified intervals throughout the school year, is designed to evaluate students' knowledge and skills relative to a specific set of academic standards, and produces results that can be aggregated (e.g., by course, grade level, school, or district) in order to inform teachers and administrators at the student, classroom, school, and district levels.

Board shall mean the Board of Elementary and Secondary Education, appointed in accordance with M.G.L. c. 15, § 1E.

Commissioner shall mean the commissioner of elementary and secondary education, appointed in accordance with M.G.L. c. 15, § 1F, or his or her designee.

Conditions for school effectiveness shall mean certain necessary conditions for schools to educate their students well. These conditions are integrated into the district indicators.

Composite Performance Index or CPI shall mean a 100-point index that assigns 100, 75, 50, 25, or 0 points to each student participating in MCAS and MCAS-Alt tests based on their performance. The total points assigned to each student are added together and the sum is divided by the total number of students assessed. The result is a number between 0 and 100, which constitutes a district, school or group's CPI for that subject and student group. The CPI is a measure of the extent to which students are progressing toward proficiency (a CPI of 100) in English Language Arts (ELA) and mathematics. CPIs are generated separately for ELA and mathematics, and at all levels—state, district, school, and student group.

Core subjects shall mean the subjects specified in M.G.L. c. 69, § 1D (mathematics, science and technology, history and social science, English, foreign languages and the arts) and subjects covered in courses that are part of an approved vocational-technical education program under M.G.L. c. 74.

Department shall mean the Department of Elementary and Secondary Education acting through the commissioner or his or her designee.

District Analysis and Review Tool or DART shall mean an electronic interface, using graphics and showing trends, of a sampling of relevant data kept by the Department or submitted to the Department by districts over time in areas including but not limited to district and school demographics, access, performance, educator licensure and turnover, student support, and educational resources.

District or school district shall mean a municipal school department or regional school district, acting through its school committee or superintendent of schools, or a county agricultural school, acting through its board of trustees or superintendent/director. For the purposes of 603 CMR 2.00 it shall not mean a charter school; charter schools are subject to accountability provisions set forth in M.G.L. c. 71, § 89, and 603 CMR 1.00.

District Improvement Plan shall mean the comprehensive, three-year improvement plan each district is required to develop under M.G.L. c. 69, § 1I.

District indicators shall mean the detailed performance indicators associated with the district standards and developed by the Department.

District review shall mean a school district audit conducted by the Department under M.G.L. c. 15, § 55A, in accordance with a process and protocol established by the commissioner on behalf of the Board pursuant to M.G.L. c. 69, § 1B, and based on published district standards and indicators.

District review report shall mean the report of a district review by a district review team, as required by M. G.L. c. 15, § 55A.

District review team shall mean a group of individuals appointed by the Department, pursuant to M.G.L. c. 15, § 55A, to conduct a district review.

District standards shall mean the standards listed in 603 CMR 2.03(4)(a) that are the basis for district reviews, improvement planning, and other forms of accountability and assistance.

ESEA shall mean the Elementary and Secondary Education Act, 20 U.S.C. 6301 et seq., reauthorized in 2001 as the No Child Left Behind Act.

Follow-up review shall mean a review conducted following a district review to gather further information, to be used for such purposes as determining whether a Level 4 district should be placed in Level 5 or whether a school or district should be removed from Level 4 or Level 5.

Follow-up review report shall mean the report of a follow-up review.

Formative assessment shall mean assessment questions, tools, and processes that are embedded in instruction and are used by teachers and students to provide timely feedback for purposes of adjusting instruction to improve learning.

Framework for district accountability and assistance shall mean the five-level system for district and school accountability and assistance approved by the Board and implemented by the Department pursuant to 603 CMR 2.03(1).

Levels 1-5 shall mean the levels in the Department's framework for district accountability and assistance, required by 603 CMR 2.03(1), in which schools and districts in the Commonwealth are placed. See definitions in 603 CMR 2.02 for placing a district in Level 5, placing a school in Level 4, and placing a school in Level 5.

Mathematics content assessment: A diagnostic assessment of mathematics content knowledge approved by the Department that mathematics teachers at a Level 4 or Level 5 school may be required to take, at no cost to the district or the teacher for the assessment instrument or its scoring.

Mathematics teacher: Any educator who teaches mathematics in a Massachusetts public school.

MCAS shall mean the Massachusetts Comprehensive Assessment System, provided for in M.G.L. c. 69, § 1I.

Placing a district in Level 5 shall mean declaring that district to be chronically underperforming in accordance with M.G.L. c. 69, § 1K. Level 5 is the last of the five levels in the Department's framework for district accountability and assistance.

Placing a school in Level 4 shall mean designating that school as underperforming in accordance with M.G.L. c. 69, § 1J. Level 4 is the fourth of the five levels in the Department's framework for district accountability and assistance.

Placing a school in Level 5 shall mean designating that school as chronically underperforming in accordance with M.G.L. c. 69, § 1J. Level 5 is the last of the five levels in the Department's framework for district accountability and assistance.

Receiver shall,

- for a district, mean a non-profit entity or an individual with a demonstrated record of success in improving low-performing schools or districts or the academic performance of disadvantaged students, appointed by the commissioner on behalf of the Board for a district placed in Level 5, pursuant to M.G.L. c. 69, § 1K(a), and 603 CMR 2.06(3); and
- for a school, mean a non-profit entity or an individual with a demonstrated record of success in improving low-performing schools or the academic performance of disadvantaged students, appointed for a school in Level 4 by the superintendent pursuant to M.G.L. c. 69, § 1J(h) and 603 CMR 2.05(7) and for a school in Level 5 by the commissioner pursuant to M.G.L. c. 69, § 1J(r), (v), or (w) and 603 CMR 2.06(5).

School shall mean a single public school, consisting of one or more school buildings, which operates under the direct administration of a principal, director, or school leader appointed by the school district responsible for its governance. For the purposes of 603 CMR 2.00 it shall not mean a charter school; charter schools are subject to accountability provisions set forth in M.G.L. c. 71, § 89, and 603 CMR 1.00.

School Improvement Plan shall mean the plan for improved student performance each school is required to develop annually under M.G.L. c. 69, § 1I.

School review shall mean a school audit conducted by the Department under M.G.L. c. 15, § 55A, in accordance with a process and protocol established by the commissioner on behalf of the Board pursuant to M.G.L. c. 69, § 1B.

Student growth percentile or SGP shall mean a measure of how much a student's performance has improved from one year to the next relative to other students statewide with a similar MCAS test score history.

Subgroup shall mean one of the groups of students for which, in accordance with ESEA, the Department issues AYP determinations, namely students with disabilities, students with limited English proficiency, economically disadvantaged students, and students belonging to major racial and ethnic groups.

Tiered instruction shall mean a data-driven prevention, early detection, and support system that guides the allocation of school and district resources with the aim of providing high quality core educational experiences for all students and targeted interventions to struggling students who experience learning or behavioral challenges.

Turnaround plan shall mean the plan to improve student achievement in a Level 4 or Level 5 school or a Level 5 district that serves as the School Improvement Plan or District Improvement Plan.

2.03 Accountability and Assistance for Districts and Schools in All Levels

(1) **Framework for district and school accountability and assistance** The Department shall implement a five-level system for district and school accountability and assistance, approved by the Board and known as the framework for district accountability and assistance, for the purpose of improving student achievement. Both the priority for assistance and the degree of intervention shall increase from Level 1 to Level 5, as the severity and duration of identified problems increase. Under the framework, districts shall hold their schools accountable for educating their students well and assist them in doing so; the Department shall hold districts accountable for both of these functions and assist them in fulfilling them.

(2) **District reviews** The Department may conduct a district review, encompassing the district and its schools, of any district in Levels 1-5.

(3) **District Analysis and Review Tool** The Department shall provide the District Analysis and Review Tool to every district, including multiple data elements, giving schools the capability of comparing themselves with similar schools or other schools of their choice, and giving districts the capability of comparing themselves with similar districts or other districts of their choice.

(4) **District standards and indicators**

(a) District reviews, improvement planning, and other forms of accountability and assistance shall be based on standards of effective policy and practice in:

(i) Leadership and governance;

(ii) Curriculum and instruction;

(iii) Assessment;

(iv) Human resources and professional development;

(v) Student support; and

(vi) Financial and asset management.

(b) The Department shall publish a detailed version of the standards, as well as associated indicators which shall include the following conditions for school effectiveness:

(i) Effective district systems for school support and intervention: The district has systems and processes for anticipating and addressing school staffing, instructional, and operational needs in timely, efficient, and effective ways, especially for its lowest performing schools.

(ii) Effective school leadership: The district and school take action to attract, develop, and retain an effective school leadership team that obtains staff commitment to improving student learning and implements a clearly defined mission and set of goals.

(iii) Aligned curriculum: The school's taught curricula are aligned to state curriculum frameworks and the MCAS performance level descriptions, and are also aligned vertically between grades and horizontally across classrooms at the same grade level and across sections of the same course.

(iv) Effective instruction: Instructional practices are based on evidence from a body of high quality research and on high expectations for all students and include use of appropriate research-based reading and mathematics programs; the school staff has a common understanding of high-quality evidence-based instruction and a system for monitoring instructional practice.

(v) Student assessment: The school uses a balanced system of formative and benchmark assessments.

(vi) Principal's staffing authority: The principal has the authority to make staffing decisions based on the School Improvement Plan and student needs, subject to district personnel policies, budgetary restrictions and the approval of the superintendent.

(vii) Professional development and structures for collaboration: Professional development for school staff includes both individually pursued activities and school-based, job-embedded approaches, such as instructional coaching. It also includes content-oriented learning. The school has structures for regular, frequent collaboration to improve implementation of the curriculum and instructional practice. Professional development and structures for collaboration are evaluated for their effect on raising student achievement.

(viii) Tiered instruction and adequate learning time: The school schedule is designed to provide adequate learning time for all students in core subjects. For students not yet on track to proficiency in English language arts or mathematics, the school provides additional time and support for individualized instruction through tiered instruction, a data-driven approach to prevention, early detection, and support for students who experience learning or behavioral challenges, including but not limited to students with disabilities and English language learners.

(ix) Students' social, emotional, and health needs: The school creates a safe school environment and makes effective use of a system for addressing the social, emotional, and health needs of its students that reflects the behavioral health and public schools framework.

(x) Family-school engagement: The school develops strong working relationships with families and appropriate community partners and providers in order to support students' academic progress and social and emotional well-being.

(xi) Strategic use of resources and adequate budget authority: The principal makes effective and strategic use of district and school resources and has sufficient budget authority to do so.

(5) **District improvement planning** Every district shall develop and implement an annual self-evaluation and district improvement planning process using the district standards and indicators established under 603 CMR 2.03(4).

(a) The district's self-evaluation and planning process shall result, every three years, in a comprehensive written three-year District Improvement Plan to improve the performance of the district and its schools.

(b) Each year, every school shall adopt school performance goals and develop and implement a written School Improvement Plan to advance those goals and improve student performance. The School Improvement Plan shall be aligned with the District Improvement Plan.

(c) A district's District Improvement Plan and School Improvement Plans shall be based on an analysis of data, including but not limited to data on student performance and the District Analysis and Review Tool provided by the Department under 603 CMR 2.03(3), and an assessment of actions the district and its schools must take to improve that performance.

(d) District Improvement Plans and School Improvement Plans shall, in form and content, conform to requirements set forth in M.G.L. c. 69, § 1I.

(6) **Assistance from the Department**

(a) The Department shall make available a variety of such forms of assistance as examples, tools, templates, protocols, and surveys to assist districts and schools in assessing themselves and improving student performance.

(b) The Department shall also make available to districts, to the extent funding allows, professional development opportunities and assistance from Department staff members, Department contractors, or third party partners. Priority for receiving professional development or assistance, as well as the degree of intervention by the Department, shall increase from Level 1 to Level 5.

2.04 Accountability and Assistance for Districts and Schools in Levels 1-3

(1) **Placement of schools and districts in Levels 1 and 2**

(a) Schools shall be placed in Levels 1 and 2 of the framework for district accountability and assistance according to their accountability status under ESEA; districts shall be placed in Levels 1 and 2 of the framework according to their schools' accountability status under ESEA. The Department shall publish guidance as to what accountability status leads to placement in what level.

(b) Schools shall move from one level to another within Levels 1 and 2 by virtue of change in their accountability status.

(c) Districts shall move from one level to another within Levels 1 and 2 by virtue of change in the accountability status of their schools.

(2) **Placement of schools and districts in Level 3** A school shall be placed in Level 3 of the framework for district accountability and assistance if it scores in the lowest 20 percent statewide of schools serving common grade levels pursuant to 603 CMR 2.05(2)(a). A district shall be placed in Level 3 of the framework for district accountability and assistance if it has a school that has been placed in Level 3.

(3) **Self-assessment by districts in Level 3** A district in Level 3 shall use a process approved by the Department to complete a self-assessment, shall use the self-assessment to identify unmet conditions for school effectiveness (see 603 CMR 2.03(4)(b)), and shall address the unmet conditions by revising its District Improvement Plan and School Improvement Plans.

2.05 Accountability and Assistance for Districts and Schools in Level 4

(1) **Placement of districts in Level 4** If a district scores in the lowest 10 percent statewide of districts of the same grade levels as calculated pursuant to 603 CMR 2.06(1)(a), the Board may place it in Level 4 upon recommendation of the commissioner based on findings from a district review showing serious or widespread deficiencies, relating to one or more district standards, that are likely to have a substantial negative effect on the educational achievement of students attending school in the district and place the district at risk of being placed in Level 5 if deficiencies are not addressed effectively and in a timely manner.

(2) **Placement of schools in Level 4**

(a) A school shall be eligible for placement in Level 4 if it scores in the lowest 20 percent statewide of schools serving common grade levels on a single measure developed by the Department that takes into account:

(i) school MCAS performance over a four-year period based on Composite Performance Index (CPI) in English language arts; CPI in mathematics; and percentages of students scoring in the "warning" or "failing" category on MCAS; and

(ii) beginning on July 1, 2011, improvement in student academic performance.

The Department shall notify districts when it is determined that any of their schools is eligible for placement in Level 4. The notification shall be made to the school committee, superintendent, and local teachers' union or association president, and the principal of any school eligible for Level 4 placement.

(b) The commissioner may place a school in Level 4 on the basis of quantitative data including:

(i) school MCAS performance over a four-year period based on Composite Performance Index (CPI) in English language arts; CPI in mathematics; and percentages of students scoring in the "warning" or "failing" category on MCAS;

(ii) improvement in school MCAS performance as represented by change in CPI (for years available, up to four);

(iii) annual growth in MCAS performance for students at the school as compared with peers across the Commonwealth (for years available, up to four);

(iv) in the case of high schools, graduation and dropout rates; and

(v) other indicators of school performance including student attendance, dismissal, suspension, exclusion, and promotion rates upon the determination of each indicator's reliability and validity, or lack of demonstrated significant improvement for two or more consecutive years in core academic subjects, either in the aggregate or among subgroups of students, including designations based on special education, low-income, English language proficiency, and racial classifications;

or on the basis of information from a school or district review performed under M.G.L. c.15, s 55A.

(c) Not more than 4 percent of the total number of public schools may be in Levels 4 and 5, taken together, at any given time.

(d) Any school designated by the Board as chronically underperforming prior to 2010 may be placed in Level 4.

(3) **Notification** The Department shall notify districts of the placement of any of their schools in Level 4. The notification shall be made to the school committee, superintendent, and local teachers' union or association president, and the principal and the parent organization of any school placed in Level 4.

(4) **Appointment of assistance liaison and accountability monitor** Upon placement of a district in Level 4 or the placement of any of its schools in Level 4 the Department may appoint

(a) an assistance liaison

(i) to support the district in developing and carrying out a turnaround plan for each of its Level 4 schools, if any; and

(ii) if the district has been placed in Level 4, to support the district in district improvement planning pursuant to 603 CMR 2.05(8); and

(b) an accountability monitor to determine and report on

(i) whether the goals, benchmarks, and timetable in the turnaround plan for each of the district's Level 4 schools, if any, are being met; and

(ii) if the district has been placed in Level 4, whether the goals, benchmarks, and timetable in the district's District Improvement Plan approved pursuant to 603 CMR 2.05(8) are being met.

(5) **Turnaround plans for Level 4 schools**

(a) The turnaround plan developed for each school placed in Level 4 shall

(i) be authorized, pursuant to M.G.L. c. 69, s. § 1J(j), for a period of up to three years;

(ii) fulfill the other requirements of M.G.L. c. 69, § 1J;

(iii) provide for the implementation of the conditions for school effectiveness in 603 CMR 2.03(4)(b);

(iv) include benchmarks by which to measure progress toward the annual goals included in the plan pursuant to M.G.L. c. 69, § 1J, and the conditions for school effectiveness, and a timetable for achieving those benchmarks;

(v) include descriptions of the assistance to be provided by the Department in support of the action steps in the plan, as agreed on by the Department and the superintendent, subject to the availability of resources for the Department to provide the assistance; and

(vi) be prepared on a format provided by the Department.

(b) Once the superintendent has received the recommendations of the local stakeholder group under M.G.L. c. 69, § 1J(b), the superintendent may request that the school committee and any union bargain or reopen the bargaining of the relevant collective bargaining agreement, pursuant to M.G.L. c. 69, § 1J(g). If necessary, the 30 days provided by M.G.L. c. 69, § 1J(e) for the superintendent to submit a turnaround plan for modifications to the local stakeholder group, school committee, and commissioner shall be extended, without exceeding the time periods mandated by M.G.L. c. 69, § 1J(g), to provide time for bargaining, ratification, a dispute resolution process, the submission of a decision by the joint resolution committee, or a resolution by the commissioner, pursuant to M.G.L. c. 69, § 1J(g).

(c) Within 30 days of the issuance of the superintendent's final turnaround plan under M.G.L. c. 69, § 1J(e), the commissioner shall review the plan and may, in consultation with the superintendent, modify the plan if the commissioner determines that

(i) such modifications would further promote the rapid academic achievement of students in the school;

(ii) a component of the plan was included, or a modification under M.G.L. c. 69, § 1J(e) was excluded, on the basis of demonstrably false information or evidence; or

(iii) the superintendent failed to meet the requirements of M.G.L. c. 69, § 1J(b) to (e), inclusive.

(d) Within 30 days of the issuance of the superintendent's final turnaround plan under M.G.L. c. 69, § 1J(e), the school committee or local union may appeal to the commissioner one or more components of the plan pursuant to M.G.L. c. 69, § 1J(f). Within 30 days of the receipt of such appeal, the commissioner shall decide the appeal and may, in consultation with the superintendent, make one or more modifications to the plan based on the appeal if the commissioner makes any of the determinations in 603 CMR 2.05(5)(c)(i)-(iii). The commissioner's decision on the appeal shall be final.

(e) Within 30 days of the receipt of the last appeal made under M.G.L. c. 69, § 1J(f) and 603 CMR 2.05(5)(d), or, if no such appeal is received within 30 days of the issuance of the superintendent's final turnaround plan under M.G.L. c. 69, § 1J(e), at the expiration of those 30 days, the commissioner shall return the turnaround plan to the superintendent

incorporating any modifications made under 603 CMR 2.05(5)(c) or (d), or both. Such return of the plan to the superintendent shall constitute the commissioner's approval, pursuant to M.G.L. c. 69, § 1J(b), of the plan returned.

(f) During school year 2009-2010, the commissioner may allow for an expedited turnaround plan pursuant to M.G.L. c. 69, § 1J(b), for Level 4 schools that have been previously designated as underperforming and where the district has a turnaround plan that has had a public comment period and approval of the local school committee.

(6) **Annual reviews of Level 4 schools** Superintendents shall use a format provided by the Department for the reviews to be submitted to the commissioner and school committee at least annually pursuant to M.G.L. c. 69, § 1J(k).

(7) **Receiver for a school in Level 4**

(a) If the superintendent appoints a receiver for a school in Level 4 pursuant to M.G.L. c. 69, s. 1J(h), the superintendent shall define the scope of the receiver's powers, up to and including all of the powers of the superintendent over the school, including all of the powers granted by M.G.L. c. 69, s. 1J. The superintendent may from time to time modify the scope of the receiver's powers based on conditions in the school. The receiver shall report directly to the superintendent.

(b) If the commissioner requires the superintendent to terminate the receiver for a school in Level 4 pursuant to M.G.L. c. 69, § 1J(k), the superintendent may, with the approval of the commissioner, select and appoint another receiver for the school in accordance with M.G.L. c. 69, § 1J(h) and 603 CMR 2.05(7)(a).

(8) **District improvement planning for Level 4 districts**

(a) The Department shall use

(i) data on student performance and the District Analysis and Review Tool provided by the Department under 603 CMR 2.03(3); and

(ii) qualitative information about the district, including information from the most recent district review

to establish goals and benchmarks for each Level 4 district to achieve in order to correct the serious or widespread deficiencies identified in the district, and to establish a timetable for achieving them.

(b) Each Level 4 district shall revise its District Improvement Plan to include the goals and benchmarks established by the Department under 603 CMR 2.05(8)(a), along with strategies and action steps to achieve those goals and benchmarks by the timetable established by the Department.

(c) Each Level 4 district shall submit its revised District Improvement Plan and any successor District Improvement Plan for approval by the Department. A district whose revised District Improvement Plan is approved by the Department shall receive priority for Department assistance. From year to year, continued priority for Department assistance shall be dependent on the district's success in achieving the goals and benchmarks in the approved District Improvement Plan or approved successor District Improvement Plan in accordance with the approved timetable.

(9) **Annual report to Board** The commissioner shall report annually to the Board on the progress made by districts and schools in Level 4.

(10) **Removal of school from Level 4**

(a) The commissioner shall define for each Level 4 school the academic and other progress that it must make for it to be removed from Level 4. Such progress may include

(i) an increase in student achievement for three years for students overall and for each subgroup of students, as shown by

a. an increase in MCAS scores and an increase in average student growth percentile;

b. a reduction in the proficiency gap;

c. (for a high school) a higher graduation rate; and

d. (for a high school) a measure of postsecondary success, once the Department identifies one that is sufficiently reliable, valid, and timely; and

(ii) progress in implementing the conditions for school effectiveness described in 603 CMR 2.03(4)(b).

(b) The commissioner, in defining the required progress for each school, shall customize it to the particular reasons the school was placed in Level 4, defining it as any or all of the progress in 2.05(10)(a)(i) and (ii), or any other progress the commissioner determines appropriate.

(c) After consultation with the superintendent, the commissioner shall remove a school from Level 4 when, at any time, the commissioner determines, based on evidence that may include evidence from a report from the accountability monitor appointed pursuant to 603 CMR 2.05(4)(b), a review by the superintendent submitted pursuant to M.G.L. c. 69, § J(k), a review conducted by the commissioner pursuant to M.G.L. c. 69, § 1J(l), or a district review or a follow-up review, that

(i) the school has achieved the academic and other progress defined by the commissioner under 603 CMR 2.05(10)(a) and (b) as necessary to allow it to be removed from Level 4; and

(ii) the district has the capacity to continue making progress in improving school performance without the accountability and assistance provided due to the school's placement in Level 4.

(d) At the expiration of the turnaround plan, in conducting a review of the school pursuant to M.G.L. c. 69, § 1J(l), the commissioner shall consider whether the conditions described in 603 CMR 2.05(10)(c)(i) and (ii) exist. If the commissioner determines that both of these conditions exist, he or she shall remove the school from Level 4.

(e) Notwithstanding the foregoing requirements of this subsection, the commissioner may remove from Level 4 any school for which he or she approves a proposal of closure.

(11) **Effect of removal of school from Level 4; transitional period**

(a) Upon the commissioner's removal of a school from Level 4 pursuant to 603 CMR 2.05(10)(c) or (d), the provisions of M.G.L. c. 69, § 1J, for schools designated as

underperforming shall no longer apply to it and the employment of any receiver for the school shall end.

(b) The district and school may continue their relationship with any external partner appointed to advise or assist the superintendent in the implementation of the turnaround plan and may continue to use the turnaround plan in order to continue to improve school performance, renewing or revising it as appropriate, provided that any feature of the turnaround plan that was adopted pursuant to M.G.L. c. 69, § 1J(d), in contravention of any general or special law to the contrary shall be discontinued unless

(i) no more than one year before the removal of the school from Level 4 the superintendent proposed to continue such feature of the turnaround plan for a transitional period after the school's removal from Level 4, supporting this proposal with a written explication of the reasons this continuation is necessary and providing the school committee, the teachers' union or association, and the parent organization for the school with a copy of the proposal and supporting documents; and

(ii) before removing the school from Level 4 the commissioner determined, after considering any opposition from the school committee, the teachers' union or association, or the parent organization for the school, that such feature of the turnaround plan would contribute to the continued improvement of the school and should continue after the removal.

The superintendent may propose to continue and the commissioner may allow to continue more than one such feature of the turnaround plan.

(c) Upon making a determination pursuant to 603 CMR 2.05(11)(b)(ii) that such feature or features of the turnaround plan should continue, the commissioner shall define the progress that the school must make for each continuing feature of the plan to be discontinued.

(d) On determination by the commissioner at any time, based on evidence that may include evidence from a school or district review or a follow-up review, that the school has made the progress defined under 603 CMR 2.05(11)(c) as necessary to allow a continuing feature of the turnaround plan to be discontinued

(i) such feature shall be discontinued; and

(ii) any powers granted to the commissioner or Board with respect to the school under M.G.L. c. 69, § 1J, that did not cease on removal of the school from Level 4 shall cease.

(e) Two years after the removal of the school from Level 4, if any of the continuing features of the turnaround plan has yet to be discontinued, the commissioner shall conduct a review of the school to determine whether such continuing feature or features should remain in place or be discontinued.

(12) **Removal of district from Level 4**

(a) Upon placement of a district in Level 4 pursuant to 603 CMR 2.05(1), the commissioner shall define for the district the academic and other progress that it must make for it to be removed from Level 4. Such progress may include

(i) an increase in student achievement for three years for students overall and for each subgroup of students, as shown by

a. an increase in MCAS scores and an increase in average student growth percentile;

b. a reduction in the proficiency gap;

c. a higher graduation rate; and

d. a measure of postsecondary success, once the Department identifies one that is sufficiently reliable, valid, and timely;

(ii) the implementation of district systems and practices that meet district standards established under 603 CMR 2.03(4); and

(iii) progress in implementing in the district's schools the conditions for school effectiveness described in 603 CMR 2.03(4)(b).

(b) The commissioner, in defining the required progress for the district, shall customize it to the particular reasons the district was placed in Level 4, defining it as any or all of the progress in 2.05(12)(a)(i), (ii), and (iii), or any other progress the commissioner determines appropriate.

(c) The commissioner shall remove the district from Level 4 when the commissioner determines, based on evidence that may include evidence from a report from the accountability monitor appointed pursuant to 603 CMR 2.05(4)(b) or from a follow-up review, that

(i) the district has achieved the academic and other progress defined by the commissioner under 603 CMR 2.05(12)(a) and (b) as necessary to allow it to be removed from Level 4; and

(ii) the district has the capacity to continue making progress without the accountability and assistance provided by Level 4.

2.06 Accountability and Assistance for Districts and Schools in Level 5

(1) **Placement of districts in Level 5**

(a) A district shall be eligible for placement in Level 5 if it is not a single-school district and it scores in the lowest 10 percent statewide of districts of the same grade levels on a single measure developed by the Department that takes into account:

(i) district MCAS performance over a four-year period based on Composite Performance Index (CPI) in English language arts; CPI in mathematics; and percentages of students scoring in the "warning" or "failing" category on MCAS; and

(ii) beginning on July 1, 2011, improvement in student academic achievement.

(b) The Board may place an eligible district in Level 5 of the framework for district accountability and assistance, if the commissioner so recommends, on the basis of one or more of the following:

(i) a district review report;

(ii) a report from an accountability monitor appointed pursuant to 603 CMR 2.05(4)(b);

(iii) a follow-up review report;

(iv) quantitative indicators such as student attendance, dismissal, suspension, exclusion, promotion, graduation, and dropout rates, upon the determination of each indicator's reliability and validity, or lack of demonstrated significant improvement for two or more consecutive years in core academic subjects, either in the aggregate or among subgroups of students, including designations based on special education, low-income, English language proficiency, and racial classifications, or annual growth in MCAS performance for students in the district as compared with peers across the Commonwealth; or

(v) the failure of a Level 4 district to meet, in a timely manner, the benchmarks or goals in its current District Improvement Plan as approved by the Department pursuant to 603 CMR 2.05(8).

(c) Not more than 2.5 percent of the total number of school districts may be in Level 5 at any given time.

(d) Before the commissioner recommends that an eligible district be placed in Level 5, a district review team including at least one member with expertise in the academic achievement of students with limited English proficiency shall conduct a district review to assess and report on the reasons for the district's underperformance and the prospects for improvement, unless the commissioner determines that a new review is unnecessary because a district review conducted within the last year is adequate.

(e) Before placing a district in Level 5, the Board shall consider the findings of the most recent district review, as well as multiple quantitative indicators of district quality such as those listed in 603 CMR 2.06(1)(b)(iv).

(f) School district and municipal officials, including the school committee, as well as the local teachers' union or association president or designee, a representative of the local parent organization, and members of the public, shall have an opportunity to be heard by the Board before final action by the Board to place the district in Level 5.

(2) **Placement of schools in Level 5**

(a) The commissioner may place a Level 4 school in Level 5 at the expiration of its turnaround plan if the commissioner determines

(i) that the school has failed to improve as required by the goals, benchmarks, or timetable of the turnaround plan; or

(ii) that the school has failed to make significant improvement and that conditions in the district make it unlikely that the school will make significant improvement unless it is placed in Level 5.

(b) School, school district, and municipal officials, including the school committee, as well as the local teachers' union or association president or designee, a representative of the school's parent organization, and family members of students at the school, shall have an opportunity to meet with the commissioner or his or her designee before the commissioner places a school in Level 5.

(3) **Appointment and powers of receiver for a district in Level 5**

(a) Following the placement of a district in Level 5 under 603 CMR 2.06(1)(b), the commissioner, on behalf of the Board, shall appoint a receiver for the district pursuant to M.G.L. c. 69, § 1K(a).

(b) The receiver shall have the powers provided to the receiver by M.G.L. c. 69, § 1K, including all of the powers of the superintendent and school committee and full managerial and operational control over the district, provided that the district shall remain the employer of record for all other purposes, and provided further that the commissioner may define the scope of the receiver's powers up to those set forth in M.G.L. c. 69, § 1K, based on conditions in the district or its schools. The commissioner may from time to time modify the scope of the receiver's powers based on conditions in the district or its schools.

(4) **Replacement of receiver for a district in Level 5** If the commissioner terminates the receiver for a district in Level 5 pursuant to M.G.L. c. 69, § 1K(h), the commissioner shall appoint another receiver for the district in accordance with M.G.L. c. 69, § 1K(a) and 603 CMR 2.06(3)(b).

(5) **Receiver for a school in Level 5**

(a) A receiver appointed by the commissioner for a school in Level 5 pursuant to M.G.L. c. 69, s. 1J(r), shall have all of the powers that the superintendent previously had over the school and all of the powers granted to a receiver for a Level 5 school by M.G.L. c. 69, s. 1J. The receiver shall report directly to the commissioner.

(b) If the commissioner terminates the receiver for a school in Level 5 pursuant to M.G.L. c. 69, § 1J(v), the commissioner may appoint another receiver for the school in accordance with M.G.L. c. 69, § 1J(r) and 603 CMR 2.06(5)(a).

(6) **Turnaround plans for Level 5 schools** The turnaround plan developed for each school placed in Level 5 shall

(a) be authorized, pursuant to M.G.L. c. 69, § 1J(t), for a period of up to three years;

(b) fulfill the other requirements of M.G.L. c. 69, § 1J;

(c) provide for the implementation of the conditions for school effectiveness in 603 CMR 2.03(4)(b);

(d) include benchmarks by which to measure progress toward the annual goals included in the plan pursuant to M.G.L. c. 69, § 1J, and the conditions for school effectiveness, and a timetable for achieving those benchmarks;

(e) include descriptions of the assistance to be provided by the Department in support of the action steps in the plan, subject to the availability of resources for the Department to provide the assistance; and

(f) be prepared on a format developed by the Department.

(7) **Turnaround plans for Level 5 districts** The turnaround plan developed for each district placed in Level 5 shall

(a) focus, pursuant to M.G.L. c. 69, §1K(b), on any Level 5 school or schools in the district and, using the most recent district review report as a guide, on any district policies or

practices that have contributed to the placement of the school or schools or district in Level 5;

(b) be authorized, pursuant to M.G.L. c. 69, § 1K(f), for a period of up to three years;

(c) fulfill the other requirements of M.G.L. c. 69, § 1K;

(d) if the district has any Level 4 or Level 5 schools, provide for the implementation in the district of the systems and processes necessary to bring about the conditions for school effectiveness in 603 CMR 2.03(4)(b);

(e) include, for the district: benchmarks by which to measure progress toward the annual goals included in the plan pursuant to M.G.L. c. 69, § 1K, and a timetable for achieving those benchmarks;

(f) describe the assistance to be provided by the Department in support of the action steps in the plan, subject to the availability of the resources for the Department to provide the assistance; and

(g) be prepared on a format developed by the Department.

(8) **Quarterly reports for Level 5 schools and districts**

(a) Quarterly reports for Level 5 schools, including the review by the commissioner to be submitted at least annually to the superintendent and the school committee, shall be submitted pursuant to M.G.L. c. 69, § 1J(u) and (v) on a format developed by the Department.

(b) Quarterly reports for Level 5 districts, including the evaluation by the commissioner to be submitted at least annually to the Board and the school committee, shall submitted pursuant to M.G.L. c. 69, § 1K(g) and (h) on a format developed by the Department.

(9) **Reports to the Board** The commissioner shall report regularly to the Board on the progress made by each district and school in Level 5.

(10) **Removal of school from Level 5**

(a) The commissioner shall define for each Level 5 school the academic and other progress that it must make for it to be removed from Level 5. Such progress may include

(i) an increase in student achievement for three years for students overall and for each subgroup of students, as shown by

a. an increase in MCAS scores and an increase in average student growth percentile;

b. a reduction in the proficiency gap;

c. (for a high school) a higher graduation rate; and

d. (for a high school) a measure of postsecondary success, once the Department identifies one that is sufficiently reliable, valid, and timely; and

(ii) progress in implementing the conditions for school effectiveness described in 603 CMR 2.03(4)(b).

(b) The commissioner, in defining the required progress for each school, shall customize it to the particular reasons the school was placed in Level 5, defining it as any or all of the

progress in 603 CMR 2.06(10)(a)(i) and (ii), or any other progress the commissioner determines appropriate.

(c) The commissioner shall remove a school from Level 5 when, at any time, the commissioner determines, based on evidence that may include a report from the accountability monitor appointed pursuant to 603 CMR 2.05(4)(b), from the school's or district's receiver, if any, from a district review, or from a follow-up review, that

(i) the school has achieved the academic and other progress defined by the commissioner under 603 CMR 2.06(10)(a) and (b) as necessary to allow it to be removed from Level 5; and

(ii) the district has the capacity to continue making progress in improving school performance without the accountability and assistance provided due to the school's placement in Level 5.

(d) At the expiration of the turnaround plan, in conducting a review of the school pursuant to M.G.L. c. 69, § 1J(w), the commissioner shall consider whether the conditions described in 603 CMR 2.06(10)(c)(i) and (ii) exist. If the commissioner determines that both of these conditions exist, he or she shall remove the school from Level 5.

(11) **Effect of removal of school from Level 5; transitional period**

(a) Upon the commissioner's removal of a school from Level 5, the provisions of M.G.L. c. 69, § 1J, for schools designated as chronically underperforming shall no longer apply to it and the employment of any receiver for the school shall end.

(b) The district and school may continue to use the turnaround plan in order to continue to improve school performance, renewing or revising it as appropriate, provided that any feature of the turnaround plan that was adopted pursuant to M.G.L. c. 69, § 1J(o), in contravention of any general or special law to the contrary shall be discontinued unless the commissioner determined before removing the school from Level 5 that such feature of the turnaround plan would contribute to the continued improvement of the school and should continue for a transitional period after the removal. The commissioner may allow more than one such feature of the turnaround plan to continue.

(c) Upon making a determination pursuant to 603 CMR 2.06(11)(b) that such feature or features of the turnaround plan should continue, the commissioner shall define the progress that the school must make for each continuing feature of the plan to be discontinued.

(d) On determination by the commissioner at any time, based on evidence that may include evidence from a school or district review or a follow-up review, that the school has made the progress defined under 603 CMR 2.06(11)(c) as necessary to allow a continuing feature of the turnaround plan to be discontinued

(i) such feature shall be discontinued; and

(ii) any powers granted to the commissioner or Board with respect to the school under M.G.L. c. 69, § 1J, that did not cease on removal of the school from Level 5 shall cease.

(e) Two years after the removal of the school from Level 5, if any of the continuing features of the turnaround plan has yet to be discontinued, the commissioner shall conduct a review of the school to determine whether such continuing feature or features should remain in place or be discontinued.

(12) **Termination of receivership and removal of district from Level 5**

(a) The commissioner shall define for each Level 5 district the academic and other progress that it must make for it to be removed from Level 5. Such progress may include

(i) an increase in student achievement for three years for students overall and for each subgroup of students, as shown by

a. an increase in MCAS scores and an increase in average student growth percentile;

b. a reduction in the proficiency gap;

c. a higher graduation rate; and

d. a measure of postsecondary success, once the Department identifies one that is sufficiently reliable, valid, and timely;

(ii) the implementation of district systems and practices that meet district standards established under 603 CMR 2.03(4); and

(iii) progress in implementing in the district's schools the conditions for school effectiveness described in 603 CMR 2.03(4)(b).

(b) The commissioner, in defining the required progress for the district, shall customize it to the particular reasons the district was placed in Level 5, defining it as any or all of the progress in 603 CMR 2.06(12)(a)(i), (ii), and (iii), or any other progress the commissioner determines appropriate.

(c) The commissioner shall terminate the receivership and remove the district from Level 5 when, at any time, the commissioner determines, based on evidence that may include a report from the district's receiver or a follow-up review, that

(i) the district has achieved the academic and other progress defined by the commissioner under 603 CMR 2.06(12)(a) and (b) as necessary to allow it to be removed from Level 5; and

(ii) the district has the capacity to continue making progress without the accountability and assistance provided by Level 5.

(d) At the expiration of the turnaround plan, in reevaluating the district's Level 5 status pursuant to M.G.L. c. 69, § 1K(i), the commissioner shall consider whether the conditions described in 603 CMR 2.06(12)(c)(i) and (ii) exist. If the commissioner determines that both of these conditions exist, he or she shall terminate the receivership and remove the district from Level 5.

(13) **Effect of removal of district from Level 5; transitional period**

(a) Upon the commissioner's removal of a district from Level 5, the provisions of M.G.L. c. 69, § 1K, for districts designated as chronically underperforming shall no longer apply to it and the employment of the receiver shall end.

(b) The district may continue to use the turnaround plan in order to continue to improve students' academic performance, renewing or revising it as appropriate, provided that any feature of the turnaround plan that was adopted pursuant to M.G.L. c. 69, § 1K(d), in contravention of any general or special law to the contrary shall be discontinued unless the commissioner determined, before removing the district from Level 5, that such feature of the turnaround plan would contribute to the continued improvement of the district and should continue for a transitional period after the removal. The commissioner may allow more than one such feature of the turnaround plan to continue.

(c) Upon making a determination pursuant to 603 CMR 2.06(13)(b) that such feature or features of the turnaround plan should continue, the commissioner shall define the progress that the district must make for each continuing feature of the plan to be discontinued.

(d) On determination by the commissioner at any time, based on evidence that may include evidence from a district review or a follow-up review, that the district has made the progress defined under 603 CMR 2.06(13)(c) as necessary to allow a continuing feature of the turnaround plan to be discontinued

(i) such feature shall be discontinued; and

(ii) any powers granted to the commissioner or Board with respect to the district under M.G.L. c. 69, § 1K, that did not cease on removal of the district from Level 5 shall cease.

(e) Two years after the removal of the district from Level 5, if any of the continuing features of the turnaround plan has yet to be discontinued, the commissioner shall conduct a review of the district to determine whether such continuing feature or features should remain in place or be discontinued.

(14) **Petition by school committee of a Level 5 district**

(a) When the school committee of a Level 5 district petitions the commissioner, pursuant to M.G.L. c. 69, § 1K (i), for either modification of the turnaround plan or elimination of the turnaround plan and termination of the receivership, the commissioner shall decide the petition after considering the following:

(i) written arguments and supporting documentation submitted with the petition by the school committee;

(ii) written arguments and supporting documentation submitted in response to the petition by the receiver; and

(iii) the report of any follow-up review conducted since the district was placed in Level 5.

(b) If no follow-up review has been conducted within the last year before the commissioner's receipt of the petition and the commissioner determines that such a review would be useful in deciding on the petition, the commissioner may cause one to be conducted and delay the decision on the petition until 30 days after receiving the follow-up review

report, provided that a decision on the petition shall be made within four months of the commissioner's receipt of the petition.

(c) Within 30 days of receiving the commissioner's decision, the school committee may appeal an adverse decision to the Board. The Board shall consider the evidence described in 603 CMR 2.06(14)(a)(i)-(iii) and may consider other evidence from the school committee, receiver, and commissioner. The decision of the Board shall be made within 60 days of receiving the appeal and shall be final.

(d) Neither the process before the commissioner nor the process before the Board shall be an adjudicatory hearing.

(e) No petition for the elimination of the turnaround plan and termination of the receivership shall be granted unless the commissioner—or, in the case of an appeal, the Board—determines

(i) that the district has achieved the progress defined by the commissioner under 603 CMR 2.06(12)(a) as necessary to allow the district to be removed from Level 5 or that the district has achieved other, comparable or superior progress; and

(ii) that the district has the capacity to continue making progress without the accountability and assistance provided by Level 5.

(f) Upon a decision by the commissioner or the Board granting a petition for the elimination of the turnaround plan and termination of the receivership, the receivership shall be terminated and the district removed from Level 5.

2.07 Mathematics Content Assessments at Level 4 and Level 5 Schools

(1) **Requirement of taking a mathematics content assessment** The superintendent or the school's receiver, if any, may require all mathematics teachers at a Level 4 school to take a mathematics content assessment approved by the Department. The commissioner or the school's receiver, if any, may require all mathematics teachers at a Level 5 school to take a mathematics content assessment approved by the Department. A mathematics teacher shall be required to take a mathematics content assessment pursuant to 603 CMR 2.07(1) no more than once a year.

(2) **Use of results** Individual results on a mathematics content assessment taken pursuant to 603 CMR 2.07(1) shall be used by the mathematics teacher and the school principal in developing or revising professional development plans, as provided in the Recertification Regulations, 603 CMR 44.04(4), and shall be considered by school and district administrators in turnaround planning in the school. These individual results are to be used for diagnostic and turnaround planning purposes only, and individual mathematics teachers' results shall not be considered public records.

(3) **Exceptions**

(a) A mathematics teacher who would otherwise be required to take a mathematics content assessment pursuant to 603 CMR 2.07(1) shall not be required to take it if the teacher

(i) has passed the Elementary Mathematics, Middle School Mathematics, or Mathematics test of the Massachusetts Tests for Educator Licensure or has passed or been deemed under 603 CMR 7.14(14)(g) to have passed the Mathematics subtest of the General Curriculum test of the Massachusetts Tests for Educator Licensure; and

(ii) is appropriately licensed for the mathematics the teacher is teaching.

(b) The superintendent or commissioner or the school's receiver, if any, may waive the mathematics content assessment requirement for an individual mathematics teacher based on a finding that the teacher has demonstrated mastery of mathematics or that special circumstances exist that make the assessment requirement inappropriate or immaterial.

Regulatory Authority:

M.G.L. c. 69, § 1B; c. 69, §§ 1J and 1K, as amended by St. 2010, c. 12, § 3; c. 71, § 38G.

Appendix E3: Applicable Legal Document, Relative to the Achievement Gap Process for "Underperforming" Schools

Description of M.G.L. Ch 69, Section 1J
An Act Relative to the Achievement Gap Process for "Underperforming" Schools

A. Within 30 Days of a school being designated as underperforming, the superintendent shall **convene a local stakeholder group** of not more than 13 individuals to solicit recommendations on a redesign plan*. The group shall meet publicly and include

(1) ESE designee
(2) School committee chair/designee
(3) Union president/designee
(4) Administrator from the school (superintendent choice)
(5) Teacher from the school (faculty choice)
(6) Parent from the school (parent association)
(7) Social service representative (superintendent choice)
(8) As appropriate, workforce development agencies (superintendent choice)
(9) EEC rep or DHE rep (EEC commissioner or secretary choice)
(10) Community member (chief executive of town choice)

B. Within 45 days of its initial meeting, the **stakeholder group** shall make its **recommendations to the superintendent**. The superintendent "shall provide due consideration to the recommendations".

C. Within 30 days of the local stakeholder group's recommendations, the **superintendent shall create a redesign plan** for up to three years.

C -1 The plan **must include steps** to address the following:

(1) Address achievement gaps (LEP, Sped, low-income)
(2) Alternative ELL programs ("not withstanding chapter 71A")
(3) Financial plan for the school
(4) Address social service and health needs ("ready to learn")
(5) Improve or expand child welfare services and law enforcement ("safe and secure learning environment")
(6) Improve workforce development services ("meaningful employment skills and opportunities")

C – 2 The Redesign Plan **shall include measurable annual goals**, including but not limited to:

(1) MCAS
(2) Progress in areas of academic underperformance
(3) Progress among subgroups
(4) Reduction of achievement gaps

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(5) Student promotion, graduation, and dropout rates

(6) Student attendance, dismissal, and exclusion rates

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(7) College readiness
(8) Developmentally appropriate child assessments (preK-3)
(9) Acquisition of 21st Century Skills
(10) Student safety and discipline
(11) Parent and family engagement
(12) Building a culture of academic success among students
(13) Building a culture of student support among school faculty and staff

C – 3 The Superintendent **may include** the following:

(1) Expand, alter, or replace the curriculum
(2) Reallocate existing budget
(3) Provide additional district funds (up to per-pupil)
(4) Differentiate compensation of school staff (bargained with union)
(5) Expand school day and/or year
(6) Add pre-K and full-day kindergarten
(7) Require all staff to re-apply for employment *(see lines 237-242 for details on "bumping rights" collective bargaining agreement applies, except no bumping of teacher with professional teaching status "during a school year")*
(8) Limit, suspend, or change collective bargaining agreements (as long as reduced pay is commensurate with reduced hours) *(see lines 286-323 for details about the bargaining process: "good faith bargaining" completed within 30 days; ratification within 10 days ;unresolved issues submitted to 'joint resolution committee appointed within 3 days; dispute heard within 10 days; ruling within 10 days; Commissioner resolves if JRC does not make ruling within 10 days)*
(9) Limit, suspend or change 1 or more school district policy or practice related to the school
(10) Include job-embedded professional development with teacher input and feedback
(11) Increase teacher planning time and collaboration focused on improving student instruction
(12) Plan professional development for administrators that includes leadership skills and distributed leadership
(13) Provide for a continuum of high-expertise teachers by aligning hiring, induction, evaluation, professional development, advancement, culture, and organizational structure
(14) Search for and study best practices
(15) Address mobility and transiency
(16) Add components based on reasons for underperformance and recommendations of stakeholder group

D. Within 30 days, a **school committee or local union may appeal to the commissioner** regarding one or more components of the plan.

E. **Within 30 days**, the **commissioner may**, in consultation with the superintendent, **modify** the plan.

F. Each redesign plan shall be **authorized for a period of not more than 3 years**.

G. The **superintendent** shall be **responsible for meeting the goals** of the redesign plan.

H. A teacher with professional teacher status in a Level 4 school may be **dismissed for good cause** with expedited arbitration. *(see lines 243-257 for details of the process)*

I. The superintendent, in consultation with principal, prepares and submits an **annual review of the school's progress** to school committee and commissioner.

**** State law refers to the plan as a "turnaround plan" while the federal grant refers to an "intervention plan". ESE is referring to both as the "redesign plan".***

Human Resources & Professional Development	1 [Under-developed]	2 [Developing]	3 [Well-Developed]	4 [Embedded & Sustainable]
1. Staff Recruitment, Selection, and Assignment	Principals have a minimal pool of candidates, or district support, or the authority to ensure that staff in their building are qualified and committed.	Most schools and district offices have qualified and committed staff, but the Human Resources practices are not clear, documented, known and/or strong enough to ensure that effective staff are incentivized to remain in the district, or to recruit and select qualified staff in the event of staff turnover or new staffing needs in the district.	The following elements of staff recruitment, selection, and assignment are in place: a. The district identifies, recruits, and selects staff who are committed, qualified, and contribute to a professional learning community; b. Teachers are all qualified to provide high quality instruction in their content area; c. All professional staff have appropriate Massachusetts licensure; d. Individuals are hired on waivers only in the event of unfilled professional positions for which other qualified candidates could not be identified; e. Individuals on waivers are provided mentoring and support to attain the standard of substantial annual progress toward appropriate licensure; f. Roles and career opportunities are available for exemplary teachers to have responsibility for instructional leadership and to enhance learning; g. Principals have the authority, guidance, and assistance to make staffing decisions based on the school's improvement plan and student needs; h. Level 4 and 5 principals are supported to select, hire, transfer, evaluate, retain, and assign staff to positions in the school based on evidence of teacher performance and commitment.	Human Resource management and professional development is marked by all of the following: a. The district identifies, attracts, and recruits qualified and effective personnel. b. The district supports, develops, improves, promotes, and retains qualified and effective professional staff.
2. Supervision and Evaluation	The tools for supervision and evaluation are ineffective to promote growth, although some supervisors may be effective in spite of limited support for effective supervision and evaluation practices.	There is some evidence that the district has put into place a system of staff supervision and evaluation but the processes are inconsistently implemented and/or communicated to stakeholders.	The following elements of supervision and evaluation are in place: a. Annual administrator evaluations describe performance on assigned duties, contain feedback for growth, and are used for improvement; b. Administration compensation and continued employment are linked to data—based, measurable evidence of effectiveness; c. School leaders regularly monitor and support teachers to meet expectations for improving student learning; d. Administrators regularly assess the strengths and needs of assigned staff during the supervision process; e. Administrators use information gathered from supervision and monitoring supervision to inform the development of programs, goals, professional development, needs for additional support; f. The district's evaluation procedure for teachers' performance is research-based, occurs at least every two years, and is effectively implemented according to Education Reform Act requirements; g. Persistently low-performing staff are removed after due process.	
3. Professional Development	Some resources may exist to support professional development for staff but it is generally the responsibility of individual staff members to identify and take advantage of opportunities as they arise. Members of staff who are not required by law to engage in professional development may choose not to do so.	District and school leadership provides basic professional development opportunities for staff around core content areas, but does not always take into account the individual needs of staff members when planning for professional development.	Professional Development is marked by: a. The PD program is shaped by data on student, teacher, program needs. b. PD enriches content-area expertise and knowledge of research-based and content-specific instructional practice. c. The PD program develops educators at all stages in their careers. d. The district provides systematic supports to make the transition from novice to accomplished educator. e. New teachers and administrators receive an orientation, coaching or mentoring, and support for at least the first 2 years. f. PD includes job-embedded and individual learning. g. The district and schools use structures for regular, frequent department and/or grade-level collaboration to improve curricula and instruction. h. Level 4 and 5 schools have 1 ELA/math coach for every 25 teachers, and at least 1 hour/week and 5 days/year for directed, collaborative work.	

Appendix E5: Process for Identifying Level 4 Candidate Schools

The *Framework for District Accountability and Assistance* calls for the use of multiple indicators to identify schools and districts as candidates for Level 4 accountability, assistance, and intervention activities. This document describes the methodology we used in identifying Level 4 candidate schools. We sought to identify schools that were both low performing on the Massachusetts Comprehensive Assessment System over a four year period and not showing signs of substantial improvement over that interval.

Methodology:

Our universe for Level 4 schools consisted of all 1,831 schools in the state. We produced percentile ranks (1-99) for all schools[1] based on several *performance* indicators:

2006 ELA Composite Performance Index (CPI)	2006 Math Composite Performance Index (CPI)
2007 ELA Composite Performance Index (CPI)	2007 Math Composite Performance Index (CPI)
2008 ELA Composite Performance Index (CPI)	2008 Math Composite Performance Index (CPI)
2009 ELA Composite Performance Index (CPI)	2009 Math Composite Performance Index (CPI)
2006 ELA MCAS % Warning/Failing	2006 Math MCAS % Warning/Failing
2007 ELA MCAS % Warning/Failing	2007 Math MCAS % Warning/Failing
2008 ELA MCAS % Warning/Failing	2008 Math MCAS % Warning/Failing
2009 ELA MCAS % Warning/Failing	2009 Math MCAS % Warning/Failing

We then generated a composite of those percentile ranks for each school and selected the lowest 65 schools based on that composite average. Then, of these 65 lowest *performing* schools, we sought to determine which of them exhibited the lowest amount of positive *movement* over the past four years. In other words, we tried to answer to the question: Of the lowest performing schools in the state, which are the most "stuck"? We used six indicators to determine movement:

The mean of 2008 and 2009 ELA CPI *minus* the mean of 2006 and 2007 CPI
The mean of 2008 and 2009 Math CPI *minus* the mean of 2006 and 2007 CPI
2008 Math Median Student Growth Percentile*
2008 ELA Median Student Growth Percentile*
2009 Math Median Student Growth Percentile
2009 ELA Median Student Growth Percentile

*In the one instances where a 2008 Median Student Growth Percentiles was not able to be calculated, we used 50 (the state average) as a proxy.

We then generated percentile ranks for each movement indicator and created a composite of those ranks. Of the lowest performing 65 schools, we identified half (32.5 rounded up to 33) that exhibited the least amount of improvement and designated those schools as Level 4, thus giving us the lowest schools according to both achievement and growth.

Handling Schools that Graduate Students

We included the following indicators of performance (in addition to the indicators listed above) specific to those schools that graduate students and ranked them separately:

2005-2006 Dropout Rate	2006 5-year graduation rate
2006-2007 Dropout Rate	2007 5-year graduation rate
2007-2008 Dropout Rate	2008 4-year graduation rate

*As soon as data are available, we will update these rates with 2009 numbers.

Based on these rankings, a proportionate number of these schools (4) was included within the 33.

[1] Schools that were missing performance data were filtered out of the calculation.

Framework for **District** Accountability and Assistance 2010-2011

ELEMENTARY & SECONDARY EDUCATION

Accountability

Assistance & Intervention

District Actions	State Actions	State Actions	District Actions
1 Review & approve District & School Improvement Plans	• Provide District Analysis and Review Tool (DART) for every district & school in Levels 1-5; • Conduct district reviews for randomly selected districts	*Provide* **VOLUNTARY** *Access to online models & tools* DART, District Data Team Toolkit, planning tools and templates, self-assessment resources,, teacher working condition survey, classroom observation protocols, promising practice examples, etc.	• Review level of implementation of district standards and indicators • Review Conditions for School Effectiveness • Review promising practice examples
2 Use District Analysis and Review Tool (DART) and other data to revise Improvement Plans	Conduct district reviews for randomly selected districts	**SUGGEST** *assistance* Above plus targeted assistance for identified student groups, professional development opportunities, etc.	• Consider using ESE's district self-assessment process to assess the level of implementation of district standards and indicators • Consider how each identified school can strengthen implementation of the **Conditions for School Effectiveness**
3 Use ESE's self-assessment process to revise improvement plans and strategies for monitoring and implementing them	Conduct selective district reviews	*Give* **PRIORITY** *for assistance* Above plus assistance: guided self-assessment, planning guidance, etc.	• Complete ESE's district self-assessment process • Develop plans to implement **Conditions for School Effectiveness** at each identified school
4 Collaborate with ESE on Intervention Plan; use it to develop district and school intervention strategies and progress benchmarks For Level 4 Schools, complete turnaround plan	Commissioner appoints Accountability Monitor; conduct or use recent district review; guide the district's development of an Intervention Plan; approve Turnaround Plan for Level 4 Schools	**REQUIRE** *Intervention* Above plus ESE appoints Assistance Liaison to coordinate Intervention; provide Guidance for intervention strategies and progress bench-marks	• Implement strategies for meeting priority indicators • Implement **Conditions for School Effectiveness** at each identified school
5 Joint District-ESE Governance			

Levels 1-2 based on NCLB Accountability Determinations

Legend

1. The district has no schools in NCLB accountability status OR the district has one or more schools in improvement status for subgroups or in the aggregate, but no schools in corrective action or restructuring for subgroups and/or in the aggregate
2. The district has one or more schools in corrective action or restructuring status under NCLB for subgroups and/or in the aggregate
3. The district has one or more Level 3 schools (the lowest-performing 20% based on absolute achievement and improvement trend as measured by MCAS [and annual growth rate starting in 2011])
4. Districts enter Level 4 when:
   (a) the Commissioner designates the district Level 4 based on District Accountability Review findings; or
   (b) the district has one or more schools identified as a Level 4 School on the basis of quantitative criteria (absolute achievement, annual growth rate, and improvement trend as measured by MCAS)
5. Districts declared Level 5 based on the following:
   (a) a fact-finding review concludes that the district requires stronger intervention
   (b) district is unable to present an acceptable Intervention Plan and/or meet the progress benchmarks; or
   Schools declared Level 5 when district intervention at one or more Level 4 school(s) does not yield sufficient improvement

A note on federal special education accountability designations:
ESE places each district in one of five levels of accountability related to compliance with special education law and regulation:
Level 1 = Meets Regulation
Level 2 = At Risk
Level 3 = Needs Technical Assistance
Level 4 = Needs Intervention
Level 5 = Needs Substantial Intervention
Placement at one of the above levels related to special education compliance does NOT mean that the district is placed at the same level for overall accountability and assistance. That placement is made on the basis of the legend on the left

May 6, 2010

Description of the Framework for District Accountability and Assistance

The *Framework for District Accountability and Assistance* defines the Department of Elementary and Secondary Education's approach to engaging with districts to improve student performance. District accountability and Department assistance must be closely linked in order to produce sustainable improvement. The *Framework* delineates the responsibilities of both parties in driving school improvement.

Three key principles have guided the development of the *Framework* and are reflected in the accompanying diagram:

1. The district is the entry point for the Department's accountability and assistance work; the focus of state assistance will be on building district capacity to support and guide improvement efforts in individual schools.
2. A strong accountability system will not, by itself, result in continued improvement. A parallel system of assistance and intervention is necessary to secure continued, strong improvement.
3. We must develop a system that ensures levels of accountability and assistance that match the severity and duration of identified problems.

The *Framework* defines the roles and expectations of the district and the Department based on the performance of the district's schools. Every district in the Commonwealth is represented in one of five "levels": districts requiring the least state intervention will be in Level 1 while districts requiring the most intervention will be in Level 5. At each level, the Framework distinguishes the Department's role with respect to "accountability" and "assistance and intervention" as well as districts' responsibilities.

The Department will provide a range of assistance to districts based on their *Framework* level. Resources will include the results of a Department-generated Annual District Data Review that reports on more than forty quantitative indicators; online models and self-assessment tools for district and school improvement that are aligned with the Department's "District Standards" and "Essential Conditions for School Effectiveness"; and access to targeted technical assistance.

Below is a brief description of each of the five levels:

Level 1 (*districts without federal accountability status except one or more schools in Improvement for subgroups or in the aggregate – 68% of districts based on 2008-2009 data*): Districts in Level 1 require the least state support. They will be encouraged to engage in self-assessment measures and targeted improvement as needed.

Level 2 (*districts with schools identified for Corrective Action or Restructuring for subgroups and/or in the aggregate – ~15% of districts based on 2008-2009 data*): Districts in Level 2 will receive targeted assistance for identified student groups and access to Department-sponsored professional development opportunities. Districts in Level 2 are expected to use the District Analysis and Review Tool (DART) and other data to revise Improvement Plans.

Level 3 (*districts with one or more schools among the lowest-performing 20% based on quantitative indicators – ~15% of districts based on 2008-2009 data*): Districts in Level 3 will

be required to complete a district self-assessment process aligned with the District Standards and Essential Conditions for School Effectiveness. Level 3 districts will be given high priority for Department assistance, including resources to assist their efforts to implement the Essential Conditions at each identified school.

Level 4 (*districts identified by quantitative and qualitative indicators through a district review; districts with one or more schools among the lowest-performing and least improving 2% based on quantitative indicators – 2% of districts based on 2008-2009 data*): Level 4 designation is based on indicators including but extending beyond federal AYP determinations in order to identify districts requiring the most intensive state intervention. Level 4 districts must develop an Intervention Plan to implement the Essential Conditions for School Effectiveness in each identified school. The Department will assign an Accountability Monitor to monitor district planning and improvement and an Assistance Liaison to coordinate interventions including grant funding.

Level 5 (*districts or schools declared by the Board as requiring "Joint District-ESE Governance" – 0% based on 2008-2009 data):* BESE will appoint a body to share responsibility for major budgetary, personnel, and policy decisions at the school and/or district level as needed.

Appendix E7: Membership of the Advisory Council on Accountability and Assistance

On August 14, 2008, Governor Patrick signed legislation assigning responsibility for district and school accountability to the Department of Elementary and Secondary Education, under standards to be established by the Board of Elementary and Secondary Education. The legislation requires creation of a 15-member advisory council that will:

- Review and advise the Department and Board on the policies and practices of the office of school and district accountability
- Develop and administer through the Department a post-audit survey of audited school districts and an annual survey to any schools and districts receiving technical assistance.
- Present its findings and recommendations to the Board at least two times annually.
- Review and comment on all regulations relative to the accountability and assistance program areas before Board approval.

Current Membership (2009-2010) includes the following members:

Mr. Andrew Churchill, Assistant Director, Center for Education Policy, UMass Amherst
Dr. Robert Consalvo, Founder/Trustee, Academy of the Pacific Rim Charter School
Dr. Deborah Dancy, Principal, Channing School, Boston
Dr. Judy DeLucia, Superintendent, Greater Lawrence Technical School
Mr. Joseph Esposito, CFO (retired) Solid Works and Former EMAC Board Member
Ms. Dorsey Yearly, Executive Director, Education Collaborative for Greater Boston
Mr. Jeffrey Thielman, School Committee Member, Arlington
Ms. Anne McKenzie, Executive Director, Lower Pioneer Valley Educational Collaborative
Ms. Beverly Miyares. Professional Development Specialist, MTA
Ms. Linda Noonan, Executive Director, Lower Pioneer Valley Educational Collaborative
Ms. Laura Perille, Executive Director, EdVestors, BPS Parent
Dr. John Portz, Chair, Political Science Department, Northeastern University
Dr. Sidney Smith, Superintendent, Malden Public Schools
Mr. Steven Sharek, Coordinator, Greater New Bedford Regional Vocational School
Dr. Susan Therriault, Research Analyst, American Institutes for Research

Massachusetts Department of Elementary and Secondary Education

District Standards and Indicators

Leadership and Governance

1. Focused School Committee Governance
2. Effective District and School Leadership
3. District and School Improvement Planning
4. Educationally Sound Budget Development
5. Effective District Systems for School Support and Intervention

Curriculum and Instruction

1. Aligned, Consistently Delivered, and Continuously Improving Curriculum
2. Strong Instructional Leadership and Effective Instruction
3. Sufficient Instructional Time

Assessment

1. Data Collection and Dissemination
2. Data-Based Decision-Making
3. Student Assessment

Human Resources and Professional Development

1. Staff Recruitment, Selection, Assignment
2. Supervision and Evaluation
3. Professional Development

Student Support

1. Academic Support
2. Access and Equity
3. Educational Continuity and Student Participation
4. Services and Partnerships to Support Learning
5. Safety

Financial and Asset Management

1. Comprehensive and Transparent Budget Process
2. Adequate Budget
3. Financial Tracking, Forecasting, Controls, and Audits
4. Cost-Effective Resource Management
5. Capital Planning and Facility Maintenance

Leadership and Governance: School committee and district and school leaders establish, implement, and continuously evaluate the effectiveness of policies and procedures that are standards-based, driven by student achievement data, and designed to promote continuous improvement of instructional practice and high achievement for all students. Leadership decisions and actions related to the attainment of district and school goals are routinely communicated to the community and promote the public confidence, community support, and financial commitment needed to achieve high performance by students and staff.

1. **Focused School Committee Governance:** School committee members are informed and knowledgeable about their responsibilities under the Education Reform Act. In their policy-making and decision-making they are guided by improvement plan goals and informed by student achievement data and other educationally relevant data. The performance of the superintendent is annually evaluated based on the attainment of the goals in the district improvement plan, MCAS results, and other student achievement data. Together with the superintendent, the school committee creates a culture of collaboration and develops contracts and agreements which encourage all stakeholders to work together to support higher levels of student achievement.

2. **Effective District and School Leadership**: The superintendent promotes a culture of transparency, accountability, public confidence, collaboration, and joint responsibility for student learning within the district and broader community. The superintendent effectively delegates educational and operational leadership to principals, program leaders, and administrators, and annually evaluates their performance in their roles based on the goals in the district and school improvement plans, MCAS results, and other relevant data. ***The district and each school take action to attract, develop, and retain an effective school leadership team that obtains staff commitment to improving student learning and implements a well-designed strategy for accomplishing a clearly defined mission and set of goals, in part by leveraging resources. Each school leadership team a) ensures staff understanding of and commitment to the school's mission and strategies, b) supports teacher leadership and a collaborative learning culture, c) uses supervision and evaluation practices that assist teacher development, and d) focuses staff time and resources on instructional improvement and student learning through effective management of operations and use of data for improvement planning and management (CSE #2).***

3. **District and School Improvement Planning:** The district and school leaders have a well-understood vision or mission, goals, and priorities for action that are outlined in a District Improvement Plan. The plan's performance goals for students and its analysis of student achievement data drive the development, implementation, and modification of educational programs. Each school uses an approved School Improvement Plan that is aligned with the district's plan and based on an analysis of student achievement data. District and school plans are developed and refined through an iterative process that includes input from staff, families, and partners on district goals, initiatives, policies, and programs. District and school leaders periodically report to the school committee, staff, families, and community on the extent of the attainment of the goals in the plans, particularly regarding student achievement.

4. **Educationally Sound Budget Development:** The superintendent annually recommends to the school committee educationally sound budgets based primarily on its improvement planning and analysis of data. The budget is developed and resources are allocated based on the ongoing analysis of aggregated and disaggregated student assessment data to assure the budget's effectiveness in supporting improved achievement for all student populations. District leaders promote equity by distinguishing among the

needs of individual schools' populations and allocating adequate resources to the schools and students with greater needs. Each school's administrators are actively involved in the development of its budget.

5. **Effective District Systems for School Support and Intervention**: ***The district has systems and processes for anticipating and addressing school staffing, instructional, and operational needs in timely, efficient, and effective ways. Using these, it monitors the performance of students and conditions in each school. The district also identifies any persistently low-achieving and/or struggling schools; makes any needed changes in staffing, schedule and/or governance; and supports an ambitious, yet realistic plan for school improvement, including goals, timelines, and benchmarks, with explicit consequences for not meeting benchmarks. The district provides its lowest achieving and struggling schools with additional monitoring and effective support for improvement. (CSE #1)***

Curriculum and Instruction: The curricula and instructional practices in the district are developed and implemented to attain high levels of achievement for all students. They are aligned with components of the state curriculum frameworks and revised to promote higher levels of student achievement.

1. **Aligned, Consistently Delivered, and Continuously Improving Curriculum**: The district and each of its schools have curriculum leadership that ensures consistent use, alignment, and effective delivery of the district's curricula. Teachers and other staff make effective use of curriculum guides for all content areas that include objectives, resources, instructional strategies, timelines, and assessments. The district has an established, documented process for the regular and timely review and revision of curricula based on valid research, the analysis of MCAS results and other assessments, and input from professional staff. ***The district ensures that each school's taught curricula a) are aligned to state curriculum frameworks and to the MCAS performance level descriptions, and b) are also aligned vertically (between grades) and horizontally (across classrooms at the same grade level and across sections of the same course). (CSE #3).***

2. **Strong Instructional Leadership and Effective Instruction:** The district and each of its schools have leadership and support for effective instruction. District and school leaders address instructional needs and strengths that are identified through active monitoring of instruction and ongoing use of formative and summative student assessment data. ***The district ensures that instructional practices are based on evidence from a body of high quality research and on high expectations for all students and include use of appropriate research-based reading and mathematics programs. It also ensures that instruction focuses on clear objectives, uses appropriate educational materials, and includes a) a range of strategies, technologies, and supplemental materials aligned with students' developmental levels and learning needs; b) instructional practices and activities that build a respectful climate and enable students to assume increasing responsibility for their own learning; and c) use of class time that maximizes student learning. Each school staff has a common understanding of high-quality evidence-based instruction and a system for monitoring instructional practice. (CSE #4)***

3. **Sufficient Instructional Time:** The district allocates sufficient instructional time for all students in core content areas. The allocation of time is based on analyses of student achievement data and focused on improving proficiency.

Assessment: District and school leadership use student assessment results, local benchmarks, and other pertinent data to improve student achievement and inform all aspects of its decision-making

including: policy development and implementation, instructional programs, assessment practices, procedures, and supervision.

1. **Data Collection and Dissemination:** District assessment policies and practices are characterized by the continuous collection and timely dissemination of data. District and school staff members have access to user-friendly, district-wide and school-based reports on student achievement and other relevant data. All appropriate staff and community members are made aware of internal reports and external review findings.

2. **Data-Based Decision-Making**: The district is highly effective at analyzing and using data to drive decision-making. District and school leadership annually review student assessment results, external and internal reviews, and other pertinent data to prioritize goals, maximize effectiveness in allocating human and financial resources, and to initiate, modify, or discontinue programs and services. District and school leaders monitor student achievement data throughout the year in order to ascertain progress towards goals identified in the district and school plans, and to make needed adjustments to programs, policies, services, or supervision practices. All professional staff members are supported and expected to use aggregated and disaggregated student achievement data regularly to improve performance.

3. **Student Assessment:** ***The district ensures that each school uses a balanced system of formative and benchmark assessments to guide instruction and determine individual remedial and enrichment requirements. Benchmark assessments are given 4 – 8 times per year. (CSE #5)***

Human Resources and Professional Development: The district identifies, attracts, and recruits effective personnel, and structures its environment to support, develop, improve, promote, and retain qualified and effective professional staff who are successful in advancing achievement for all students.

1. **Staff Recruitment, Selection, and Assignment:** The district has policies and practices that secure candidates who are committed and qualified to meet student needs, contribute to a professional learning community, and in the case of teachers, provide high quality instruction in their content area. The district assesses candidates' proficiency in domains of the common core of professional knowledge and skills during the hiring process. Hiring and placement timelines and policies allow districts to recruit high-quality external candidates in a competitive time frame. The district develops varied incentives and other strategies for recruiting and ensuring a diverse pool of high-quality candidates in hard-to-staff fields and schools. Hiring processes include input from appropriate district stakeholders. All members of the professional staff have appropriate Massachusetts licensure. In the event of unfilled professional positions, individuals are hired on waivers and provided mentoring and support to attain the standard of substantial annual progress toward appropriate licensure. The district places a high priority on retaining and maximizing the impact of effective professional staff by establishing a process for identifying, recruiting, training, appropriately compensating, and supporting teacher leaders through career opportunities and both formal and informal opportunities for exemplary teachers to have responsibility for instructional leadership and mentoring. ***The district ensures that each principal has the authority, guidance, and assistance needed to make staffing decisions based on the School Improvement Plan and student needs, subject to district personnel policies, budgetary restrictions, and the approval of the superintendent. (CSE#6)***

2. **Supervision and Evaluation:** The district's evaluation procedure for administrators' performance fulfills the requirements of the education reform act and state regulations and is informative,

instructive, and used to promote individual growth and overall effectiveness. Compensation and continued employment for administrators are linked to evidence of effectiveness, as assessed by improvement in student performance and other relevant data. The district ensures that school leaders regularly use research-based supervision processes to monitor and support teachers to meet instructional and program expectations based on high standards of performance aligned to the common core of professional knowledge and skills. Through effective supervision practices, administrators identify the strengths and needs of assigned staff in order to plan effective implementation of district and school initiatives , assess the application of skills and practices learned from professional development, provide struggling teachers with opportunities for additional professional development and support, and provide frequent, meaningful feedback focused on professional growth. The district promotes a culture of growth-oriented supervision through a combination of formal evaluations and ongoing, informal instructional feedback. The district's evaluation procedure for teachers' performance is aligned to the supervision process, incorporates multiple sources of data including student achievement results, is effectively implemented by trained administrators, and fulfills the requirements of the Education Reform Act and state regulations. The district has identified variegated strategies for supporting and developing struggling teachers. After one year of intensive support, educators who do not meet evaluation criteria may be dismissed.

3. **Professional Development:** The district maintains a strong commitment to creating and sustaining a professional development system that is based on information about staff needs, student achievement data and assessments of instructional practices and programs at each school, and district-wide priorities. ***Professional development for school staff includes both individually pursued activities and school-based, job-embedded approaches, such as instructional coaching. It also includes content-oriented learning. Each school has structures for regular, frequent collaboration that allow for sufficient department and/or grade-level meetings to improve implementation of the curriculum and instructional practice. Professional development and structures for collaboration are evaluated for their effect on raising student achievement. (CSE #7)*** The district provides comprehensive, systematic supports to make the transition from being a novice to being an accomplished educator more effective and professionally rewarding. They include adequate resources, comprehensive support for all novices during their first three years in accessing all domains of the common core of professional knowledge and skills, and a practice of not assigning novices to teach the most academically needy students. Programs progress developmentally and differentiate for educators' different areas of responsibility and levels of expertise and experience. District and school organizational culture and structures create a climate focused on and conducive to adult learning through open and honest communication, continuous professional improvement and joint responsibility for student learning.

Student Support: The district provides quality programs for all students that are comprehensive, accessible and rigorous. Student academic support services and district discipline and behavior practices address the needs of all students. The district is effective in maintaining high rates of attendance for students and staff and retains the participation of students through graduation.

1. **Academic Support:** The district has policies, procedures, and practices that promote student high achievement, support course completion, reduce grade retention, and encourage on-time graduation. ***The district has an effective system for identifying all students who are not performing at grade level. Each school schedule is designed to provide adequate learning time for all students in core subjects. For students not yet on track to proficiency in English language arts or mathematics, the district ensures that each school provides additional time and support for individualized instruction through tiered instruction, a data-driven approach to prevention, early detection, and support for students who experience learning or behavioral challenges, including but not limited to students with disabilities and English language learners. (CSE #8)***

2. **Access and Equity:** District and school staff members work to close achievement gaps by using aggregated and disaggregated data on student participation and achievement to adjust policies and practices and to provide additional programs or supports. Inclusive classrooms and programs that use an integrated services model minimize separation of special populations from the mainstream of school activity. The district and its schools work to promote equity through such means as increasing the proportion of underrepresented subgroups in advanced and accelerated programs. Beginning at the middle school level, leaders actively create pathways to ensure that all students are prepared for post-secondary education and career opportunities upon graduation.

3. **Educational Continuity and Student Participation:** District and school policies and practices promote student attendance, which is continuously monitored, reported, and acted upon. They also promote and track staff attendance and participation, and appropriate provisions are made to ensure continuity for students. District and school policies and practices also help all students make effective transitions from one school, grade level, or program. Entering and mobile students are promptly placed in educationally appropriate settings using information from skill and other assessments when prior school records are not accessible. Transient and homeless students have timely and equitable access to quality programs supported by district oversight, policies and practices to address their needs. Fair and equitable policies, procedures, and practices are implemented to reduce suspensions, exclusions, and other discipline referrals. Policies and practices are implemented to reduce or minimize dropping out, and the district has practices to recover dropouts and return them to an educationally appropriate placement.

4. **Partnerships and Services to Support Learning:** ***The district ensures that each school creates a safe school environment and makes effective use of a system for addressing the social, emotional, and health needs of its students that reflects the behavioral health and public schools framework developed by the Task Force on Behavioral Health and Public Schools pursuant to c. 321, s. 19, of the Massachusetts Acts of 2008. Students' needs are met in part through a) the provision of coordinated student support services and universal breakfast (if eligible); b) the implementation of a systems approach to establishing a productive social culture that minimizes problem behavior for all students; and c) the use of consistent schoolwide attendance and discipline practices and effective classroom management techniques that enable students to assume increasing responsibility for their own behavior and learning. (CSE #9) The district ensures that each school develops strong working relationships with families and appropriate community partners and providers in order to support***

students' academic progress and social and emotional well-being (CSE #10); such community partners and providers as human service agencies, corporate and civic sponsors, and higher education give students and families access to health, social, recreational, and supplemental educational services.

4 Safety: The district supports schools to maintain safe environments for students. The district has a comprehensive safety plan that is reviewed annually with local police and fire departments and is used to create aligned school plans. The district provides ongoing training for appropriate staff in dealing with crises and emergencies, as well as opportunities for all staff and students to practice safety procedures.

Financial and Asset Management: The district engages in a participative, well-documented, and transparent budget process that uses student achievement as a factor in the overall budget. The district acquires and uses financial, physical, and competitive capital resources to provide for and sustain the advancement of achievement for all students enrolled in the district. The district regularly assesses the effectiveness and efficiency of its financial and capital assets and has the ability to meet reasonable changes and unanticipated events.

1. **Comprehensive and Transparent Budget Process:** The district's budget is developed through an open, participatory process, and the resulting document is clear, comprehensive, complete, current, and understandable. The budget provides accurate information on all fund sources, as well as budgetary history and trends. The district and community have appropriate written agreements and memoranda related to 603 CMR 10.0 that detail the manner for calculating and the amounts to be used in calculating indirect charges levied on the school district budget by the community. Regular, timely, accurate, and complete financial reports are made to the school committee, appropriate administrators and staff, and the public. Required local, state, and federal financial reports and statements are accurate and filed on time.

2. **Adequate Budget:** The community annually provides sufficient financial resources to ensure educationally sound programs and quality facilities, with a sufficient district revenue levy and level of local spending for education. The combination of Chapter 70 Aid and local revenues, considering justified indirect charges, meets or exceeds Net School Spending (NSS) requirements of the education reform formula. The district's budget and supplemental funding are adequate to provide for effective instructional practices and adequate operational resources.

3. **Cost-Effective Resource Management:** As part of its budget development, the district implements a review process to determine the cost-effectiveness of its programs, initiatives, and activities. This process is based, in part, on student performance data and needs. ***The district ensures that each principal makes effective and strategic use of district and school resources and has sufficient budget authority to do so. (CSE #11)*** The district has a system in place to pursue, acquire, monitor, and coordinate all local, state, federal, and private competitive grants. The district implements an effective system to monitor special revenue funds, revolving accounts, and the fees related to them to ensure that they are managed efficiently and used effectively for the purposes intended and to advance the district's improvement plan. The district actively seeks ways to leverage resources and expand capacity through collaboration with such external partners as educational collaboratives and institutions of higher education.

4. **Financial Tracking, Forecasting, Controls, and Audits:** District administrators are able to regularly and accurately track spending and other financial transactions. The district uses forecast mechanisms and control procedures to ensure that spending is within budget limits. It uses efficient accounting technology to facilitate tracking, forecasting, and control procedures, and to integrate the district-level financial information of each school and program. All procurement, tracking, and monitoring systems and external audits are accurate, current, and timely. The district has a system in place to ensure that state procurement laws are followed, that staff are qualified to manage their fiscal responsibilities, and that all assets and expenditures are monitored and tracked to attain the most efficient and effective utilization. The district competitively procures independent financial auditing services at least every five years, shares the results of these audits, and consistently implements their recommendations.

5. **Capital Planning and Facility Maintenance:** The district has a formal preventive maintenance program to maximize and prolong the effective use of the district's capital and major facility assets, as well as to ensure that educational and program facilities are clean, safe, secure, well-lit, well-maintained, and conducive to student learning. The district has a long-term capital plan that clearly and accurately reflects future capital development and improvement needs, including the need for educational and program facilities of adequate size. The plan is reviewed and revised as needed with input from all appropriate stakeholders.

Appendix E9: Essential Conditions for School Effectiveness

These 11 essential conditions are necessary conditions for schools to educate their students well; they guide the actions taken by both districts and the Department at all levels of the accountability and assistance system. While schools are responsible for developing the school level practices that ensure implementation of these essential conditions, schools need to be supported in these efforts by the policies and practices of their districts.

Districts are ultimately responsible for ensuring that these essential conditions are being implemented for all students in all schools. Districts at Level 3 of the system will be required to conduct a self-assessment following Department guidance to inform their improvement planning; this self-assessment will also be made available for use by districts at Levels 1 and 2. Districts at Levels 4 and 5 will be required to implement all of these conditions in their Level 4 or 5 schools or provide a compelling rationale for alternative approaches designed to achieve comparable or superior results. The commissioner will determine whether the rationale is sufficiently compelling to warrant an exception to any of the specific requirements of these essential conditions.

1. Effective district systems for school support and intervention: The district has systems and processes for anticipating and addressing school staffing, instructional, and operational needs in timely, efficient, and effective ways, especially for its lowest performing schools.

2. Effective school leadership: The district and school take action to attract, develop, and retain an effective school leadership team that obtains staff commitment to improving student learning and implements a clearly defined mission and set of goals.

3. Aligned curriculum: The school's taught curricula are aligned to state curriculum frameworks and the MCAS performance level descriptions, and are also aligned vertically between grades and horizontally across classrooms at the same grade level and across sections of the same course.

4. Effective instruction: Instructional practices are based on evidence from a body of high quality research and on high expectations for all students and include use of appropriate research-based reading and mathematics programs; the school staff has a common understanding of high-quality evidence-based instruction and a system for monitoring instructional practice.

5. Student assessment: The school uses a balanced system of formative and benchmark assessments.

6. Principal's staffing authority: The principal has the authority to make staffing decisions based on the School Improvement Plan and student needs, subject to district personnel policies, budgetary restrictions and the approval of the superintendent.

7. Professional development and structures for collaboration: Professional development for school staff includes both individually pursued activities and school-based, job-embedded approaches, such as instructional coaching. It also includes content-oriented learning. The school has structures for regular, frequent collaboration to improve implementation of the curriculum and instructional practice. Professional development and structures for collaboration are evaluated for their effect on raising student achievement.

8. Tiered instruction and adequate learning time: The school schedule is designed to provide adequate learning time for all students in core subjects. For students not yet on track to proficiency in English language arts or mathematics, the school provides additional time and support for individualized instruction through tiered instruction, a data-driven approach to prevention, early detection, and

support for students who experience learning or behavioral challenges, including but not limited to students with disabilities and English language learners.

9. Students' social, emotional, and health needs: The school creates a safe school environment and makes effective use of a system for addressing the social, emotional, and health needs of its students that reflects the behavioral health and public schools framework.

10. Family-school engagement: The school develops strong working relationships with families and appropriate community partners and providers in order to support students' academic progress and social and emotional well-being.

11. Strategic use of resources and adequate budget authority: The principal makes effective and strategic use of district and school resources and has sufficient budget authority to do so.

Promising District Practices Guide *Draft in Development*

- The Department is working on a Promising Practices Guide to help districts implement research-based effective practices in order to meet the District Standards.
- This draft contains two examples to partially address two indicators under the Human Resources and Professional Development Standard: (1) Staff Recruitment, Selection, Assignment, and (3) Professional Development
- Promising district practices in this draft (3.10.10) is largely based on research published by the Council of Chief State School Officers in collaboration with the Celt Corporation in October 2008. Further development of the self-assessment will be based on research and models identified Massachusetts stakeholders and research conducted by the Regional Education Laboratory of Northeast and the Islands.

Human Resources and Professional Development 1. Staff Recruitment, Selection, and Assignment

The district has effective processes in place to:

HRPD.1.1 Recruit quality applicants

Promising practice: There is a teacher recruitment process that involves multiple staff members, and multiple venues of recruiting to attract a pool of diverse applicants

- Teacher recruiting is a year-long process, not an annual event
- Incentives are offered for high needs position
- Hiring processes reflect the diversity of the community
- Applicants represent a wide variety of locations

HRPD.1.2 Post and manage vacancy postings

Promising practice: There is a clear, manageable process for posting and managing vacancies that provides for equitable opportunities for all schools and applicants

- Process is district operated and supervised
- Applicants are processed through the district level hiring process prior to being interviewed by schools
- The length of time from posting to filling vacancies is short
- There are no unfulfilled positions at the beginning of the year

HRPD.1.3 Screen, track and process employment applications (Including criminal records/background check

Promising practice: Employment and recruiting have clear workflow processes that are understandable to the applicant and standardized for all applicants

- All employees follow the exact same hiring processes
- A standardized screening instrument is used prior to formal interviews
- Background checks are thorough, detailed, and timely

HRPD.1.4. Develop and retain a highly qualified teaching staff

Promising practice: Ensure the recruitment and retention of highly qualified teachers

- All teachers are highly qualified teachers within each district
- Core classes are taught by highly qualified teachers in each school
- Only highly qualified teachers are hired by each district annually
- Highly qualified teachers with positive evaluations are retained within each district annually
- Mentor program includes components to encourage retention of teachers
- The recruitment process includes a plan to post vacancies early and in various venues to enable the system to select teachers from a broad pool of applicants

HRPD.1.5. Develop leaders/mentors

Promising practice: Implement a mentoring program for all new teachers

- All new teachers assigned to a mentor the first year
- Mentors and new teachers meet weekly
- A program is in place to retain all qualified teachers
- School administration monitors and evaluates the mentoring program

Promising practice: Systematic approach to developing leaders and mentors (North Central Association)

- Participation of faculty as mentors and development as leaders
- Documented process for how system develops leaders
- Process for becoming a mentor is defined
- Evaluation process for mentors is in place

HRPD.1.6. Manage employee salaries

Promising practice: There are standardized salary scales for all positions

- Salary scales are Board approved
- All positions fit on a scale
- There are provisions for appeal or adjustment of salary scale placement based on achievement

Promising practice: Mandatory direct deposit to any bank, credit union, or ATM card for all employees

- ATM is used if employee has no bank account
- System has accounts available for all
- Employee hire process includes paperwork necessary for direct deposit, etc.

HRPD.1.7. Manage employee benefits

Promising practice: There are clear standard processes for administration of employee benefits

- Benefits are allocated fairly
- There is an appeal process in place for denied benefits
- The appeals process is delineated in employee handbook

Promising practice: On-line employee benefits modules for all benefit adds, changes, and deletions

- Training in use of system is proactive
- Employees are able to access system in order to check personal data
- Employees are directed to a person or site for questions regarding benefits

HRPD.1.8. Manage contracts

Promising practice: Employee contracts (project specific) are standardized and include specified expectations for completion

- The scope of work is clearly outlined with benchmark expectations for completion included in the contract

Promising practice: Student interests are at the forefront of professional negotiations

- Negotiated contracts show significant evidence of addressing students' needs
- Negotiation sessions begin with district mission and vision and goals

HRPD.1.9 Track and manage substitutes

Promising practice: Substitutes support the instructional program through training and simple reporting processes

- Substitute teachers have minimum requirement for hiring
- There is a formal substitute-training program in place at the district level
- There is an evaluation process in place for substitute teachers
- Teachers have a simple, clear, process for obtaining a sub with a backup process in place
- Data-driven decisions from evaluation of substitutes is used to provide better instruction for students
- A clear and simple process for obtaining a substitute is included in the employee handbook, along with a back-up plan

Promising practice: An automated substitute calling system is used

- Teachers call in with ID for absences, program has criteria for teacher's job identified and calls best qualified sub
- System is connected to the staff development calendar to automatically get subs for teachers in staff development
- The process for obtaining a substitute via the automated substitute calling system is delineated in the employee handbook

HRPD.1.10. Coordinate allocation of staff

Promising practice: Staff members are allocated to buildings based upon a data formula accounting for diverse student needs

- District maintains a staffing profile for all schools including: Beginning teachers, Transfer teachers, Advanced degrees Demographics, Highly Qualified
- The profile is used to monitor success of teacher assignments
- District maintains records of data formula including allocations of staff
- There is a plan for equity (formula) in the allocation of staff between buildings in the same system

HRPD.1.11. Track internal transfers

Promising practice: Utilize data from teacher mobility charts to determine flow of experienced teachers

- Teachers requesting internal transfers are granted their first choice school
- Number of teachers moving from urban to suburban is tracked and monitored
- Number of teachers moving from suburban to urban is tracked and monitored

HRPD.1.12. Manage professional licensure and certification

Promising practice: There is a process in place to track teacher certification

- Teachers are notified when certification is due for renewal
- All certifications are accurate and teachers are placed in proper positions
- Credentials appropriate to staff assignments are on file

Promising practice: The personnel qualifications criteria are used to assign staff to support the teaching and learning program (North Central Association)

- Staff is of sufficient quality and number and appropriately assigned in order for the District to achieve its strategic goals
- Staff meet qualifications of certification agencies
- The District meets minimum staffing requirements
- The District maintains sufficient student-teacher ratios

Human Resources and Professional Development 3: Professional Development

The district has effective processes in place to:

HRPD.3.1. Adopt/approve a research-based PD plan that is aligned to the district's strategic plan and curriculum as well as to each school's strategic plan and to identified needs of educators

Promising practice: Implement structured professional development and teacher advancement programs

- Teachers have access to and participate in on-going professional development
- Teachers receive remuneration based on performance
- Individualized professional development plan is in place for all teachers

Promising practice: Provide multiple formats for delivery of professional development (North Central Association)

- Informal delivery options may include mentoring, online courses, periodic evaluation/feedback sessions with peers and/or administrators
- Formal delivery options – CPU credit, course reimbursement at postsecondary institution or conferences, online courses, district or school-wide delivery

Promising practice: Develop a teacher proficiency model that will depict what proficiencies are expected for all teachers

- Teachers complete a self-assessment based on the established standards
- Teachers meet expectations of the proficiencies
- Reduction in gaps in teacher proficiencies documented and plans for addressing are written

Promising practice: Determine and implement a staff development program for the reading model

- Teachers receive specific on-going staff development in the reading model and associated curriculum material
- Teachers receive on-going professional development in the use of effective research-based instructional strategies for reading
- Professional development courses include the reading content topics of oral language, listening skills, concepts of print, phonemic awareness, decoding strategies, fluency, extension of vocabulary, pre-reading strategies, active comprehension, reading for a variety of purposes, experiencing various media and genre, and motivation to read

Promising practice: Determine and implement a staff development program for the mathematics model

- Teachers receive specific on-going staff development in the mathematics model and associated curriculum material
- Teachers receive on-going professional development in the use of effective research-based instructional strategies for mathematics
- Professional development courses include the mathematics content topics of numbers and operations, algebra, geometry, measurement, and data analysis and probability

Promising practice: Determine and implement a staff development program for the social studies model

- Teachers receive on-going specific staff development in the social studies model and associated curriculum material
- Teachers receive on-going professional development in the use of effective research-based instructional strategies for social studies
- Professional development courses include the social studies content topics of culture, economics, geography, governance and civics, history, and individuals, groups and interactions

PROMISING DISTRICT PRACTICES

Promising practice: Determine and implement a staff development program for the science model

- Teachers receive specific on-going staff development in the science model and associated curriculum material
- Teachers receive on-going professional development in the use of effective research-based instructional strategies for science
- Professional development courses include the science content topics of inquiry, technology and engineering, life science (cells, interactions, flow of matter, heredity, biodiversity and change), earth science (the universe, the earth and the atmosphere), and physical science (matter, energy, motion and the forces in nature)

Promising practice: Determine and implement a staff development program for the writing model

- Teachers receive specific on-going staff development in the writing model and associated curriculum material
- Teachers receive on-going professional development in the use of effective research-based instructional strategies for writing
- Professional development courses include the writing content topics of pre-writing skills, writing for a variety of purposes, drafts, editing, evaluation of writing, publishing opportunities, narrative accounts, expressive writing, writing across the content areas, writing in response to literature and writing in a variety of modes and genre

Promising practice: Determine and implement a staff development program for the language arts model

- Teachers receive specific on-going staff development in the language arts model and associated curriculum material
- Teachers receive on-going professional development in the use of effective research-based instructional strategies for language arts
- Professional development courses in the language arts topics of standard English usage, standard English mechanics, standard English spelling, and correct sentence structure

HRPD.3.2 Promote stakeholder involvement in the preparation of a professional development plan (i.e., Faculty, staff, and administrators)

Promising practice: Documented process for designing, evaluating, and improving professional development that aligns with curriculum and instruction

- Documentation of process for developing and delivering professional development opportunities
- Evaluation ratings of professional development provided by district/state
- Documentation of faculty/staff taking and passing each formal option
- Frequency and documentation of informal meetings with mentors, including documentation of feedback
- Pre- and post-measures of student performance as an indirect indicator of success of professional development

Promising practice: Involvement of key staff (faculty, staff, administration) in development of professional development for their role and for the system in general

- Documented process of involvement and planning process
- Signature by faculty/staff agreeing to professional development plan
- School personnel communicate and share a common knowledge and understanding of the school's goals, purposes, and of the educational program

HRPD.3.3. Manage new employee orientation/assimilation

Promising practice: There is a clear process implemented for orienting and assimilating new employees

- New employees are assigned a mentor for their probationary period with specific activities (checklist) that are to be completed by the mentor team
- Applicant can complete the orientation process in minimal visits

Promising practice: The district has a plan in place for retention of quality employees

- The district plan includes steps to retain quality employees
- The annual employee survey data is used to determine pro-active ways to retain quality employees
- Administrative professional development includes methods of retaining quality employees

HRPD.3.4. Offer continuous improvement opportunities throughout the school year

Promising practice: Support teachers with ongoing on-site professional learning to employ innovative research-based strategies and proven instructional methods for student learning

- Teachers are provided ongoing on-site coaching and professional learning
- Strategies are in place to monitor/evaluate student learning related to professional development of teachers
- Professional learning communities collaborate and share research-based strategies to meet the needs of students and/or subgroups not reaching proficiency

HRPD.3.5. Develop and implement professional learning communities (PLCs)

Promising practice: Collaborate in grade-level/subject teams focused on student learning and instructional practices

- Teachers meet in professional learning communities on a biweekly (regular) basis
- Teachers regularly develop and implement integrated projects as a collaborative team
- Professional Learning Communities dialogue regularly regarding promising practices and research-based interventions
- Professional learning communities regularly use student work protocols to determine student thinking and then, to determine strategies to improve proficiency of students and subgroups

Promising practice: School leaders model the behaviors and strategies that reflect promising practices in teaching and learning and serve as skilled coaches within professional learning communities

- School leaders inform staff regarding current theory of best instructional practice and regularly model the strategies in meetings
- Teachers are knowledgeable of current theory regarding best instructional practices
- School leaders differentiate their interactions based upon the individualized needs of staff
- School leaders provide staff with frequent opportunities to reflect on promising practices in professional learning communities with school leaders serving as mentors
- School leaders provide frequent opportunities for staff members exhibiting exemplary practices to serve as models and peer leaders
- Staff members exhibit exemplary practice and serve as models and peer leaders
- Staff meetings model promising practices, adult learning theory and include analysis of data at each meeting

HRPD.3.6. Identify professional development needs

Promising practice: Employee and organizational development needs are aligned

Promising practice: Training needs are established by analysis of required and available skills

HRPD.3.7. Plan and develop professional development programs

Promising practice: Employee career plans are developed for each employee

HRPD.3.8. Track professional development opportunities, evaluations, etc.

Promising practice: Employee performance objectives are defined and matched with professional development opportunities

Promising practice: Employee performance is reviewed, appraised and managed and matched with appropriate opportunities for growth

Promising practice: Employee performance is evaluated and matched with appropriate opportunities for improvement.

Summary

The Regional Education Laboratory-Northeast and the Islands (REL-NEI) has provided evidence to support new Massachusetts Conditions for School Effectiveness.

Background

Last spring, as policymakers at the Massachusetts Department of Elementary and Secondary Education (ESE) updated the state's regulations describing essential conditions for "underperforming schools," they turned to the Regional Education Laboratory-Northeast and the Islands (REL-NEI) to provide top-line research on school effectiveness to inform their decision-making.

The Center for District and School Accountability was drafting updated district standards and indicators, and the Accountability and Assistance advisory council requested evidence supporting the district indicators. The Center contacted REL-NEI Massachusetts Liaison Leslie Hergert for assistance, in order to establish an independent body of researchers to verify these indicators. The priority indicators were identified as the Conditions for School Effectiveness because those would be included in the new regulations. Hergert and REL-NEI researcher Katie Buckley spent much of the summer scouring libraries, federal resources, and online databases to find rigorous, up-to-date research on such topics as district leadership, professional development, student assessment, school climate, and effective instructional practices.

As an example, Hergert uncovered two research analyses showing that nearly 50 hours of sustained professional development are necessary to lead to improved student achievement. This information can be incorporated in the upcoming *Promising District Practices Guide.*

Potential Uses

Now that REL-NEI has compiled comprehensive research on school effectiveness, the resources are available to all regional stakeholders. This research can help districts and schools clarify, refine, and justify expectations for staff, programs and structures.

Essential Condition 1: Effective District Systems for School Support and Intervention

Essential Condition 1. Effective district systems for school support and intervention: The district has systems and processes for anticipating and addressing school staffing, instructional, and operational needs in timely, efficient, and effective ways. Using these, it monitors the performance of students and conditions in each school. The district also identifies any persistently low-achieving and/or struggling schools; makes any needed changes in staffing, schedule and/or governance; and supports an ambitious, yet realistic plan for school improvement, including goals, timelines, and benchmarks, with explicit consequences for not meeting benchmarks. The district provides its lowest achieving and struggling schools with additional monitoring and effective support for improvement.

Key Words:

District systems of support, academic achievement, accountability, administrator role, case studies, educational change, educational improvement, federal legislation, instructional improvement, leadership responsibility, meta-analysis, restructuring, sanctions, school districts, superintendents, urban schools.

Organizations:

Center for Applied Research and Educational Improvement at University of Minnesota, Center for Policy and Research in Education, Cross-City Campaign for Urban School Reform, McREL: Mid-continent Research for Education and Learning, Public Education Leadership Project at Harvard University, The Wallace Foundation, West Ed.

Limitations:

This summary includes publicly available documents with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

Essential Condition 1: Effective District Systems for School Support and Intervention

Waters, J. T. & Marzano, R. J. (2006). *School district leadership that works: The effect of superintendent leadership on student achievement.* Denver, CO: McREL, Mid-continent Research for Education and Learning.
http://www.mcrel.org/product/244

Summary/Methods	Findings/Recommendations
The purpose of this meta- analysis of research was to determine the influence that district superintendents have on student achievement and the characteristics of effective superintendents. The meta-analysis examines findings from 27 studies conducted from 1970 to 2005 that used quantitative methods to study the influence of school district leaders on student achievement.	McREL found a positive correlation between effective district leadership and student achievement. Five specific responsibilities of district leaders were associated with a collective focus on teaching and learning goals. Among them were: ▪ District goal-setting is collaborative, involving, for example, school administrators, central office staff, and board members. ▪ Vision remains focused on specific and non-negotiable goals for student achievement and instruction. ▪ The work of the local board of education aligns with and supports the district goals. ▪ The superintendent continually monitors district progress toward achievement and instructional goals. ▪ District leaders make sure that the allocation of resources supports district goals for achievement and instruction. Effective district leaders give school leadership teams autonomy in how they meet district goals while maintaining clear, non-negotiable goals for learning and instruction.

Essential Condition 1: Effective district systems for school support and intervention

Leithwood, K., Louis, K. S., Anderson, S. & Wahlstrom, K. (2004). *How leadership influences student learning*. Minneapolis, MN: Center for Applied Research and Educational Improvement, University of Minnesota. http://www.wallacefoundation.org/WF/KnowledgeCenter/KnowledgeTopics/EducationLeadership/HowLeadershipInfluencesStudentLearning.html

Summary/Methods	Findings/Recommendations
This 87-page report seeks to establish how district and school leadership promotes student learning, summarizes the characteristics of effective leadership, and explains what leaders must do. Existing research on effective leadership practices from the 1970s through 2005 was reviewed. The report shares a broad range of empirical research that shows the effects of state, district, and school initiatives.	The work of superintendents and principals does affect student learning, second only to the quality of curriculum and teaching. The greatest impact tends to be in schools where the learning needs of students are more severe. District and school leaders contribute to student learning indirectly in three major areas: ▪ Setting directions by providing guidance that is clearly understood by all, establishing high expectations, and using data to monitor progress and performance. ▪ Supporting staff with resources and the professional development necessary to succeed. ▪ Managing and redesigning the organization so that the entire range of conditions in the district and schools fully supports teaching and learning.

Essential Condition 1: Effective District Systems for School Support and Intervention

Supovitz, J. A. (2006). *The case for district-based reform: Leading, building, and sustaining school improvement.* Cambridge, MA: Harvard Education Press.

Summary/Methods	Findings/Recommendations
This document, a case study of Duval County, Florida, states its goals as: (1) To provide a portrait of a district throughout the implementation of a reform (not just looking back late in the implementation). (2) To consider "reconfiguration of the district role in supporting system-wide improvement in the 21st century." Beginning in 1999, the author was principal investigator for national evaluation of the America's Choice comprehensive school reform model. In 2000, Duval County requested more intensive evaluation of its standards-based reform efforts. From 2002, the author gathered data more systematically, including fieldwork in a representative sample of ten schools, and continued extensive interviews with district leaders. Also collected were data on the influences of an instructional implementation monitoring system, which the author had helped the district develop.	(1) *Persistence.* Duval County remained consistent and relatively stable in its advocacy and support for standards-based instruction. It dedicated more resources to implementation than to documenting and planning. (2) *Social Aspects of Change.* The professional learning community (PLC) concept in Duval County was vague and not sufficiently focused on problems of practice. Implementation was "generally thin," and it varied across schools. Still, the concept did expand interest and engagement in professional learning. (3) *Embedded Learning Opportunities*. Duval County used its "Standards Implementation Snapshot System" to build learning "into the everyday rhythms and routines of the district" and to enhance understanding of its reforms. Supovitz characterizes 11 core district functions, in which the district acts as a "Local Support Organization," Instructional functions are classified as service (which might involve external partners for functions like curriculum development and training) and orchestration (which includes monitoring/evaluation and facilitating collaboration and support).

Essential Condition 1: Effective District Systems for School Support and Intervention

Mass Insight Education & Research Institute. (2007). *The turnaround challenge: New research, recommendations, and a partnership framework for states and school districts.* Boston, MA: Author.
http://www.massinsight.org/micontent/trnresources.aspx

Summary/Methods	Findings/Recommendations
This analysis aims "to produce recommendations for states and districts seeking a flexible, systematic approach to swift and significant transformation in schools (particularly high schools) deemed chronically underperforming." Included in the document are a survey of (1) past and current reform efforts, (2) root causes of chronic underperformance, and (3) analyses of high-performing, high-poverty (HPHP) schools. From its analysis, Mass Insight developed a framework for state and district policy-shapers to use in developing the conditions necessary to help struggling schools achieve dramatic turnarounds.	The study recommends creating a state or district turnaround zone in order to change traditional operating conditions that inhibit reform. Changes include: ▪ CHANGE CONDITIONS: by creating a protected space free of bureaucratic restrictions and overly stringent collective bargaining agreements. Provide incentives to challenge and motivate people to do their best work. ▪ INCREASE CAPACITY: *internally*, of school personnel, especially school leaders, and *externally*, through the support of strong local providers with the experience and ability to serve as turnaround partners. ▪ ORGANIZE CLUSTERS OF SCHOOLS: either within a district or across districts, with their own lead turnaround partner to provide comprehensive services focused on turnaround. Clusters can be grouped by need, school type, region, or other characteristics. The report describes a two-stage process, "with fundamental transformation at the start [...and] steady, capacity-building improvement to follow". This model requires the state to drive local capacity-building and shift or redesign how schools work with external partners.

Essential Condition 1: Effective District Systems for School Support and Intervention

Childress, S., Elmore, R. F., Grossman, A., & Johnson, S. M. (Eds.). (2007). *Managing school districts for high performance: Cases in public education leadership.* Cambridge, MA: Harvard Education Press.

Summary/Methods	Findings/Recommendations
This study was conducted in order to provide both a conceptual framework and case studies from a variety of urban school districts to guide district leaders as they work to improve instruction at scale and to sustain that improvement. Public Education Leadership Project (PELP) researchers created a framework, cases, and readings in the course of their 4-year study of 15 urban school districts—and fluid partnerships with 9 districts —across the United States . The book presents five learning modules, which draw case study examples from the private-sector, nonprofits, and public education. Modules explore: (1) strategy & coherence, (2) human resource management, (3) a results-orientation, (4) implementation challenges, given wide differences among schools in a district, and (5) extended district case studies, which include districts past the first bloom of reform success.	The study found five implementation challenges that are common in urban districts: (1) Implementing a given strategy effectively across schools with different characteristics. (2) Redesigning the organization so that it supports the strategy. (3) Developing and managing human capital to carry out the strategy. (4) Allocating resources in alignment with the strategy. (5) Using performance data for decision making, organizational learning, and accountability. The PELP Coherence Framework illustrates the interdependence of district culture, systems and structures, resources, stakeholder relationships, and environment and shows how they can reinforce one another to support the implementation of an improvement strategy. Rather than a prescriptive strategy, the PELP framework asserts that coherence at district, school, and classroom levels makes the sustainability and effectiveness of any reform more likely.

Essential Condition 1: Effective District Systems for School Support and Intervention

Rothman, R. (Ed.). (2007). *City schools: How districts and communities can create smart education systems.* Cambridge, MA: Harvard Education Press.

Summary/Methods	Findings/Recommendations
This is an anthology of applied research-based essays designed to provide examples of partnerships school districts can make in order to provide a comprehensive web of support and opportunities for students. Methods vary by essay, but most emerge from ongoing applied research by the Annenberg Institute for School Reform of school districts, district-external support partnerships, and community engagement. Two of the essays are case studies—of Hamilton County, Tennessee, (by its former superintendent, Jesse Register), and of the Dallas, Texas, Arts Learning Initiative [DALI], a citywide approach to give all children the opportunity to "learn *in* and *through* the arts."	District reform efforts face two significant challenges: (1) Sustainability: Changing leadership and reform agendas, as well as the need for both instructional *and* political support and buy-in (at all levels), make even promising reforms difficult to sustain. (2) The qualitative difference between basic and proficient performance, and the different kinds of classroom and outside-school experiences needed to bridge that gap. Local Education Support Networks bring community organizations and schools together to support student learning (e.g., Harlem Children's Zone). Individual school-level partnerships make it more difficult to share strengths across schools in a district, and a Smart Education System aligns services to meet community needs. Foundations for a Smart Education System: ▪ Leadership development ▪ Applied research focusing on context and implementation ▪ Partners for innovation/instruction ▪ Governance structures to support collaboration across organizations

Essential Condition 1: Effective District Systems for School Support and Intervention

WestEd, in collaboration with McREL and NCREL. (2002). *Improving districts: Systems that support learning.* San Francisco, CA: WestEd.
For purchase: http://www.wested.org/cs/we/view/rs/566

Summary/Methods	Findings/Recommendations
This report, commissioned by the U.S. Department of Education, looks at nine districts that were recognized by the department's National Awards Program for Model Professional Development. The report includes descriptions of the roles and structures in place, how teachers' professional development is structured, and how data is used to guide decisions. Three Regional Educational Laboratories—WestEd, McREL, and NCREL—conducted the study of nine districts. Data was collected from site visits and interviews with members in the community, including administrators, teachers, parents, and school board members.	The successful professional development programs studied tended to: ▪ Involve the school community in developing standards. ▪ Be flexible and allow choice within professional development. ▪ Develop a community-wide vision and understanding of the action plan. ▪ Communicate both the content of and the rationale for new programs and approaches. ▪ Value and learn from the expertise within the district. ▪ Foster the development of learners and leaders. ▪ Develop a sense of shared responsibility with appropriate accountability at various levels. ▪ Cultivate a culture that expects progress that can be measured.

Essential Condition 1: Effective District Systems for School Support and Intervention

Coleman, P. & LaRocque, L. (1988). *Reaching out: Instructional leadership in school districts.* [Electronic version]. Peabody Journal of Education, 65 (4), 60-89.

Summary/Methods	Findings/Recommendations
This study examines the similarities among the activities of superintendents in high-performing districts in British Columbia, Canada. This multi-year, multi-site study of school districts explored the relationship between district ethos and district quality. The approach is exploratory and descriptive based on an inferential conceptual framework.	Superintendents can have a profound effect on the work of other professionals in the district, and ultimately instruction, through the creation and maintenance of a positive district ethos. In high-performing school districts, the work of the superintendent tends to be more clearly focused on instructional issues, and accountability mechanisms tend to be stronger. Three aspects of superintendent instructional leadership are described: ▪ Reach: the superintendent's ability to influence the orientations of the staff. ▪ Vision: professional norms that shape and guide activities towards a goal. ▪ Range: the scope and diversity of activities to which the superintendent devotes time and energy.

Essential Condition 1: Effective District Systems for School Support and Intervention

Cross City Campaign for Urban School Reform. (2004*). Leading from the middle: Mid-level central office staff and instructional improvement.* Chicago, IL: Cross City Campaign for Urban School Reform. http://www.crosscity.org/pubs/index.html	
Summary/Methods	**Findings/Recommendations**
The report explores the district's role in instructional reform. In particular, it looks at the role of middle-level central office staff and their relationships with staff in local schools. The purpose is to provide a perspective on the role of the school district in improving instruction and help stir a national dialogue. In 2000, the study began its 3-year qualitative study in Chicago, Milwaukee, and Seattle. Data includes interviews, observations, and document collection at both the school and central office levels in these three districts. Accounts were taken from 55 mid-level managers.	Mid-level central office staff members play an important role in translating and communicating between top district leadership and school-level staff around instructional initiatives. They have significant impact on how district reform policies are understood and carried out by school leaders. Mid-level central office staff members describe their responsibilities as translating reform agendas into resources for schools to use, helping teachers and principals understand the relevance of data on student achievement, supporting staff development and training, and connecting people who have expertise to share with each other. They focus on developing relationships with other district office staff, school staff members, and reformers and/or scholars working on instructional change.

Essential Condition 1: Effective District Systems for School Support and Intervention

Laguarda, K. (2006). *District assistance to low-performing schools in an era of increasing accountability*. Washington, DC: Policy Studies Associates. http://www.policystudies.com/studies/school/Laguarda%20paper.pdf	
Summary/Methods	**Findings/Recommendations**
This paper uses findings from the early years of No Child Left Behind (NCLB) to evaluate (a) the support provided to schools identified as needing improvement under NCLB, and (b) how, if at all, that support differed from the assistance offered to other schools. Title I Accountability Systems and School Improvement Efforts (TASSIE) was a 3-year, nationwide evaluation of district efforts to provide support and assistance to low-performing schools. Approximately 1,300 districts with schools receiving Title I funds participated in a yearly survey from 2001-04. Case studies of 20 elementary schools identified under Title 1 for improvement in 15 districts in five states were provided.	Districts tended to offer the same supports to all of their schools, regardless of context or performance. Many schools identified as needing improvement did not receive extra supports from their districts. In case study sites where districts did provide more intensive, school-based assistance, the efficacy of interventions varied widely. Districts appeared to have the capacity to help schools with "routine processes associated with school improvement" but struggled to tailor assistance to meet specific school needs, especially to directly improve instruction.

Essential Condition 1: Effective District Systems for School Support and Intervention

ADDITIONAL RESOURCES

The following resources are written for practitioner use, drawing from research but not reporting the research itself.

Agullard, K. & Goughnour, D. S. (2006). *Central office inquiry: Assessing organization, roles, and actions to support school improvement*. San Francisco, CA: WestEd.

This is a research-based tool, piloted in three central offices, to assist a superintendent who wants to engage in central office inquiry "in which key staff reflect on their shared theory of action and examine their current organizational arrangement, their enacted roles, and their day-to-day activities" to evaluate how well they are serving their schools. The three stages of inquiry involve (1) examining [current] support for continuous district improvement, (2) working to better understand district context, and (3) creating an aligned theory of action (which might require uncomfortable shifts in the current central office arrangement).

Gross, S. J. (2004). *Promises kept: Sustaining school and district leadership in a turbulent era.* Alexandria, VA: Association for Supervision and Curriculum Development.

This book grew out of the author's 5-year case study research of ten schools engaged in well sustained curricular reform. He expanded school visits to focus on how reform weathers turbulence, particularly that caused by the departure of a key leader. The focus on turbulence at the school level is instructive for central offices in their efforts to buffer schools from challenges that make reform efforts difficult to sustain over time.

Honig, M. & Copland, M. (September 2008). *Reinventing district central offices to expand student learning.* Center for Comprehensive School Reform and Improvement. Washington D.C.: Learning Point Associates. www.centerforcsri.org

An Issue Brief drawing from research and cases of three large school districts and describing new roles of the central office in terms of partnerships, central office staff development, inventiveness, and external support.

Essential Condition 2: Effective School Leadership

Essential Condition 2. Effective School leadership: The district and each school take action to attract, develop, and retain an effective school leadership team that implements a well-designed strategy for accomplishing a clearly defined mission and set of goals, in part by leveraging resources and obtaining staff commitment to improving student learning. Each school leadership team a) ensures staff understanding of and commitment to the school's mission and strategies, b) supports teacher leadership and a collaborative learning culture, c) uses supervision and evaluation practices that assist teacher development, and d) focuses staff time and resources on instructional improvement and student learning through effective management of operations and use of data for improvement planning and management.

Key Words:

School leadership and student achievement, principal leadership, school leadership, school leadership team, principal development

Organizations:

McREL: Mid-continent Research for Education and Learning, Public Agenda, Stanford Educational Leadership Institute, The Wallace Foundation, Trends in International Mathematics and Science Studies.

Limitations:

This summary includes publicly available documents with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

REL Northeast and Islands

Essential Condition 2: Effective School Leadership

Leithwood, K., Louis, K. S., Anderson, S. & Wahlstrom, K. (2004). *How leadership influences student learning*. Minneapolis, MN: Center for Applied Research and Educational Improvement, University of Minnesota. http://www.wallacefoundation.org/WF/KnowledgeCenter/KnowledgeTopics/EducationLeadership/HowLeadershipInfluencesStudentLearning.html

Summary/Methods	Findings/Recommendations
This 87-page report summarizes over 30 years of research to review evidence on the effects of district and school leadership on student learning, and the practices of effective leadership. Existing research on effective leadership practices from the 1970s to 2004 was reviewed. The report draws on a broad range of empirical research from several organizational sectors (e.g., schools, the military) and countries (e.g.,U.S., Netherlands, Hong Kong) to identify lessons.	The work of superintendents and principals does affect student learning, second only to the quality of curriculum and teaching. The greatest impact tends to be in schools where the learning needs of students are more severe. District and school leaders contribute to student learning indirectly in three major areas: ▪ Setting directions by providing guidance that is clearly understood by all, establishing high expectations, and using data to monitor progress and performance. ▪ Supporting staff with resources and the professional development necessary to succeed. ▪ Managing and redesigning the organization so that the entire range of conditions in the district and schools fully supports teaching and learning.

Essential Condition 2: Effective School Leadership

Waters, J. T., Marzano, R. J., & McNulty, B. (2003). *Balanced leadership: What 30 years of research tells us about effect of leadership on student achievement.* Denver, CO: Mid-continent Research for Education and Learning (McREL).

http://www.mcrel.org/PDF/LeadershipOrganizationDevelopment/5031RR_BalancedLeadership.pdf

Also see Marzano, Waters, McNulty, *School Leadership that Works: from Research to Results* (2005). Alexandria VA: Association for Supervision and Development and Aurora, CO: Mid-continent Research and Education and Learning.

Summary/Methods	Findings/Recommendations
This synthesis of 30 years of quantitative studies examines the relationship between leadership practices and student achievement. From the research analysis, the authors develop the "Balanced Leadership Framework" that complements the commonly used and cited ISLLC [Council (of Chief State School Officers)'s Interstate School Leaders Licensure Consortium] standards. Researchers reviewed over 5,000 studies since 1970 that explored the relationship between school leadership and student achievement; 70 (representing almost 3,000 schools, 24,000 teachers, and 1.1 million students) met their criteria to be included in a meta-analysis. In addition, they surveyed 652 principals.	▪ Principal leadership demonstrates significant correlation with student achievement, with one standard deviation improvement in leadership corresponding to a 10-percentile improvement in student achievement. ▪ Twenty-one specific leadership qualities, associated with 66 specific practices, demonstrate statistically significant relationships with student achievement. ▪ Leaders can have a positive, marginal, or even negative effect on achievement. The determining factor is whether the leader focuses on and understands the proper changes for his or her particular school, as well as the leadership practices associated with those changes. ▪ This framework can be used to inform district and regional professional development, mentoring, and administrator evaluation, as well as for state licensure policies and administrator preparation programs. The leadership qualities identified involve more standards that "break from past practice" or involve "change leadership" than the ISLLC standards.

Essential Condition 2: Effective School Leadership

Vidoni, D., Bezzina, C., Gatelli, D., & Grasetti, L. (2008) *The role of school leadership on student achievement: Evidence from TIMSS 2003.* European Commission.	
Summary/Methods	**Findings/Recommendations**
Drawing on data from the Trends in International Mathematics and Science Study of 2003 (TIMMS 2003), this research used quantitative methods to investigates the relationship between the principal's (or head teacher's) time allocation and school characteristics, student background, and student achievement in 18 countries. The report includes an examination of the "economic nature of the educational good" as well as a summary of international research on school leadership and management.	While the study found negligible direct effects of principal's timeon student achievement, it found a difference between leadership and management activity: "High concentrations of school leadership are especially valuable for students of lower SES [socioeconomic status]. On the other hand, the high concentrations of school management are most valuable to students with higher SES."The authors posit that this finding could be because leadership implies deep involvement of the principal in the 'modeling and tailoring of the educational process to the needs of students," while management "aims at rationalizing and making the best use of resources." Authors also found that principals' involvement in activities related to student achievement appears to reduce the connection between student results and their family socioeconomic status.

Essential Condition 2: Effective School Leadership

Appalachia Educational Laboratory at Edvantia. (2005). *Shared leadership and student achievement*. Charleston WV: Edvantia	
Summary/Methods	**Findings/Recommendations**
This literature review describes "ways of thinking about sharing school leadership and examine[s] the possible link between shared leadership and student achievement." The authors summarize research on four approaches to school leadership that involves more than one person: school-based management, teacher leadership, distributed leadership, and shared leadership (the latter linked to the presence of a "professional learning community").	▪ "While a substantial amount of qualitative research exists on the subject of sharing leadership, . . .only a small number of studies examine instructional benefits, and the findings of those studies yield ambiguous results." ▪ Ambiguity may be due to the quality of shared leadership implementation, which varies widely, or to weaknesses in the studies themselves. ▪ "The next phase of research on sharing school leadership should move beyond description and focus more on explanation, and incorporate longitudinal studies that capture change over time.

Essential Condition 2: Effective School Leadership

Public Impact (2008). *School turnaround leaders: Competencies for success.* Chapel Hill NC: Public Impact for The Chicago Public Education Fund.	
Summary/Methods	**Findings/Recommendations**
"The four resources in the Competencies for Turnaround Success Series are designed to help district officials identify and hire the right leaders and teachers for this demanding role. These resources clarify the most critical competencies – or patterns of thinking, feeling, speaking and acting – that enable people to be successful in attempts to transform schools from failure to excellence quickly and dramatically." It is based on an earlier analysis of 59 cross-sector case studies in which "public and private organizations that were failing by many measures made very rapid, dramatic performance improvements".	The authors identify four clusters of competence: ▪ *Driving for Results,* which includes "a strong desire to achieve outstanding results and [implementation of] the task-oriented actions required." ▪ *Influencing for Results,* or motivating others to join in the work. ▪ *Problem-Solving,* including analysis of data to inform decisions, making clear logical plans that people can follow, and ensuring strong connections between school learning goals and classroom activity." ▪ *Showing confidence to lead,* i.e., "the public display of self-confidence, staying visibly focused, committed and self-assured" through the public and private attacks that are common.

Essential Condition 2: Effective School Leadership

Mintrop, H. & Trujillo, T. (2005). *Corrective action in low-performing schools: Lessons for NCLB implementation from state and district strategies in first-generation accountability systems.* Report 657. Los Angeles, CA: Center for the Study of Evaluation, UCLA.
http://www.cse.ucla.edu/products/summary.asp?report=657

Summary/Methods	Findings/Recommendations
The authors extract lessons from the experiences of states and districts that instituted NCLB-like accountability systems prior to 2001 (here called first-generation accountability systems). They studied the accountability systems of three smaller states (Kentucky, Maryland, North Carolina), four larger ones (California, Florida, New York, Texas), and two large districts (Chicago and Philadelphia). The places studied varied in their theories of action and in the nature of supports they provided. The authors analyzed evaluative reports and policy documents and conducted interviews with state officials and researchers.	Continuous school improvement requires a "sophisticated infrastructure that comprehensively 'moves on all fronts.'" The data from the nine sites were condensed into eight lessons relevant to design effective education accountability systems: (1) Sanctions are not the fallback solution. (2) No single strategy has been universally successful. (3) Staging should be handled with flexibility. (4) Intensive capacity-building is necessary. (5) A comprehensive bundle of strategies is key. (6) Relationship-building needs to complement powerful programs. (7) Competence reduces conflict. (8) Strong state commitment needed to create system capacity. "Ambitious performance goals without a well structured and well supported capacity-building strategy create ineffective, low-performing school programs, with undesirable political consequences." "Accountability systems designed in the medium range of cognitive complexity, with modest pressures and reasonably elaborate capacity-building structures, may be a good start" (p. 30).

Essential Condition 2: Effective School Leadership

Johnson, J., Rochkind, J. & Doble, J. (2008). *A mission of the heart: Leaders in high-needs districts talk about what it takes to transform a school.* New York: Public Agenda and The Wallace Foundation.	
Summary/Methods	**Findings/Recommendations**
"Prepared for The Wallace Foundation by Public Agenda, *A Mission of the Heart* attempts to understand the best ways to recruit and sustain top leaders in high-needs schools. The study is based on five in-depth focus groups with principals in high-needs districts and sixteen one-on-one interviews with superintendents and other high-ranking education officials, including a state superintendent of education."	"The study reveals that principals often fall into two distinct categories: "Transformers" and "Copers." Transformers had an explicit vision for what their school might be and a 'can do' attitude about changing the status quo. Copers were often caring and well intentioned, but rarely able to do more than just 'cope' with the turmoil of the day. Other observations from the study touch on topics ranging from managing teaching staff to whether top-notch principals are 'made' or 'born.'"

Essential Condition 2: Effective School Leadership

Darling-Hammond, L., LaPointe, M., Meyerson, D., & Orr, M. (2007). *Preparing school leaders for a changing world: Executive summary*. Stanford, CA: Stanford University, Stanford Educational Leadership Institute.	
Summary/Methods	**Findings/Recommendations**
The study examined eight exemplary pre- and in-service principal development programs, . .chosen because they had "evidence of strong outcomes in preparing school leaders" and because as a group they represented a variety of approaches, designs, and policy contexts. Researchers interviewed program faculty and administrators, participants and others; surveyed participants and graduates about their experiences; and observed them in their jobs.	The report found that successful programs had "comprehensive and coherent curricula aligned with state and professional standards" that effectively blended theory and practice. These included "well designed and supervised administrative internships." Recruitment and selection strategies were important, as was the creation of a cohort structure that provided peer support and formal mentoring by expert principals.

Bryk, A. & Schneider, B. (2002). *Trust in schools: A core resource for improvement*. New York: Russell Sage Foundation.	
Summary/Methods	**Findings/Recommendations**
This book provides a framework for relational trust in schools, case studies of three urban elementary schools, and analysis of the relationship of trust to academic achievement. Data for the analysis come from 10 years of research in Chicago schools, including longitudinal case studies of 12 schools and large-scale quantitative data collected from all public schools.	Bryk and Schneider have developed a grounded theory of social trust in school communities that focuses on interpersonal social exchanges and how they "shape the thinking and behavior of local school actors." The authors measure trust between teachers and parents, teachers and principal, and among teachers. When teachers were more likely to engage in the "hard work of school improvement" and all parties were more likely to treat one another with respect and acceptance of good intentions, school communities with high relational trust were more likely to demonstrate marked improvements in academic productivity.

Essential Condition 3: Aligned Curriculum

Essential Condition 3. Aligned Curriculum: The district ensures that each school's taught curricula a) are aligned to state curriculum frameworks and to the MCAS performance level descriptions, and b) are also aligned vertically (between grades) and horizontally (across classrooms at the same grade level and across sections of the same course).

Key Words/Phrases:

Aligned curriculum (curriculum alignment), frameworks, standards

Organizations:

Appalachia Educational Laboratory, ABC education consultants.

Limitations:

This summary includes publicly available documents, whenever possible, with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

Essential Condition 3: Aligned Curriculum

Squires, D. A. (2009). *Curriculum alignment: Research-based strategies for increasing student achievement.* Thousand Oaks, CA: Corwin Press. See also Squires, D. A. (2005). *Aligning and balancing the standards-based curriculum*. Thousand Oaks, CA: Corwin Press.	
Summary/Methods	**Findings/Recommendations**
"The goal of this book is to refine practitioners' knowledge of alignment issues and to demonstrate what districts can do now to improve their alignment process and student achievement based on research. The book concludes by demonstrating how curriculum can be a systemic tool for addressing many alignment issues as well as a tool for improving achievement."	"Chapter 10 summarizes the results of Balanced Curriculum as one model of alignment, showing improved achievement in districts around the country."

Essential Condition 3: Aligned Curriculum

Schmidt, W. H., McKnight, C. C., Houang, R. T., Wang, H. C., Wiley, D. E., Cogan, L. S., et al. (2001). *Why schools matter: A cross-national comparison of curriculum and learning.* San Francisco, CA: Jossey-Bass.	
Summary/Methods	**Findings/Recommendations**
"In this book, we seek to offer fresh hope and direction to reform efforts by focusing on a fundamental aspect of education accessible and amendable to education policy and change—the curriculum. We document in detail aspects of the mathematics and science curriculum in the United States and Other Third International Mathematics and Science Study (TIMSS) countries. In the course of this examination, we've been able to demonstrate very dramatic results on the strength of the relationship of curriculum to learning." This study gathered data on four aspects of curriculum, "content standards, text-book space, teacher content goals, and duration of content coverage" in order to determine the relationship of curriculum to student learning (as demonstrated by TIMMS data).	Using data from the Third International Mathematics and Science Study (TIMSS), the authors find that "even controlling for many student background differences, these curriculum measures are strongly related to what students learn".

Essential Condition 3: Aligned Curriculum

Appalachia Educational Laboratory. (2005). *Research brief: Aligned curriculum and student achievement*. Charlestown, WV: Edvantia. http://www.edvantia.org/pdta/pdf/Aligned.pdf	
Summary/Methods	**Findings/Recommendations**
"This research digest summarizes the research literature, specifically addressing textbook alignment, instructional alignment, alignment between state standards and enacted curriculum, curriculum alignment through professional development, and findings from international alignment studies."	"The studies reported in this review provide strong evidence from scientifically based research that aligning the various components can have positive and significant effects."

Essential Condition 3: Aligned Curriculum

Reys, R., Reys, B., Lapan, R., Holliday, G., & Wasman, D. (2003). Assessing the impact of "standards"-based middle grades mathematics curriculum materials on student achievement. *Journal for Research in Mathematics Education*, *34*(1), 74-95.	
Summary/Methods	**Findings/Recommendations**
"This study compared the mathematics achievement of eighth graders in the first three school districts in Missouri to adopt NSF-funded, Standards-based middle grades mathematics curriculum materials (*MATH Thematics* or *Connected Mathematics Project*) with students from other districts who had similar prior mathematics achievement and family income levels. Achievement was measured using the mathematics portion of the Missouri Assessment Program (MAP) administered to all eighth graders in the state annually, beginning in the spring of 1997."	"Significant differences in achievement were identified between students using Standards-based curriculum materials for at least 2 years and students from comparison districts using other curriculum materials. All of the significant differences reflected higher achievement of students using Standards-based materials. Students in each of the three districts using Standards-based materials scored higher in two content areas (data analysis and algebra), and these differences were significant."

Additional Resources

Duncan, R. G. (2009). Learning progressions: Aligning curriculum, instruction, and assessment. *Journal of Research in Science Teaching 46*(6), 606-609.

English, F. W. & Steffy, B. E. (2001). *Deep curriculum alignment: Creating a level playing field for all children on high-stakes tests of educational accountability.* Lanaham, MD: Scarecrow Press.

Roach, A. T., Niebling, B. C., & Kurz, A. (2008). Evaluating the alignment among curriculum, instruction, and assessment: Implications and applications for research and practice. *Psychology in the Schools, 45*(2), 158-176.

Wang, M., Haertel, G., & Walberg, H. (1993). Toward a knowledge base for school learning. *Review of Educational Research 63*, 249-294.

Essential Condition 4: Effective Instruction

Essential Condition 4. Effective Instruction: The district ensures that instruction reflects effective practice and high expectations for all students, focuses on clear objectives, uses appropriate educational materials, and includes a) a range of strategies, technologies, and supplemental materials aligned with students' developmental levels and learning needs; b) instructional practices and activities that build a respectful climate and enable students to assume increasing responsibility for their own learning; and c) use of class time that maximizes student learning. Each school staff has a common understanding of the features of high-quality standards-based instruction and a system for monitoring instructional practice.

Key Words/Phrases:

Instructional practices/strategies, high expectations, learning objectives, student learning responsibility, student learning/performance

Organizations:

Center for Research on the Education of Students Placed at Risk, The Institute for Effective Instruction, The Center on Innovation and Improvement

Limitations:

This summary includes publicly available documents, whenever possible, with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

Essential Condition 4: Effective Instruction

Marzano, R. J., Gaddy, B. B., & Dean, C. (2000). *What works in classroom instruction.* Aurora, CO: Mid-continent Research for Education and Learning. http://www.mcrel.org/PDF/Instruction/5992TG_What_Works.pdf. See also Marzano, R. J., Pickering, D. J., Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement.* Alexandria, VA: Association for Supervision and Curriculum Development. See also Marzano, R. J. (1998). *A theory-based meta-analysis of research on instruction.* Aurora, CO: Mid-continent Research for Education and Learning. http://www.mcrel.org/PDF/Instruction/5982RR_InstructionMeta_Analysis.pdf.	
Summary/Methods	**Findings/Recommendations**
"The synthesized research findings presented in this document are based in part on an earlier technical document published by McREL entitled *A Theory-Based Meta-Analysis of Research on Instruction* (Marzano, 1998), which summarizes findings from more than 100 studies involving 4,000+ comparisons of experimental and control groups. Since that document was published, McREL researchers have analyzed additional research findings from selected research on instructional strategies that could be used by teachers in K–12 classroom. . . .The research technique we used is referred to as *meta-analysis*, a strategy that combines the results from a number of studies to determine the net effect of an intervention. Just as with a single study, this net effect can be translated into an expectation about achievement gain or loss, but in this case it has the added value of representing many studies."	"The average effect size of these strategies ranges from .59 to 1.61. . . .No instructional strategy works equally well in all situations. The effectiveness of a strategy depends in part on the current achievement level of a student, in part on the skill and thoughtfulness with which a teacher applies the strategy, and in part on contextual factors such as grade level and class size. Instructional strategies are only tools. We strongly recommend that teachers keep this in mind as they review the strategies presented in this manual and use them with students. Although the strategies presented in this manual are certainly good tools, they should not be expected to work equally well in all situations, or with all students, even when expertly used."

Essential Condition 4: Effective Instruction

Brophy, J. (2000). *Teaching*. Brussels, Belgium: International Academy of Education and Geneva, Switzerland: Palais des Académies. http://www.ibe.unesco.org/fileadmin/user_upload/archive/publications/EducationalPracticesSeriesPdf/prac01e.pdf.	
Summary/Methods	**Findings/Recommendations**
"This booklet is a synthesis of principles of effective teaching that have emerged from research in classrooms. It addresses generic aspects of curriculum, instruction and assessment, as well as classroom organization and management practices that support effective instruction. It focuses on learning outcomes but with recognition of the need for a supportive classroom climate and positive student attitudes towards schooling, teachers and classmates. Much of the research support for these principles comes from studies of relationships between classroom processes(measured through observation systems) and student outcomes (most notably, gains in standardized achievement tests). However, some principles are rooted in the logic of instructional design (e.g., the need for alignment among a curriculum's goals, content, instructional methods and assessment measures). In addition, attention was paid to emergent theories of teaching and learning (e.g., socio-cultural, social constructivist) and to the standards statements circulated by organizations representing the major school subjects. Priority was given to principles that have been shown to be applicable under ordinary classroom conditions and associated with learning outcomes."	Findings suggest that the following are needed to optimize student learning: ▪ A supportive classroom climate. ▪ Opportunity to learn. ▪ Curricular alignment. ▪ Establishing learning orientations. ▪ Coherent content. ▪ Thoughtful discourse. ▪ Practice and application activities. ▪ Scaffolding students' task engagement. ▪ Strategy teaching. ▪ Co-operative learning. ▪ Goal-oriented assessment. ▪ Achievement expectations.

Essential Condition 4: Effective Instruction

Pashler, H., Bain, P. M., Bottge, B. A., Graesser, A., Koedinger, K., McDaniel, M., and Metcalfe, J. (2007). *Organizing instruction and study to improve student learning*. (NCER 2007-2004). Washington, DC: National Center for Education Research, Institute of Education Sciences, U.S. Department of Education. http://ies.ed.gov/ncee/wwc/pdf/practiceguides/20072004.pdf	
Summary/Methods	**Findings/Recommendations**
"The recommendations in this practice guide are intended to provide teachers with specific strategies for organizing both instruction and students' studying of material to facilitate learning and remembering information, and to enable students to use what they have learned in new situations. In classifying levels of empirical support for the effectiveness of our recommendations, we have been mindful not only to the issue of whether a study meets the 'gold-standard' of a randomized trial, but also to the question 'Effective as compared to what?' Virtually any educational manipulation that involves exposing students to subject content, regardless of how this exposure is provided, is likely to provide some benefit when compared against no exposure at all. To recommend it, however, the question becomes 'Is it more effective than the alternative it would likely replace?' In laboratory studies, the nature of instruction in the control group is usually quite well defined, but in classroom studies, it is often much less clear. In assessing classroom studies, we have placed most value on studies that involve a baseline that seems reasonably likely to approximate what might be the 'ordinary practice default.'"	"We recommend a set of actions that teachers can take that reflect the process of teaching and learning, and that recognizes the ways in which instruction must respond to the state of the learner. It also reflects our central organizing principle that learning depends upon memory, and that memory of skills and concepts can be strengthened by relatively concrete—and in some cases quite non-obvious—strategies." Recommended actions include: ▪ Space learning over time. ▪ Interleave worked example solutions with problem-solving exercises. ▪ Combine graphics with verbal descriptions. ▪ Connect and integrate abstract and concrete representations of concepts. ▪ Use quizzing to promote learning. ▪ Help students allocate study time efficiently. ▪ Ask deep explanatory questions.

Essential Condition 4: Effective Instruction

Von Secker, C. E. & Lissitz, R. W. (1999). Estimating the impact of instructional practices on student achievement in science. *Journal of Research in Science Teaching 36*(10), 1110-1126.	
Summary/Methods	**Findings/Recommendations**
"This study used a hierarchical linear model (HLM) to estimate the direct and indirect effects of the instructional practices recommended by ten National Science Education Standards on individual achievement. Three pedagogical reforms—namely, providing more opportunities for laboratory inquiry, increasing emphasis on critical thinking, and reducing the amount of teacher-centered instruction—were expected to account for variability in school mean achievement and explain why gender, racial-ethnic status, and socioeconomic status have more influence on achievement of students in some schools than in others."	"Results suggest that whereas the instructional polices recommended by the authors of the Standards may be associated with higher achievement overall, they are equally likely to have the unintended consequences of contributing to greater achievement gaps among students with different demographic profiles. Theoretical expectations about the impact of instructional practices on academic excellence and equity require further evaluation."

Essential Condition 4: Effective Instruction

Slavin, R. E., Lake, C., Chambers, B., Cheung, A., & Davis, S. (2009). *Effective beginning reading programs: A best-evidence synthesis.* Retrieved from the Center for Data-Driven Reform in Education at John's Hopkins University School of Education. www.bestevidence.org/word/begin_read_Feb_09_2009.pdf	
Summary/Methods	**Findings/Recommendations**
"This article systematically reviews research on the achievement outcomes of four types of approaches to improving the beginning reading success of children in kindergarten and first grade: ▪ Reading curricula. ▪ Instructional technology. ▪ Instructional process programs. ▪ Combinations of curricula and instructional process. Study inclusion criteria included use of randomized or matched control groups, a duration of at least 12 weeks, valid achievement measures independent of the experimental treatments, and a final assessment at the end of grade 1 or better. A total of 62 studies met these criteria."	"The review concludes that instructional process programs designed to change daily teaching practices have substantially greater research support than programs that focus on curriculum or technology alone. In particular, positive achievement effects were found for Success for All, PALS, phonological awareness training, and other programs focused on professional development."

Essential Condition 5: Student Assessment

Essential Condition 5. Student Assessment: The district ensures that each school uses a balanced system of formative and benchmark assessments to guide instruction and determine individual remedial and enrichment requirements. Benchmark assessments are given 4 – 8 times per year.

Key Words/Phrases:

Tiered instruction, benchmark/formative assessment, response to intervention, differentiated/enriched instruction

Organizations:

Institute for Education Sciences, What Works Clearinghouse, Assessment for Learning

Limitations:

This summary includes publicly available documents, whenever possible, with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

Essential Condition 5: Student Assessment

Wiliam, D. (2007). *What does research say the benefits of formative assessment are?* Research Brief. Retrieved from the National Council of Teachers of Mathematics.

http://www.nctm.org/uploadedFiles/Research_News_and_Advocacy/Research/Clips_and_Briefs/Research_brief_05_-_Formative_Assessment.pdf.

See also: Wiliam, D., & Leahy, S. (2007). A theoretical foundation for formative assessment. In J. McMillan (Ed.), *Formative classroom assessment: Theory into practice*. New York: Teachers College Press.

See also: Wiliam, D., & Thompson, M. (2007). Integrating assessment with instruction: What will it take to make it work? In C. A. Dwyer (Ed.), *The future of assessment: Shaping teaching and learning*. Mahwah, NJ: Lawrence Erlbaum Associates.

Summary/Methods	Findings/Recommendations
This is a research brief summarizing the literature on formative assessment. Formative assessment is referred to "Assessment for learning" which is an assessment for which the first priority in its design and practice is to serve the purpose of promoting pupils' learning."	"Two reviews of research in this area (Natriello. 1987; Crooks, 1998) found that assessment practices could have substantial positive impact on students' attitudes and achievement, although the impact was more often negative. Further reviews of research by Bangert-Drowns and his colleagues (1991), by Kluger and DeNisi (1996), by Black and Wiliam (1998), and by Nyquist (2003) have clarified when assessment helps and when it hinders student learning. Most recently, Wiliam (2007) has synthesized the research on how assessment can support the learning of mathematics specifically. The available research evidence suggests that formative assessment produces a greater increase in a student's achievement than class-size reduction or increase in teacher's content knowledge, and at a fraction of the cost (Wiliam and Thompson, 2007)."

Essential Condition 5: Student Assessment

Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice, 5*(1), 7-74.	
Summary/Methods	**Findings/Recommendations**
"This article is a review of the literature on classroom formative assessment. The perceptions of students and their role in self-assessment are considered alongside analysis of' the strategies used by teachers and the formative strategies incorporated in such systemic approaches as mastery learning. There follows a more detailed and theoretical analysis of the nature of feedback, which provides a basis for a discussion of the development of theoretical models for formative assessment and of the prospects for the improvement of practice."	"Several studies show firm evidence that innovations designed to strengthen the frequent feedback that students receive about their learning yield substantial learning gains."

Essential Condition 5: Student Assessment

Gersten, R., Beckmann, S., Clarke, B., Foegen, A., Marsh, L., Star, J. R., & Witzel, B. (2009). *Assisting students struggling with mathematics: Response to*

Intervention (RtI) for elementary and middle schools (NCEE 2009-4060). Washington, D C: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. http://ies.ed.gov/ncee/wwc/pdf/practiceguides/rti_math_pg_042109.pdf.

Summary/Methods	Findings/Recommendations
"Students struggling with mathematics may benefit from early interventions aimed at improving their mathematics ability and ultimately preventing subsequent failure. This guide provides eight specific recommendations intended to help teachers, principals, and school administrators use Response to Intervention (RtI) to identify students who need assistance in mathematics and to address the needs of these students through focused interventions. The guide provides suggestions on how to carry out each recommendation and explains how educators can overcome potential roadblocks to implementing the recommendations." "The panel relied on WWC evidence standards to assess the quality of evidence supporting mathematics intervention programs and practices. The WWC addresses evidence for the causal validity of instructional programs and practices	The eight recommendations are: **Tier 1** 1. Screen all students to identify those at risk for potential mathematics difficulties and provide interventions to students identified as at risk. **Tiers 2 and 3** 2. Instructional materials for students receiving interventions should focus intensely on in-depth treatment of whole numbers in kindergarten through grade 5 and on rational numbers in grades 4 through 8. These materials should be selected by committee. 3. Instruction during the intervention should be explicit and systematic. This includes providing models of proficient problem solving, verbalization of thought processes, guided practice, corrective feedback, and frequent cumulative review. 4. Interventions should include instruction on solving word problems that is based on common underlying structures. 5. Intervention materials should include opportunities for students to work with visual representations of mathematical ideas and interventionists should be proficient in the use of visual representations of mathematical ideas. 6. Interventions at all grade levels should devote about 10 minutes in each session

according to WWC standards. Information about these standards is available at http://ies.ed.gov/ncee/wwc/references/standards/.”	to building fluent retrieval of basic arithmetic facts. 7. Monitor the progress of students receiving supplemental instruction and other students who are at risk. 8. Include motivational strategies in Tier 2 and Tier 3 interventions.

Essential Condition 5: Student Assessment	
Gersten, R., Compton, D., Connor, C. M., Dimino, J., Santoro, L., Linan-Thompson, S., and Tilly, W. D. (2008). *Assisting students struggling with reading: Response to Intervention and multi-tier intervention for reading in the primary grades. A practice guide*. (NCEE 2009-4045). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. http://ies.ed.gov/ncee/wwc/pdf/practiceguides/rti_reading_pg_021809.pdf	
Summary/Methods	**Findings/Recommendations**
"In the primary grades students with reading difficulties may need intervention to prevent future reading failure. This guide offers specific recommendations to help educators identify students in need of intervention and implement evidence-based interventions to promote their reading achievement. It also describes how to carry out each recommendation, including how to address potential roadblocks in implementing them." "The panel relied on WWC evidence standards to assess the quality of evidence supporting mathematics intervention programs and practices. The WWC addresses evidence for the causal validity of instructional programs and practices according to WWC standards. Information about these standards is available at http://ies.ed.gov/ncee/wwc/references/standards/."	Recommendations of the guide included: *Screen all students for potential reading problems at the beginning of the year and again in the middle of the year*. Regularly monitor the progress of students at risk for developing reading disabilities. Tier 1 intervention/general education: *Provide time for differentiated reading instruction for all students based on assessments of students' current reading level.* Tier 2 intervention: *Provide intensive, systematic instruction on up to three foundational reading skills in small groups to students who score below the benchmark score on universal screening*. Typically, these groups meet between three and five times a week, for 20 to 40 minutes. *Monitor the progress of tier 2 students at least once a month*. Use these data to determine whether students still require intervention. For those students still making insufficient progress, school-wide teams should design a tier 3 intervention plan.

	Tier 3 intervention: *Provide intensive instruction on a daily basis that promotes the development of the various components of reading proficiency to students who show minimal progress after reasonable time in tier 2 small group instruction.*

Additional Resources

McMillan, J. (2007). Formative classroom assessment: The key to improving student achievement. In J. McMillan (Ed.), *Formative classroom assessment: Theory into practice*. New York: Teachers College Press.

Essential Condition 6: Principal's Staffing Authority

Essential Condition 6. Principal's Staffing Authority: The district ensures that each principal has the authority, guidance, and assistance needed to make staffing decisions based on the school's improvement plan and student needs.

Key Words/Phrases:

Principal, authority, staffing decisions, hiring

Organizations:

New Teacher Project, Wallace Foundation, RAND, Center for Reinventing Public Education (CRPE)

Limitations:

This summary includes publicly available documents, whenever possible, with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

Essential Condition 6: Principal's Staffing Authority

Daly, T., Keeling, D., Grainger, R., & Grundies, A. (2008). Mutual benefits: *New York City's shift to mutual consent in teacher hiring.* New York: The New Teacher Project.
http://www.tntp.org/files/MutualBenefits.pdf

Summary/Methods	Findings/Recommendations
"In 2005, the New York City Department of Education (NYCDOE) and its teachers union, the United Federation of Teachers (UFT), agreed to a groundbreaking contract that reformed outdated school staffing provisions. Specifically, the new contract changed the staffing process for teachers and schools in three major ways. First, it protected the right of schools to choose which teachers they hired, regardless of seniority. Second, it ended the "bumping" of novice teachers out of their positions by senior teachers who claimed these positions based on seniority and without input from principals or school staffs. Finally, it established a more open hiring process for "excessed" teachers (those displaced from their positions because of falling school enrollments, budget declines, programmatic changes, or school closures). As this paper will illustrate, the mutual consent system has resulted in mutual benefits for teachers and schools by offering better choices, increased flexibility, and greater transparency throughout the staffing process. The positive impact of this policy shift on New York City teachers is especially noteworthy." "Data included in this report were collected by The New Teacher Project (TNTP) between May 2006 and December 2007. . . .TNTP collaborated with district staff to track excessed teacher data from payroll, human resources, and teacher tracking systems. . . .TNTP conducted several surveys of excessed teachers."	This study finds that the mutual consent system has: ▪ Earned strong support from New York City teachers. ▪ Successfully facilitated thousands of transfers. ▪ Resulted in positions that teachers find satisfying. ▪ Resulted in positions that teachers plan to keep. ▪ Provided fair and equal access to vacancies. ▪ Not disadvantaged high-poverty schools. In addition to giving schools greater choice in teacher hiring, the system has not spurred an exodus of teachers from high-poverty schools. A number of underlying factors appear to contribute to the success of the mutual consent system. First, it is far simpler and more transparent than the multi-faceted system it replaced, in which different schools used a number of technological systems to track hiring, and vacancies were not centrally accessible to all teachers in real time. Second, the new system respects a strong preference by educators to have consent from both sides in hiring decisions, as opposed to a process-driven system in which consent plays little if any role. Third, the district supports the new hiring process with new technological infrastructure built to facilitate interactions between teachers and schools."

Essential Condition 6: Principal's Staffing Authority

Gill, B. P., Hamilton, L. S., Lockwood, J. R., Marsh, J. A., Zimmer, R. W., Hill, D., & Pribesh, S. (2005). *Inspiration, perspiration, and time: Operations and achievement in Edison schools.* Santa Monica, CA: RAND Education, Monograph. http://www.rand.org/pubs/monographs/2005/RAND_MG351.pdf	
Summary/Methods	**Findings/Recommendations**
"In 2000, Edison contracted with the RAND Corporation to conduct a comprehensive evaluation of the performance of the schools it manages. This monograph is the final product of this multiyear evaluation. It examines Edison's strategies for improving schools, the implementation of these strategies in a sample of Edison schools across the United States, and the achievement trends attained by students in Edison schools." As one part of the evaluation, Edison examined the impact of principal hiring and firing authority on student achievement trends. Principal authority was investigated using case studies, which was found to "shed light on differences in achievement trajectories among Edison schools. Case study findings are not definitive, because the sample is small and relationships can be measured only in simple, correlational terms, but they are nevertheless suggestive."	"There is some evidence that Edison schools that operate with fewer local constraints on the model, and where principals have full authority over hiring and firing teachers, may have better achievement trends." In particular, "schools in which the principal has full authority to hire and fire teachers (as desired by Edison) have slightly better achievement trends in reading (0.4 on the z-score scale) and in math (0.1 on the z-score scale). All of these differences are small (and short of statistical significance), so they should be viewed only as suggestive."

Essential Condition 6: Principal's Staffing Authority

Gross, B., DeArmond, M., & Goldhaber, D. (2008) *Is it better to be good or lucky? Decentralized teacher selection in 10 elementary schools*. CRPE Working Paper #3.
http://www.crpe.org/cs/crpe/download/csr_files/wp_crpe3_joyce_may08.pdf

Summary/Methods	Findings/Recommendations
"This paper reports on a qualitative field study that describes recruitment and interview practices in 10 elementary schools in a large, decentralized urban school district. While all of the schools followed a common procedure, we found striking differences in the extent to which they actively recruited teachers and articulated consistent hiring priorities. We argue that these differences and the schools' subsequent hiring outcomes are contingent on a complex interaction of school-based knowledge, resource constraints, and each school's relative standing in the district's internal labor market. As in prior research on school decentralization, these contingencies offer an important caveat to the premise that school-based hiring will, by virtue of empowerment alone, lead to more effective teacher recruitment and selection."	Findings of the study include: • "District's site-based hiring system was better than having centralized teacher assignments, and most respondents wished they had more local authority (for example, by eliminating the restrictions on who they could interview in each cycle). • However, school-based hiring reforms can fall short for at least two reasons: ▪ First, school-based hiring policies assume local capacity and technical expertise that may or may not be present. Schools may be more or less entrepreneurial and more or less clear about who they are as a school and what they want in teacher candidates. ▪ Second, the reforms can fall short if they ignore the relative attractiveness of schools and its effect on staffing outcomes. o In the end, even though the 10 schools approached teacher selection differently, the impact of these differences appeared to be mitigated by the school's relative attractiveness in the district's internal labor market. o Schools in less attractive areas may ultimately be better off if they are more active and coherent, but their relative place in the local labor market can frustrate their efforts. Improving the effectiveness and equity of the teacher selection process is likely to require systemic solutions. These include investing in the capacity of school personnel to conduct effective interviews and evaluate candidates; increasing the supply of teachers for hard-to-staff schools; and collecting and providing more useful information to schools."

Essential Condition 6: Principal's Staffing Authority

Harris, D. N., Rutledge, S. A., Ingle, W. K., & Thompson, C. C. (2007). *Mix and match: What principals look for when hiring teachers and what this means for teacher quality policies.* Retrieved from Teacher Quality Research. http://www.teacherqualityresearch.org/mix_match.pdf

Summary/Methods	Findings/Recommendations
"Principals' preferences for teachers have important, but largely unexplored, implications for centralized educational policies aimed at improving teacher quality. Using interviews of school principals in a mid-sized Florida school district, we examine in-depth the characteristics principals prefer." "To understand principals' hiring preferences, we chose to conduct a mixed methods analysis that allowed us to collect complementary sources of data and to identity and analyze principals' preferred choices while also exploring the connotation and context of these choices. . . .The subjects of the study are 30 principals draw from a mid-sized Florida school district, who are responsible for screening and selection of teachers at their schools, as well as three district official involved in hiring."	The report finds "that the principals in our study prefer teachers with a mixture of personal and professional qualities—what we call the 'individual mix.' They also prefer an 'organizational mix,' hiring teachers who differ from those already in the school in terms of race, gender, experience, and skills. Finally, these principals want an 'organizational match' in which teachers have similar work habits and a high propensity to remain with the school over time. Several findings have immediate implications for teacher quality-related policies: ▪ The principals' frequent references to the needs of their individual schools (organizations) highlights the potential need for local control over teacher quality; and ▪ The principals' preferences were clearly influenced by policies such as school accountability, teacher certification and teacher tenure, though not always in the intended ways. These findings are significant given that principals are likely to minimally comply with centralized policies that conflict with their preferences and that principals generally play some role, and often a significant one, in teacher quality-related decisions."

Essential Condition 6: Principal's Staffing Authority

Johnson, S. M., Berg, J. H., & Donaldson, M. L. (2005). Who stays in teaching and why: A review of the literature on teacher retention. (Chapter 3) Harvard Graduate School of Education: The Project on the Next Generation of Teachers. http://assets.aarp.org/www.aarp.org_/articles/NRTA/Harvard_report.pdf	
Summary/Methods	**Findings/Recommendations**
"Increasingly, reports from research and practice suggest that a teacher's hiring experience may influence her satisfaction and retention in teaching. Although it is often difficult to separate teacher hiring from other working conditions and thus isolate its effect on teacher outcomes, recent evidence attests to the impact of hiring on new teachers' job satisfaction (Liu, 2004; McCarthy & Guiney, 2004). This small body of empirical research on teacher hiring contributes to a field largely based on a few case studies oriented towards defining "best practices" rather than describing broader, empirical findings. It should be noted that the empirical work on teacher hiring is still very sparse."	"Many districts are changing the way they conduct hiring. A substantial number of urban districts recognize late hiring as a problem and are working to decrease the number of new teachers hired near or after Labor Day. . . .Moreover, many districts are moving hiring from the central office to the school site. These changes warrant study. Are principals prepared to spend the time and money needed to make hiring information-rich? How will experienced teachers, who may be involved on hiring committees, respond to new hiring practices? Finally, will these changes in hiring lead to greater teacher satisfaction and retention, both in the applicant pool and once in the classroom?"

Essential Condition 6: Principal's Staffing Authority

Levin, J., Mulhern, J., & Schunk, J. (2005). *Unintended consequences: The case for reforming the staffing rules in urban teachers union contracts.* Retrieved from The New Teacher Project. http://www.tntp.org/files/UnintendedConsequences.pdf

Summary/Methods	Findings/Recommendations
"Nearly everyone involved in the enterprise of schooling understands the profound importance of building and sustaining a high-quality team of teachers. Moreover, the research is clear: The single most important school-based determinant of student achievement is the quality of the teacher in the classroom. Yet, urban schools must often staff their classrooms with little or no attention to quality or fit because of the staffing rules in their teachers union contracts. This report focuses on the contractual staffing rules governing "voluntary transfers" and "excessed teachers." Voluntary transfers are incumbent teachers who want to move between schools in a district, while excessed teachers are those cut from a specific school, often in response to declines in budget or student enrollment." "The New Teacher Project studied five representative urban districts (we identify them as the Eastern, Mid-Atlantic, Midwestern, Southern, and Western districts). Within each district, they extensively analyzed data for internal teacher movements and new teacher hires. They complemented our data analyses with principal surveys in the Eastern and Western districts, and interviews of school and central staff in all districts."	Results show: ▪ Urban schools are forced to hire large numbers of teachers they do not want and who may not be a good fit for the job and their school. ▪ Poor performers are passed around from school to school instead of being terminated. ▪ New teacher applicants, including the best, are lost to late hiring. ▪ Novice teachers are treated as expendable regardless of their contribution to their school. "These four effects significantly impede the efforts of urban schools to staff their classrooms effectively and sustain meaningful school-wide improvements. Ultimately, it is the students who lose the most as the transfer and excess rules place hundreds, and sometimes even thousands, of teachers in urban classrooms each year with little regard for the appropriateness of the match, the quality of the teacher, or the overall impact on schools. Perhaps most important, our data show that in the five studied districts, these rules negatively affect all schools regardless of poverty level, indicating the need for a systemic solution to this systemic problem."

Essential Condition 6: Principal's Staffing Authority

Liu, E., Rosenstein, J. G., Swan, A. E., & Khalil, D. (2008). When districts encounter teacher shortages: The challenges of recruiting and retaining mathematics teachers in urban districts. *Leadership and Policy in Schools, 7*(3), 296-323. http://www.gse.rutgers.edu/faculty/genFacultyProfileBiography~cguid~%7B16C916C9-2048-472E-B4E1 98B72F1F8C92%7D~ciid~fac_1081.asp	
Summary/Methods	**Findings/Recommendations**
"Policymakers, educational administrators, and the public at large all understand that the quality of the teaching force is essential to improving student achievement. Of particular concern is the challenge of staffing the nation's schools with qualified mathematics teachers—a group that is in short supply. The goal of this research study is to document and understand the nature of this staffing challenge and how central office and building administrators in urban districts are responding to it. This article presents preliminary findings from the initial phase of our study, in which we interviewed thirty administrators in six urban districts in the northeastern United States to find out the extent of their problems in recruiting and retaining new middle- and high-school teachers of mathematics, the approaches they have taken to address these problems, and what has resulted from the implementation of these approaches. In analyzing the interview data, we used contextual analysis to understand each district's experience of recruiting, retaining, and supporting new math teachers, as well as cross-case analysis to understand patterns and themes across the districts."	"Administrators interviewed explained that supply is tight, demand is high, and competition with other districts for the best math candidates is fierce. Virtually all complained about the overall quantity and quality of the pool of secondary mathematics candidates from which they had to choose. Policy factors, organizational factors, and administrators' own views of teacher quality and the unique characteristics urban teachers needed in order to be successful exacerbated the staffing challenge and affected how administrators responded to it: Together, these factors often: ▪ restricted district flexibility; ▪ made it difficult to hire early, when the pool was largest and of highest quality; ▪ reduced districts' competitiveness in terms of hiring teachers; ▪ reduced the number of candidates who were viewed as acceptable (i.e., the effective supply). "

Essential Condition 7: Professional Development and Structures for Collaboration

Essential Condition 7. Professional Development and Structures for Collaboration: Professional development includes a) both job-embedded and individually pursued learning, including content-based learning, that enhances a teacher's knowledge and skills and b) structures for collaboration that enable teachers to have regular, frequent department and/or grade-level common planning and meeting time that is used to improve implementation of the curriculum and instructional practice.

Key Words:

Professional development, professional learning community, common planning time, instructional coaching

Organizations:

Center for Comprehensive School Reform and Improvement, Consortium for Policy Research in Education, National Staff Development Council, U.S. Department of Education Institute of Education Sciences

Limitations:

This summary includes publicly available documents, whenever possible, with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

Essential Condition 7: Professional Development and Structures for Collaboration

Wei, R. C., Darling-Hammond, L., Andree, A., Richardson, N., Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad.* Dallas, TX. National Staff Development Council.	
Summary/Methods	**Findings/Recommendations**
"The purpose of this report is to provide policymakers, researchers, and school leaders with a teacher-development research base that can lead to powerful professional learning, instructional improvement, and student learning." The report includes a summary of current research that "links teacher development to student learning", including examinations of the impact of traditional workshops, formal coursework, "professional learning community" approaches, coaching, and other content and context-based learning. Researchers also reviewed national studies from the OECD and TIMMS, as well as the U.S. Schools and Staffing Surveys from 1999-2000 and 2003-04.	Sustained and intensive professional development is related to student achievement. Effective professional development is intensive, ongoing, and connected to practice; focuses on the teaching and learning of specific academic content; is connected to other school initiatives; and builds strong working relationships among teachers. Teachers typically need close to 50 hours of professional development in a given area to improve their skills and student learning. Most professional development offered is much shorter. Collaborative approaches to professional learning can promote school change that extends beyond individual classrooms.

Essential Condition 7: Professional Development and Structures for Collaboration

Yoon, K. S., Duncan, T., Lee, S. W.-Y, Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (Issues & Answers Report, REL 2007–No. 033). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest.
http://ies.ed.gov/ncee/edlabs

Summary/Methods	Findings/Recommendations
"This report reviews the research-based evidence on the effects of professional development on student achievement. The focus is on student achievement in three subjects: mathematics, science, and reading/language arts." Studies were gathered via an electronic search and nominations from 14 key researchers and subjected to a review protocol with criteria and parameters. Of 1300 studies gathered, 132 met all 5 criteria. Nine studies met evidence standards and were analyzed using the What Works Clearinghouse formulas for effect sizes and improvement indices.	"This report finds that teachers who receive substantial professional development—an average of 49 hours in the nine studies—can boost their students' achievement by about 21 percentile points." The three studies that involved the least amount of professional development (5-14 hours total) showed no statistically significant effects on student achievement.

Essential Condition 7: Professional Development and Structures for Collaboration

Garet, M. S. et al. (September 2008) *The impact of two professional development interventions on early reading instruction and achievement.* District of Columbia: National Center for Education Statistics, U.S. Department of Education, Institute of Education Sciences. http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=NCEE20084034	
Summary/Methods	**Findings/Recommendations**
"This report describes the effectiveness of two specific professional development strategies in improving the knowledge and practice of second-grade teachers in high-poverty schools and the reading achievement of their students." The measurement tools used in the study were seven standardized tests including CAT5, SAT9, Terra Nova CTBS, Gates-MacGintie, MAT8, Terra Nova CAT, and SAT10.	"An 8-day content-focused institute series and the institute series plus in-school coaching both produced positive impacts on teachers' knowledge of scientifically based reading instruction and on instructional practices introduced. However, neither intervention resulted in significantly higher student test scores at the end of one year." The addition of in-school coaching did not yield significantly greater impact on teacher practice than the institute series alone.

Essential Condition 7: Professional Development and Structures for Collaboration

Jacob, B. A. & Lefgren, L. (April 2002) *The impact of teacher training on student achievement: Quasi-experimental evidence from school reform efforts in Chicago.* National Bureau of Economic Research; NBER Working Paper No. 8916. (http://sitemaker.umich.edu/bajacob/files/training.pdf)	
Summary/Methods	**Findings/Recommendations**
Using data from Chicago public schools, this study estimates the effect of teacher training on the math and reading performance of elementary students. In a quasi-experimental research design, the authors measured the impact on math and reading scores on the Iowa Test of Basic Skills (ITBS), in terms of grade equivalents (GEs), which reflect the years and months of learning that a student has mastered.	"Marginal increases in in-service training have no statistically or academically significant effect on either reading or math achievement, suggesting that modest investments in staff development may not be sufficient to increase the achievement of elementary students in high-poverty schools."

Essential Condition 7: Professional Development and Structures for Collaboration

Poglinco, S. M., Bach, A. J., Hovde, K., Rosenblum, S., Saunders, M, & Supovitz, J. A. (2003) *The heart of the matter: The coaching model in America's Choice Schools*. Philadelphia, PA: Consortium for Policy Research in Education.	
Summary/Methods	**Findings/Recommendations**
"The purpose of CPRE's evaluation is to provide formative feedback to NCEE and America's Choice schools about emerging trends in the implementation of the design, and to seek evidence of the impacts of the design using accepted high standards of evaluation design and analysis methodologies." This study focuses on the role of coaching in America's Choice. It is based on qualitative and quantitative data, including teacher surveys, site visits, telephone interviews, documents reviews, and student performance measures such as state and local tests.	The study's literature review found that evidence on the effectiveness of coaching for increasing instructional quality is "in its incipient stages." In America's Choice, where each school has a full time coach, there is evidence of influence on the way educators in most schools think about teaching and learning. Other CPRE studies of America's Choice have found evidence of improved student learning.

Deussen, T., Coskie, T., Robinson, L., Autio, E. (June 2007). *"Coach" can mean many things: Five categories of literacy coaches.* District of Columbia: U. S. Department of Education Institute for Education Sciences. (http://ies.ed.gov/ncee/edlabs/regions/northwest/pdf/REL_2007005.pdf)	
Summary/Methods	**Findings/Recommendations**
This report describes the backgrounds of educators who become coaches and "what coaches actually do once they are in a coaching position." Researchers administered surveys to teachers and literacy coaches in 203 Reading First schools in five western states. Data was obtained from 75-88% of teachers and 90% of coaches. Follow up interviews with 77 coaches and 300 teachers were conducted.	Most coaches were experienced teachers who were relatively inexperienced as coaches. The study identifies five categories of coaches: data-oriented, student-oriented, managerial, and two teacher-oriented (with individual teachers and with groups). A literature review reports mixed findings on the impact of coaching on teaching practice.

Moss, M., Fountain, A., Boulay, B., Horst, B., Rodger, C., Brown-Lyons, M. (October 2008). *Reading First implementation evaluation. Final Report.* District of Columbia: U.S. Department of Education, Office of Planning, Evaluation and Policy Development. http://www.ed.gov/rschstat/eval/other/readingfirst-final/readingfirst-final.pdf	
Summary/Methods	**Findings/Recommendations**
This Reading First program evaluation includes an extensive look at professional development for teachers in Reading First and other schools and a glimpse at the participation of reading coaches in professional development.	The authors argue that since Reading First recommends the use of coaches, "it is critical that coaches receive the support and training in the tenets of SBRI [Scientifically Based Reading Instruction], how to effectively guide and provide feedback to teachers, and how to model high-quality classroom teaching" (136). Reading coaches in non-Reading First schools most frequently reported professional development in topics of "planning instructional interventions, helping teachers identify appropriate instructional materials, using assessment data to form instructional groups, and classroom management."

Essential Condition 7: Professional Development and Structures for Collaboration

Vescio, V., Ross, D., & Adams, A. (January 2006) *A review of research on professional learning communities: What do we know?* Paper presented at the National School Reform Faculty Research Forum. http://www.nsrfharmony.org/research.vescio_ross_adams.pdf	
Summary/Methods	**Findings/Recommendations**
This paper summarizes 10 empirical studies that have data on the impact of professional learning communities (PLCs) on teaching practices and improved student learning. Researchers found only 54 studies that met this criterion among articles published between 1990 and 2005.	The limited number of studies examined "clearly demonstrate that a learning community model can have positive impact on both teachers and students." The paper concludes that "The focus of a PLC should be developing teachers' 'knowledge of practice' around the issue of student learning."

Essential Condition 7: Professional Development and Structures for Collaboration

Kruse, S., Seashore Louis, K., & Bryk, A. (1995). Teachers build professional communities. *WCER Highlights*. Madison WI: Wisconsin Center for Education Research. Spring 1995, Vol. 7, No. 1. http://www.wcer.wisc.edu/publications/highlights/v7n1.	
Summary/Methods	**Findings/Recommendations**
This report summarizes findings on teachers' experiences with their peers and their impact on work with students. It is based on data collected in schools that were part of larger studies conducted by the Center on Organization and Restructuring of Schools.	The authors identify both structural conditions (e.g., time to meet and talk, physical proximity) and social and human resources (e.g., openness to improvement, trust and respect) that are crucial to the "development of schools as healthy professionally sustaining environments in which teachers are encouraged to do their best job."

Steiner, L. & Kowal, J. (2007). *Issue brief – Instructional coaching: The Center for Comprehensive School Reform and Improvement.* http://www.centerforcsri.org/files/CenterIssueBriefSept07Coaching.pdf	
Summary/Methods	**Findings/Recommendations**
The article lists characteristics of successful coaches, which include pedagogical knowledge, content expertise, and interpersonal capabilities. It summarizes the literature on instructional coaching but not necessarily that on research studies.	"Training programs for coaches. . .should adhere to the common guidelines for effective professional development. It should be ongoing and provide opportunities for collaboration with other coaches. In surveys, coaches express a strong preference for collaborative forms of professional development, such as the training provided in Boston, over lecture-style training provided by outside experts. In terms of online seminars, coaches like best those that foster collaborative learning communities, such as questioning seminars and demonstration lessons.

Essential Condition 7: Professional Development and Structures for Collaboration

Mertens, S. B. & Flowers, N. (September 2003). Middle school practices improve student achievement in high poverty schools. *Middle School Journal, 35*(1), 33-43. (http://www.nmsa.org/portals/0/pdf/publications/On_Target/achievement/achievement_1.pdf)	
Summary/Methods	**Findings/Recommendations**
"The purpose of this study is to establish a relationship between team and classroom practices, as assessed by the Center for Prevention Research and Development Self-Study, and student achievement. . . .The analyses. . .examine the relationships between interdisciplinary team practices, classroom practices, and student achievement, as measured by standardized test scores." The study is based on a survey of teachers, students, and administrators in 121 schools serving middle grade students in the Mid-South region in both the 1998-99 and the 2000-01 school years. In the latter academic year, more than 3,500 teachers participated in the Self-Study teacher survey. This regional sample of middle-grades schools is primarily located in rural communities with populations of fewer than 10,000 (57%), have a student population in which at least 40% receive a free or reduced-priced lunch (83%), and serve ethnically diverse communities.	"The impact of teaming/common planning time on team and classroom practices is positive. However the level of implementation as a single factor does not appear to affect student achievement in higher poverty schools. There are no significant differences in student achievement between schools that are teaming with high common planning time, low common planning time, or other/not teaming. In other words, the simple existence of teams and common planning time in a school does not guarantee a positive impact on student achievement, even though the team practices, and to a lesser degree the classroom practices, are more frequent in higher implemented schools. An implication of this finding is that teams need to sustain the use of effective classroom practices before we can expect to see a corresponding positive change in achievement."

Flowers, N., Mertens, S. B., & Mulhall, P. F. (November 1999). The impact of teaming: Five research-based outcomes. *Middle School Journal (31)*2,51-60.

Summary/Methods	Findings/Recommendations
This is a summary of findings from a study of 155 middle schools in the Michigan Middle Start Initiative. "These schools participated in the School Improvement Self-Study, a set of surveys completed by staff, students, and administrators during 1994-95 and again in 1996-97 (Mertens, Flowers, and Mulhall, 1998). The Self-Study, conducted by the Center for Prevention Research and Development at the University of Illinois, is a data collection system that is intended to be used by schools in conjunction with their existing school improvement plans. The Self-Study provides schools with quantitative data to document and track the changes in their schools. . .and most importantly, assessing and measuring the outcomes of new programs and practices."	The five findings of the study are: ▪ Common planning time makes a big difference: "For interdisciplinary teams to be effective, they need regular time to plan and work together as a group." ▪ Teaming improves work climate. ▪ Teaming increases parental contact. ▪ Teaming increases job satisfaction. ▪ Teaming is associated with higher student achievement.

L Lewis, L., Parsad, B., Carey, N, & Bartfai, E. (January 1999). *Teacher quality: A report on the preparation and qualifications of public school teachers*. Washington, DC: National Center for Education Statistics, Institute of Education Science. http://nces.ed.gov/surveys/frss/publications/1999080/index.asp?sectionid=6

Summary/Methods	Findings/Recommendations
This report is based on a large-scale Fast Response Survey on professional development and training administered to a representative sample of American teachers in 1998. Completed questionnaires were received from 3,560 teachers, or 92 percent of the eligible teachers in grades 1 through 12.	"Teacher collaboration was identified as a second major mechanism of on-the-job learning. . . .Teachers who engaged in common planning periods for team teaching were more likely than those who did not participate in the activity to report that they felt very well prepared to implement new teaching methods, implement state and district curriculum and performance standards, use student performance assessment techniques, maintain order and discipline, and address the needs of students with disabilities. Similarly, teachers who participated in regularly scheduled collaboration with other teachers felt better prepared than their peers to implement new teaching methods, implement state or district curriculum and performance standards, use student performance techniques, and address the needs of students with disabilities."

Essential Condition 7: Professional Development and Structures for Collaboration

Leonard, L. & Leonard, P. (2003, September 17). The continuing trouble with collaboration: Teachers talk. *Current Issues in Education*[On-Line], 6(15).
http://cie.ed.asu.edu/volume6/number15/

Summary/Methods	Findings/Recommendations
This paper draws on data from a follow-up survey addressing aspects of professional collaboration in North Louisiana schools. The questionnaire addressed teachers' *beliefs* about collaborative practice compared to what they perceived as *actual* collaborative conditions and circumstances in their schools. Of the 238 teachers who completed the initial questionnaire, 56 teachers from 45 schools in eight districts returned a second follow-up questionnaire. Teachers represented elementary, middle, and high schools, and school enrollment size ranged from 168 to approximately 2,000 students. Teacher experience ranged from 3 years to 34 years.	"The institutionalization of collaborative working environments is widely considered to be critical to the creation and maintenance of schools as professional learning communities. Prevailing thought suggests that improved student performance may be fully realized only when teachers routinely function as teams and abandon their traditional norms of isolationism and individualism. This interpretive study involving teachers in 45 North Louisiana schools suggests that while some schools and school districts are indeed characterized by elements of the 'learning community,' others remain largely mired in customary practices that are counterproductive to realizing the newer collaborative standards. Participating teachers report that, despite the rhetoric, major impediments to joint professional work remain, and they make suggestions for better meeting the continuing collaborative challenge."

Essential Condition 8: Tiered Instruction and Adequate Learning Time

Essential Condition 8. Tiered Instruction and Adequate Learning Time : The district has an effective system for identifying all students who are not performing at grade level. Each school schedule is designed to provide adequate learning time for all students in core subjects; for students not yet achieving at grade level in English language arts and mathematics, the district ensures that each school provides a) at least 90 minutes per academic day of instruction in English language arts and in mathematics and a tiered model of instruction and individualized support in those subject areas; and b) appropriate supplemental instruction (for example: homework assistance, tutoring, Saturday school, summer school).

Key Words/Phrases:

Adequate learning time, allocated school (class) time, instructional time, academic learning time

Organizations:

Mass 20/20, National Center on Time and Learning, National Education Commission on Time and Learning, The Center for Comprehensive School Reform and Improvement, Consortium on Chicago School Research.

Limitations:

This summary includes publicly available documents, whenever possible, with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

Essential Condition 8: Professional Development and Structures for Collaboration

Silva, E. (2007). *On the clock: Rethinking the ways schools use time*. Washington DC: Education Sector. www.educationsector.org/usr_doc/OntheClock.pdf	
Summary/Methods	**Findings/Recommendations**
"This report examines both the educational and political dimensions of time reform. It presents the findings of a wide range of research on time reform, discusses the impact of various time reforms on the life of schools and beyond, and makes recommendations for policymakers about how to best leverage time in and out of school to improve student achievement." The document includes a literature review of relevant research.	"Most schools that have extended time have not done so in isolation but as part of a larger reform effort. So it is difficult to isolate the effects of extending the school day or school year on student achievement. There has never been a controlled or longitudinal experiment that specifically measures the effect of extending time on student learning. But past studies on time and learning offer some insight. . . .As would be expected, the research shows that the correlation between time and student achievement gets stronger with more engaged time. Students who are given more allocated school time have outcomes only slightly better than students who receive less. But the correlation between time and achievement increases when students are given more instructional time, and it is even greater when students' academic learning time increases."

Aronson, J., Zimmerman, J., & Carlos, L. (1998). *Improving student achievement by extending school: Is it just a matter of time?* San Francisco, CA: WestEd.
www.wested.org/online_pubs/po-98-02.pdf

Summary/Methods	Findings/Recommendations
This document is a literature review/research brief on the relationship between student achievement and different usages of extended time. "The majority of studies dealing with the relationship of education time to student achievement look at allocated time (which refers to the total number of days or hours students are required to attend school), while other studies focus on engaged time (that subset of instructional time when students are participating in learning activities) or academic learning time (that precise period when an instructional activity is perfectly aligned with a student's readiness and learning occurs). In some cases, the time variable being studied is not clearly specified. This inconsistency can make it difficult or misleading to compare studies.	The impact of time on student achievement depends on how time is used as an additional resource. The variability in the usage of time "also helps explain why, looking at the entire body of research on time and learning, there appear to be mixed findings about the degree to which time influences student learning. However, despite this variability, the literature reveals a fairly consistent pattern: • There is little or no relationship between *allocated time* and student achievement. • There is some relationship between *engaged time* and achievement. • There is a larger relationship between *academic learning time* and achievement. In short, time *does* matter. How much or little it matters, however, depends greatly on the degree to which it is devoted to appropriate instruction."

Essential Condition 8: Professional Development and Structures for Collaboration

Gabrieli, C. & Goldstein, W. (2009). *Expanding school time to expand school learning: Lessons learned and challenges remaining*. Policy Perspective. San Francisco, CA: WestEd.
http://www.wested.org/online_pubs/pp-09-01.pdf.
See also: Gabrieli, C. (2008). *Time to learn: How a new school schedule is making smarter kids, happier parents, and safer neighborhoods*. San Francisco, CA: Jossey-Bass.

Summary/Methods	Findings/Recommendations
"In this WestEd Policy Perspectives paper, we highlight a dozen design principles we believe should be part of future new day schools. Our conclusions are based on our direct experience in helping create such schools, our visits to schools, our review of the available data, and our best judgment. They are certainly worthy of debate and are not meant to be final, comprehensive, or exhaustive. Our intent is to encourage more people to seek change and to help those who want to make the new school day work." Analyses, findings, and recommendations are drawn from Gabrieli's 2008 book, *Time to Learn*.	"Emerging patterns allow us to recommend 12 features as key elements of strong designs for new day schools: 1. Voluntary participation for schools; 2. Mandatory participation for all students; 3. Whole-school redesign; 4. Significantly expanded time; 5. Clear academic focus; 6. Well-rounded education; 7. Data-driven continuous quality improvement; 8. Time for teacher collaboration, planning, and professional development; 9. Individualization; 10. Time for up-front planning; 11. Partnerships with outside resources; 12. Starting with individual schools, building for scale." "Most experience with new day schools has come in urban schools with predominantly at-risk children from lower-income families. We argue here that the best proof of success comes from the schools that have voluntarily pursued the new school day, both the charter and experimental district schools and the Massachusetts Expanded Learning Time schools. We know far less about how well it works in several other settings."

Essential Condition 8: Professional Development and Structures for Collaboration

Farbman, D. & Kaplan, C. (2005). *Time for a change: The promise of extended-time schools for promoting student achievement*. Boston, MA: Massachusetts 2020. www.mass2020.org/files/file/Time-for-a-change(1).pdf.

Summary/Methods	Findings/Recommendations
"This report details the work of a handful of "extended-time schools" and describes and analyzes their effective practices. This study is not intended to suggest that extended-time schools automatically produce better results. Neither is it meant to prove that simply by extending time alone, schools will offer a superior educational product. Rather, this research was conducted to understand how these particular schools, which have already demonstrated themselves to be effective, capitalize on the additional time, and what benefits the schools' educators perceive the additional time delivers. It is hoped that their examples are both inspirational and informational for those who seek to operate schools that purposely break from the conventional schedule in order to bring all their students to proficiency." The work reported on involves classroom observations and interviews with school leaders.	"Students at the extended-time schools profiled for this report generally out-perform students of comparable socioeconomic status at traditional public schools in their district." "School leaders and policymakers who are considering adopting a longer school day are eager to understand how additional time translates into higher academic achievement. The extended-time schools examined through this research provide important answers to this central question. Classroom observations, and interview with school leaders and teachers, revealed five key ways that additional time, if structured effectively, can promote student learning and achievement: 1. Increased 'time on task.' 2. Broader and deeper coverage of curriculum 3. More opportunities for experiential learning. 4. Greater ability to work with diverse ability levels simultaneously. 5. Deepened adult-child relationships."

Additional Resources

Smith, B. (1998). *It's about time: Opportunities to learn in Chicago's elementary schools.* Chicago, IL*:* Consortium on Chicago School Research. cccsr.uchicago.edu/publications/p0f03.pdf

Essential Condition 9: Students' Social, Emotional, and Health Needs

Essential Condition 9. Students' Social, Emotional, and Health Needs: Each school addresses the social, emotional, and health needs of its students by creating a safe school environment in which student needs are met in systemic and systematic ways, including through a) the provision of coordinated student support services and universal breakfast (if eligible); b) the implementation of a systems approach to establishing a productive social culture that minimizes problem behavior for all students (e.g. Positive Behavior Intervention and Supports); and c) the use of consistent schoolwide attendance and discipline practices and effective classroom management techniques that enable students to assume increasing responsibility for their own behavior and learning.

Key Words:

Social emotional learning, health, nutrition, student support

Organizations:

Collaborative for Academic, Social, and Emotional Learning; Association for Supervision and Curriculum Development; Centers for Disease Control and Prevention Division of Nutrition, Physical Activity and Obesity; National School Boards Association (NSBA)

Limitations:

This summary includes publicly available documents with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

Essential Condition 9: Students' Social, Emotional, and Health Needs

Payton, J., Weissberg, R.P., Durlak, J.A., Dymnicki, A.B., Taylor, R.D., Schellinger, K.B., & Pachan, M. (2008). *The positive impact of social and emotional learning for kindergarten to eighth-grade students: Findings from three scientific reviews.* Chicago, IL: Collaborative for Academic, Social, and Emotional Learning.	
Summary/Methods	**Findings/Recommendations**
"This report summarizes results from three large-scale reviews of research on the impact of social and emotional learning (SEL) programs on elementary and middle-school students—that is, programs that seek to promote various social and emotional skills. Collectively the three reviews included 317 studies and involved 324,303 children."	"SEL programs. . .were effective across the K-8 grade range and for racially and ethnically diverse students from urban, rural, and suburban settings. SEL programs improved students' social-emotional skills, attitudes about self and others, connection to school, positive social behavior, and academic performance; they also reduced students' conduct problems and emotional distress. . . .SEL programs are among the most successful youth-development programs offered to school-age youth. Furthermore, school staff (e.g., teachers, student support staff) carried out SEL programs effectively, indicating that they can be incorporated into routine educational practice. In addition, SEL programming improved students' achievement test scores by 11 to 17 percentile points, indicating that they offer students a practical educational benefit."

Essential Condition 9: Students' Social, Emotional, and Health Needs

Durlak, J. A. & Weissberg, R. P. (2007). *The impact of after-school programs that promote personal and social skills*. Chicago, IL:Collaborative for Academic, Social, and Emotional Learning.	
Summary and Methods	**Findings/Recommendations**
A meta-analysis of 73 studies of after-school programs that examined effects of the program on children and that included a control group. The researchers only "considered after-school programs that attempted to promote personal and social skills."	"The two most important findings were: ▪ Youth who participate in after-school programs improve significantly in three major areas: feelings and attitudes, indicators of behavioral adjustment, and school performance. ▪ It was possible to identify effective programs: Programs that used evidence-based skill training approaches were consistently successful in producing multiple benefits for youth, while those that did not use such procedures were not successful in any outcome area."

Essential Condition 9: Students' Social, Emotional, and Health Needs

Linares, L. O., Rosbruch, N., Stern, M. B., Edwards, M. E., Walker, G., Abikoff, B., & Alvir, J. (2005). Developing cognitive-social-emotional competencies to enhance academic learning. *Psychology in the Schools, (42)*4, 405–417.	
Summary/Methods	**Findings/Recommendations**
This preliminary study examined intervention effects of a universal prevention program offered by classroom teachers to public elementary school students. The Unique Minds School Program (M.B. Stern, 1999) is a teacher-led program designed to promote cognitive-social-emotional (CSE) skills, including student self-efficacy, problem solving, social-emotional competence, and a positive classroom climate, with the dual goal of preventing youth behavioral problems and promoting academic learning. During 2 consecutive school years, 119 students and their teachers were assessed in the fall and spring of Grade 4 and again in the spring of Grade 5.	As compared to students in the comparison school, students in the intervention showed gains in student self-efficacy, problem solving, social-emotional competencies, and math grades. Incremental gains within CSE domains were found after 1 and 2 years of intervention.

Essential Condition 9: Students' Social, Emotional, and Health Needs

Bailey, R. (2006). Physical education and sport in schools: A review of benefits and outcomes. *Journal of School Health*. 76(8), pp. 397-401.	
Summary/Methods	**Findings/Recommendations**
This paper explores the scientific evidence that has been gathered on the contributions and benefits of physical education and sport (PES) in schools for both children and for educational systems. Research evidence is presented in terms of children's development in a number of domains: physical, lifestyle, affective, social, and cognitive.	The review suggests that PES have the potential to make significant and distinctive contributions to development in each of these domains. It is suggested that PES have the potential to make distinctive contributions to the development of children's fundamental movement skills and physical competences, which are necessary precursors of participation in later lifestyle and sporting physical activities. They also, when appropriately presented, can support the development of social skills and social behaviors, self-esteem and pro-school attitudes, and, in certain circumstances, academic and cognitive development. The review also stresses that many of these benefits will not necessarily result from participation, per se; the effects are likely to be mediated by the nature of the interactions between students and their teachers, parents, and coaches who work with them. Contexts that emphasize positive experiences, characterized by enjoyment, diversity, and the engagement of all, and that are managed by committed and trained teachers and coaches, and supportive and informed parents, significantly influence the character of these physical activities and increase the likelihood of realizing the potential benefits of participation.

Essential Condition 9: Students' Social, Emotional, and Health Needs

Taras, H. (2005). Physical activity and student performance at school. *Journal of School Health*, *75*(6), 214	
Summary/Methods	**Findings/Recommendations**
The author reviewed published studies on the association between physical activity among school-aged children and academic outcomes. A table includes brief descriptions of each study's research methodology and outcomes.	A review of the research demonstrates that there may be some short-term improvements of physical activity (such as on concentration) but that long-term improvement of academic achievement as a result of more vigorous physical activity is not well substantiated. The relationship between physical activity in children and academic outcomes requires further elucidation.

Other Resources

Zins, J., Weissberg, R., Wang, M. and Walberg, H.J., Editors (2004). *Building Academic Success on Social and Emotional Learning: What Does the Research Say?* New York: Teachers College Press

Nationally recognized leaders in education and psychology examine the relationships between social-emotional education and school success—specifically focusing on interventions that enhance student learning.

Collaborative for Academic, Social, and Emotional Learning (www.casel.org)

See *Benefits of SEL and Academics*, *SEL and Academics Research Brief*, and *SEL: what is it and how does it contribute to students' academic success?*

Essential Condition 10: Family-School Relationships

Essential Condition 10. Family-School Relationships*:* The district ensures that each school develops strong working relationships with families and appropriate community partners and providers in order to support students' academic progress and social and emotional well-being

Key Words:

Parent involvement, family involvement, school-family relationships, family involvement and academic achievement

Organizations:

Harvard Family Research Project; National Coalition for Parent Involvement in Education; Parent Information Centers; The Parent Institute; Johns Hopkins University, Center on School, Family, and Community Partnership; Southwest Education Development Laboratory (SEDL); National Center for Family and Community Connections with Schools.

Limitations:

This summary includes publicly available documents, with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

REL Northeast and Islands

This document was prepared by the Regional Educational Laboratory for the Northeast and Islands (REL-NEI) under a contract with the U.S. Department of Education's Institute of Education Sciences (IES), Contract ED-06-CO-0025, in response to a request by the Massachusetts Department of Elementary and Secondary Education. The contents of this document have not been reviewed by and do not necessarily reflect the views of the U.S. Department of Education.

Essential Condition 10: Family-School Relationships

Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*. Austin, TX: Southwest Educational Development Laboratory. http://www.sedl.org/connections/resources/evidence.pdf	
Summary/Methods	**Findings/Recommendations**
This publication examines parent and community involvement and its impact on student achievement. It is the fourth in a series of Evidence publications authored or co-authored by Anne Henderson. It is also the second in the series of publications by the Southwest Educational Development Laboratory's (SEDL) National Center for Family and Community Connection with Schools. SEDL staff identified about 80 research studies and literature reviews focused on the influence of family and community involvement on student academic achievement and other outcomes. In addition, they searched major databases such as the Educational Resources Information Center (ERIC) and Education Abstracts and asked colleagues for recommendations. All studies were reviewed to make sure they had sound methodology, that study findings matched the data collected, and that conclusions were consistent with the findings.	This study found that children do better in school when their parents talk to them about school, expect them to do well, help them plan for college, and make sure that out-of-school activities are constructive. Findings included: ▪ When schools engage families in supporting children's learning, students make greater gains. ▪ When schools respond to families' concerns and honor their contributions, they are successful in sustaining connections that are aimed at improving student achievement. ▪ When families and communities organize to hold poorly performing schools accountable, studies suggest that school districts make positive changes in policy, practice, and resources.

Essential Condition 10: Family-School Relationships

Coleman, A., Starzynski, A., Winnick, S., Palmer, S., Furr, J. (2006). *It takes a parent: Transforming education in the wake of the No Child Left Behind act: Recommendations regarding the role of parents and guardians in achieving student and school success.* Washington, DC: Appleseed.
http://www.educationalcounsel.com/resources/files/It%20Takes%20a%20Parent.pdf

Summary/Methods	Findings/Recommendations
This report documents an effort to combine practical, on-the-ground perspectives with current social science research on key parental involvement issues and effective practices. Its purpose is to assemble and analyze what is known as a matter of practice and as a matter of research in framing an action agenda promoting more effective parental involvement practices by schools, districts, and states. The appendix of the report contains a section on model policies and notices that is meant to serve as a resource for districts and schools. The report represents extensive qualitative research. During 9 months, more than 100 school, district, and state leaders and teachers were interviewed in 6 states and 18 school districts. A total of 27 focus groups of parents were convened over a 6-month period in 2006. Researchers also interviewed 47 representatives from community-based organizations that provide support for parents and schools.	Findings of the study included: ▪ States, districts, and schools must provide meaningful, timely, and understandable information to parents about key school and student data. ▪ Educators should use multiple, proactive strategies to connect with parents, especially low-income and ELL parents. ▪ Educators should partner with community organizations. ▪ Educators need to fund more comprehensive professional development for teachers and administrators, with emphasis on culture and language. ▪ Policymakers and educators should recognize parental involvement as central to school improvement.

Essential Condition 10: Family-School Relationships

Hernandez, L., Kreider, H., Coffman, J., & Lopez, M. E. (2002*). Concepts and models of family involvement* . Cambridge MA: Harvard Family Research Project	
Summary/Methods	**Findings/Recommendations**
This report identifies four approaches to family involvement in a student's education—parenting practices, school-family partnerships, democratic participation, and school choice. The document provides case studies on democratic participation in the Right Question Project, the National Coalition of Advocates for Students, and the Prichard Committee for Academic Excellence.	Family involvement with students in the home and school makes an enormous difference in student achievement and healthy development. When schools provide information, encouragement, and opportunities for partnership, parental involvement increases. The cases in this report focus on capacity-building across a range of functions, including outreach, leadership development, research and program development, and evaluation.

Essential Condition 10: Family-School Relationships

Nye, C., Turner, H. M., & Schwartz, J. B. (2006). *Approaches to parental involvement for improving the academic performance of elementary school children in grades K-6.* London: The Campbell Collaboration. Available online at http://campbellcollaboration.org/doc-pdf/Nye_PI_Review.pdf	
Summary/Methods	**Findings/Recommendations**
Drawing from 19 research studies that included data on parent engagement in academic support activities with their child and that had control or comparison groups, this meta-analysis summarized the most dependable evidence on the effect of parental involvement intervention programs for improving the academic performance of elementary-school-age children.	Findings and recommendations of the analysis include: ▪ Parental involvement, defined as parents engaging theirh children in activities to enhance academic performance, has a significant positive effect on children's overall academic achievement. This finding is particularly compelling considering that the median intervention lasted less than 2 months. ▪ The academic area most positively affected by parent involvement activities was reading. ▪ The types of parent involvement activities that had the greatest impact were rewards and incentives and educations and training. Rewards and incentives were used with fourth and fifth graders. Education and training programs that provided the parents with skills, activities, and materials to work with their children on academic skills outside of school were implemented with first and second graders.

Essential Condition 10: Family-School Relationships

National Center for Family and Community Connections with Schools, Southwest Educational Development Laboratory. (2004). *Learning outside of the school classroom: What teachers can do to involve family in supporting classroom instruction.* Austin, TX: Southwest Educational Development Laboratory.

Summary/Methods	Findings/Recommendations
This paper examines how teachers can draw upon family and community resources to provide students with the individualized instruction they need. A Strategy Brief that draws on research is cited in an appendix.	The authors conclude that to support classroom instruction, family and community involvement programs should be designed to do the following: ▪ Link with student achievement goals and standards. ▪ Engage families in activities that focus directly on student learning. ▪ Keep family members informed about what is happening in the classroom. ▪ Build a school culture that is inclusive and supportive of family and community involvement. Specific strategies are recommended, including: ▪ Engaging parents in role-playing ways to reinforce classroom learning at home. ▪ Involving family members and students in math and reading games at family nights. ▪ Creating learning kits that can be lent to students for home use.

Essential Condition 10: Family-School Relationships

Harvard Family Research Project. (2006). *Family involvement makes a difference in school success*. Cambridge, MA: Author.	
Summary/Methods	**Findings/Recommendations**
According to this report, "the evidence is clear: Family involvement helps children get ready to enter school, promotes their school success, and prepares youth for college. This Research Brief presents findings from HFRP's ongoing, in-depth review of research and evaluated programs that link family involvement in children's education to student outcomes." The brief summarizes and provides citations for numerous studies from 2001-2005. It was produced for release at the Raising Student Achievement, 2006, National PTA Legislative Conference. Each section of the report presents findings from research and describes an evaluated program.	Findings are organized into the following sections: ▪ Family involvement helps children get ready to enter school. ▪ Family involvement promotes elementary-school children's success. ▪ Family involvement prepares youth for college. ▪ Family involvement supports all children, especially those less likely to succeed in school.

Essential Condition 10: Family-School Relationships

Caspe, M., Lopez, M. E., & Wolos, C. (Winter 2006/2007). *Family involvement in elementary school children's education*. Cambridge, MA: Harvard Family Research Project. www.gse.harvard.edu/hfrp	
Summary/Methods	**Findings/Recommendations**
The research brief summarizes the latest evidence base on effective involvement—specifically, the research studies that link family involvement during the elementary school years to outcomes and programs that have been evaluated to show what works. The report synthesizes the outcome-based empirical research published from 1999-2006 catalogues in the Family Involvement Network of Educators' bibliographies. Outcome-based investigations were defined as those that measured family involvement and then linked family involvement to outcomes considered representative of young children's positive growth and development.	The paper summarizes family involvement processes in elementary school into three areas—parenting, home-school relationships, and responsibility for learning—citing research in each area. Implications of the studies for policy, practice, and further research are presented, as are brief descriptions of successful programs.

Essential Condition 10: Family-School Relationships

Epstein, J. (2005). *Developing and sustaining research-based programs of school, family, and community partnerships: Summary of fivr years of NNPS research.* Baltimore, MD: Johns Hopkins University, Center on School, Family, and Community Partnerships.	
Summary/Methods	**Findings/Recommendations**
This research paper summarizes 5 years of studies on ways to improve partnership program development and how family and community involvement contribute to student achievement and other indicators of success in school. Researchers with the National Network of Partnership Schools (NNPS) conducted studies between 2001 and 2006 based on annual *UPDATE* surveys that are required from all NNPS members. Other studies are based on NNPS *Focus on Results* studies and on national data sets. These include data from over 1,000 schools, 100 districts, and 17 state departments of education working with NNPS to use research based approaches to establish and strengthen school, family, and community partnerships.	Researchers identified eight essential elements for effective programs in areas such as leadership, planning, outreach, and evaluation. They also found that effective programs yield positive results in student achievement and success in school, with outcomes in higher achievement, better attendance, fewer disciplinary actions, and completion of homework.

Essential Condition 11: Strategic Use of Resources and Adequate Budget Authority

Essential Condition 11. Strategic Use of Resources and Adequate Budget Authority: District and school plans are coordinated to provide integrated use of internal and external resources (human, financial, community and other) to achieve each school's mission.

Key Words/Phrases:

District resource allocation, budget authority, school-based management

Organizations:

The Annenberg Institute for School Reform, Center for Comprehensive School Reform Improvement, Brookings Institution, The Southwest Educational Development Laboratory (SEDL)

Limitations:

This summary includes publicly available documents, whenever possible, with an emphasis on research summaries, syntheses, and meta-analyses, as well as major studies that link the indicator with student achievement. It was prepared in a limited amount of time in a specific time period in response to a request and should not be considered exhaustive.

Siegel, D. E. & Fruchter, N. (2002). *Implementation study of performance driven budgeting in the New York City Public Schools*. New York University, NY: Institute for Education and Social Policy. http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1a/5c/d3.pdf	
Summary/Methods	**Findings/Recommendations**
"School-based planning for instructional improvement has been a major national education reform focus for over 2 decades. However, many efforts proposed to put schools in charge of their own instructional operations delivered only increased discretion rather than real autonomy over internal operations, such as budgeting. In 1997, New York City introduced the Performance-Driven Budgeting (PDB) initiative to link school-based budgeting with efforts to improve student and school performance. This paper is a condensation of the final report on the PDB implementation study. Data were collected from (1) interviews with senior staff at the central administration, the school district, and the case-study schools; (2) document reviews; and (3) surveys of school-planning team members."	"After 3 years of study, it was concluded that the central administration transferred primary authority for planning and budgeting to the schools. The initiative produced a new budgeting system in which school-level decision-making is driving change upward through district and central-administration levels. The impact of PDB included a small but significant increase in elementary student test scores compared with non-PDB schools. Current economic problems and political hostility are factors that can affect PDB adversely, especially in low-performing schools. "

Essential Condition 11: Strategic Use of Resources and Adequate Budget Authority

Hadderman, M. (1999). *School-based budgeting.* Eugene, OR: ERIC Clearinghouse on Educational Management, *131.* http://www.ericdigests.org/2000-2/budgeting.htm	
Summary/Methods	**Findings/Recommendations**
"This digest discusses a contemporary rationale for decentralizing fiscal decisions through school-based budgeting (SBB). It comments on procedural, legal, and equity considerations; reviews several studies of SBB implementation in urban districts; and identifies emerging policy and research directions. The rationale behind SBB includes the finding that decentralizing four key resources (power, information, knowledge, and rewards) can enhance organizational effectiveness and productivity. Some of the implementations and obstacles to SBB include the time involved, fairness issues, and the need to enhance equity among schools."	"Recent studies paint a complex picture of SBB's promise and pitfalls. Some districts had a 'broadened definition' of SBB and a high-involvement orientation, and some power was decentralized, but district and state constraints allowed schools little discretionary authority. However, a study of Chicago Public Schools showed that they achieved at least one reform goal—the reallocating of funds to reduce administrative bureaucracy and equalize interschool finance. Even so, other studies demonstrated that SBB provided no impetus for schools to do business differently and equity remained a problem. The digest suggests that clarity is needed about SBB's purpose and goal, and it cautions that only a weak link between SBB and school-based management has been found."

Essential Condition 11: Strategic Use of Resources and Adequate Budget Authority

Chubb, J. E. & Moe, T. M. (1990). *Politics, markets, and America's schools*. Washington DC: Brookings Institution.	
Summary/Methods	**Findings/Recommendations**
"The effect of institutions on school effectiveness is explored in this book, which argues that school reforms in the United States are destined to fail because of the failure to address the root of the problem, which is found in the institutions of direct democratic control by which schools have traditionally been governed. Methodology involved analysis of two data sets: the High School and Beyond (HSB) survey conducted in 1980 and 1982 and the Administrator and Teacher Survey (ATS) conducted in 1984. The HSB survey elicited responses from 30,030 sophomores in 1980 and 28,240 seniors in 1982 from 532 public and private schools. The ATS survey was administered to 10,370 teachers and 402 principals in a subsample of 402 HBS schools, eliciting response rates of 86 and 76 percent, respectively."	"Findings indicate that schools with effective organizational characteristics perform better; that school autonomy is the most important prerequisite for school effectiveness; and that the existing public education system inhibits the emergence of effective organizations and stifles student achievement. A recommendation is made to implement a new system based on parent/student choice and school competition to promote school autonomy. Six chapters discuss the root of the problem, an institutional perspective on schools, effective school organization, causes of student achievement, institutional context and school organization, and school choice. Notes accompany each chapter. Appendices contain data from the two surveys, measures and indicators, special issues in modeling student achievement, and achievement and organization in public schools."

Essential Condition 11: Strategic Use of Resources and Adequate Budget Authority

Miles, K. H. & Frank, S. (2008). The strategic school: Making the most of people, time, and money. *Reston, VA: National Association of Secondary Principals.*
See also Miles, K. H. (2000). Rethinking school resources. *Arlington, VA: New American Schools.*
www.educationresourcestrategies.org/documents/rethinking-resources.pdf

Summary/Methods	Findings/Recommendations
"The purpose of this book is to provide school leaders and the administrators who support them with a deep understanding of how strategic schools leverage their available people, time, and money to impact student achievement. We share both our research—extensive reviews of the literature, in-depth case studies, and district analysis—and our experience in partnering with urban schools and districts across the country to give readers both the academic and practical support they need to make strategic decisions in their own schools." The study included case studies of 20 schools: "We collected data through visits and interviews and by gathering and reviewing detailed budgets, improvement plans, and the course schedules from each school."	"A large body of quantitative research explores the importance of specific inputs such as teacher education levels, experience, and class size. This research clearly suggests that the way schools organize resources matters." "In analyzing our case study data, we searched for patterns of resource use across schools and found that despite difference in school level, size, location, student population, or even instructional focus, high-performing schools used their resources in very consistent ways. Although their specific strategies varied to reflect differences in context, instructional approach, or staff, each school organized its resources around three guiding resource strategies. Specifically, strategic schools organize and use resources to: ▪ Invest in order to continuously improve teaching quality through hiring, professional development, job structure, and common planning time; ▪ Create individual attention and personal learning environments; and ▪ Use student time strategically by emphasizing core academics and literacy."

Essential Condition 11: Strategic Use of Resources and Adequate Budget Authority

Fisher, S. C. & Balch-Gonzalez, M. (Eds) (2008). *Moving toward equity in school funding within districts.* School communities that work: A national task force on the future of urban districts. Retrieved from The Annenberg Institute for School Reform at Brown University. http://www.annenberginstitute.org/pdf/Towards_Equity.pdf

Summary/Methods	Findings/Recommendations
"As part of the work on alternative school-funding mechanisms undertaken by the School Communities that Work task force, we analyzed differences in spending across schools and students within three urban districts—Cincinnati, Seattle, and Houston. We also explored the impact of a nearly universal budgeting policy among school districts—basing per school allocations on average teacher salaries." "All three of the districts we chose had recently adopted student-based budgeting policies, enabling us to examine financial data after the new budgeting policies were implemented and to explore the changes that this strategy brought about."	"Our analysis demonstrated that traditional "staff-based" budgeting practices had created substantial inequities among schools in each district." "What we Learned about the impact of student-based budgeting: ▪ Greater equity comes gradually, even during the implementation of the new formula. o Districts used non-formula dollars to supplement formula funds in some schools, sometimes for several years. o Districts limited how many resources they dedicated to the formula. Non-formula dollars were less equitable. o Districts chose formulas initially that reflected their old distributions to mitigate the immediate impact on all schools. ▪ Not all weightings were related to equity; some were strategic decisions to concentrate more resources, such as making a strategic investment in the middle grades. ▪ With student-based formulas, investments are clear and intentional and can be deliberately modified from year to year."

Appendix E12: Level 4 Schools' Demographics

District	School	Grades	Total Students	% Low Income	% Special Ed.	% Limited English Proficient	% First Language Not English
Boston	Agassiz	PK - 05	492	92.5%	26.3%	34.3%	54.7%
	Dearborn	06 - 08	287	94.1%	27.5%	38.2%	53.7%
	Elihu Greenwood	K - 05	347	89.9%	19.3%	7.4%	21.5%
	John F Kennedy	K - 05	352	94.3%	18.8%	41.3%	55.7%
	John P Holland	PK - 05	658	91.8%	22.7%	33.7%	42.2%
	Orchard Gardens	PK - 08	700	85.7%	21.0%	34.5%	45.8%
	Paul A Dever	PK - 05	480	92.3%	20.5%	31.8%	46.9%
	William Monroe Trotter	PK - 05	355	91.3%	17.0%	2.9%	7.1%
	Blackstone	PK - 05	569	92.3%	23.4%	51.9%	65.1%
	Harbor School	06 - 08	287	83.3%	29.6%	3.8%	20.0%
	Jeremiah E Burke High	09 - 12	779	74.2%	21.4%	24.8%	40.7%
	The English High	09 - 12	791	73.7%	19.3%	26.2%	48.3%
Fall River	John J Doran	K - 05	405	91.6%	12.0%	33.2%	48.6%
	Henry Lord Middle	06 - 08	517	83.8%	22.0%	1.9%	32.1%
	Matthew J Kuss Middle	06 - 08	596	83.1%	21.3%	2.8%	29.9%
Holyoke	Morgan Elem	K - 08	442	93.9%	28.9%	43.9%	66.4%
	Dean Voc Tech High	09 - 12	652	81.6%	30.3%	22.9%	74.8%
Lawrence	Arlington Elementary	K - 04	481	95.8%	11.7%	43.1%	89.7%
	S. Lawrence E. Middle	05 - 08	503	86.9%	25.5%	11.9%	83.4%
Lowell	Charlotte M Murkland	PK - 04	481	83.2%	15.0%	41.7%	56.5%
Lynn	Connery	K - 05	574	93.7%	10.2%	63.7%	78.3%
	E J Harrington	PK - 05	575	90.1%	14.3%	55.9%	71.6%
New Bedford	John Avery Parker	K - 05	276	86.2%	18.2%	1.6%	16.9%
Springfield	Brightwood	K - 05	416	95.7%	20.8%	32.9%	45.8%
	Elias Brookings	PK - 05	363	90.6%	20.7%	22.9%	29.4%
	Homer Street	K - 05	411	90.5%	18.2%	12.5%	19.5%
	Alfred G Zanetti	PK - 08	471	64.8%	14.4%	6.9%	11.9%
	White Street	K - 05	382	92.4%	14.8%	22.1%	27.7%
	Gerena	PK - 05	726	87.9%	20.8%	24.5%	35.4%
	Chestnut Street Middle	06 - 08	1,038	88.5%	26.7%	20.2%	42.3%
	John F Kennedy Middle	06 - 08	639	91.5%	22.6%	8.8%	21.5%
	M Marcus Kiley Middle	06 - 08	841	87.6%	28.1%	13.1%	28.7%
	H.S. of Commerce	09 - 12	1,380	77.0%	27.0%	11.1%	25.8%
Worcester	Chandler Elem Comm.	PK - 06	347	98.8%	19.2%	53.4%	61.6%
	Union Hill School	K - 06	311	97.4%	24.2%	33.1%	38.2%
	L4 TOTAL		**18,924**	**86.9%**	**18.7%**	**25.5%**	**44.0%**

District	School	Mobility*	% African Amer.	% Asian	% Hisp.	% White	Total Teachers	% Highly Qualified Teachers
Boston	Agassiz	32.3%	17.1%	0.6%	78.3%	2.6%	41.6	100%
	Dearborn	30.3%	66.9%	0.0%	26.8%	2.8%	24.7	96%
	Elihu Greenwood	32.2%	56.2%	0.3%	38.3%	3.2%	24.1	100%
	John F Kennedy	29.6%	16.8%	0.3%	80.1%	2.0%	26.5	100%
	John P Holland	24.9%	44.5%	17.9%	34.5%	1.2%	56	95%
	Orchard Gardens	33.9%	31.7%	0.4%	64.4%	2.1%	55.3	97%
	Paul A Dever	30.7%	32.7%	9.0%	49.8%	5.4%	38.2	94%
	William Monroe Trotter	32.8%	67.6%	0.3%	28.7%	0.6%	27.1	85%
	Blackstone	26.8%	13.9%	0.5%	82.4%	2.1%	44.5	100%
	Harbor School	22.5%	68.6%	2.1%	18.8%	6.6%	24	100%
	Jeremiah E Burke High	65.1%	69.6%	2.4%	23.1%	1.7%	52.4	98%
	The English High	49.2%	37.2%	2.0%	55.8%	3.8%	68.9	100%
Fall River	John J Doran	29.3%	4.0%	3.0%	36.0%	52.6%	32	90%
	Henry Lord Middle	17.8%	8.3%	6.0%	18.2%	65.2%	53.7	98%
	Matthew J Kuss Middle	14.8%	6.4%	2.2%	15.8%	73.5%	45.7	79%
Holyoke	Morgan Elem	27.1%	5.7%	0.7%	88.7%	5.0%	47	96%
	Dean Voc Tech High	27.9%	1.4%	0.5%	89.9%	8.3%	75.3	93%
Lawrence	Arlington Elementary	24.8%	1.5%	0.0%	95.0%	3.1%	36	97%
	S. Lawrence E. Middle	22.8%	1.8%	6.6%	86.3%	5.0%	41	100%
Lowell	Charlotte M Murkland	22.7%	2.5%	55.7%	24.5%	14.1%	37	95%
Lynn	Connery	21.7%	11.5%	12.4%	69.3%	5.1%	40.1	92%
	E J Harrington	23.0%	16.9%	4.7%	63.0%	10.8%	42.3	96%
New Bedford	John Avery Parker	17.5%	16.7%	1.8%	32.2%	40.9%	16.9	100%
Springfield	Brightwood	24.5%	11.3%	0.0%	84.9%	3.4%	35.4	90%
	Elias Brookings	21.4%	24.5%	1.1%	57.9%	9.6%	30.4	94%
	Homer Street	36.3%	28.2%	1.2%	62.5%	2.9%	32.2	90%
	Alfred G Zanetti	12.6%	27.0%	1.3%	44.8%	19.1%	36	91%
	White Street	39.0%	18.3%	9.2%	60.5%	7.6%	34.5	92%
	Gerena	38.5%	10.9%	0.3%	80.0%	6.2%	66.5	73%
	Chestnut Street Middle	24.5%	10.8%	1.4%	77.2%	8.4%	82.2	86%
	John F Kennedy Middle	28.0%	30.8%	0.5%	56.8%	7.8%	43.8	97%
	M Marcus Kiley Middle	26.0%	19.5%	1.1%	60.3%	16.4%	67.3	86%
	H.S. of Commerce	32.6%	29.1%	1.4%	59.9%	7.1%	117.6	89%
Worcester	Chandler Elem Comm.	32.3%	14.7%	9.5%	62.8%	8.9%	19.4	100%
	Union Hill School	36.2%	17.7%	4.8%	51.1%	18.0%	21.7	100%
	L4 TOTAL	**30.0%**	**23.4%**	**4.4%**	**57.7%**	**11.8%**	**1,537.3**	**92.9%**

*This rate indicates the percentage of students enrolled at any point during the year who either entered or left the school during the 2008-2009 school year.

District	School	GradeStart	GradeEnd	AYP	Org_Type	FY10_Title_I_Status
Boston	Agassiz	PK	05	RST-A	Public School	Title I School (SW)
	Dearborn	06	08	RST-A	Public School	Title I School (SW)
	Elihu Greenwood	K	05	RST-A	Public School	Title I School (SW)
	John F Kennedy	K	05	RST-A	Public School	Title I School (SW)
	John P Holland	PK	05	RST-A	Public School	Title I School (SW)
	Orchard Gardens	PK	08	RST-A	Public School	Title I School (SW)
	Paul A Dever	PK	05	RST-A	Public School	Title I School (SW)
	William Monroe Trotter	PK	05	RST-A	Public School	Title I School (SW)
	Blackstone	PK	05	RST-A	Public School	Title I School (SW)
	Harbor School	06	08	RST-A	Public School	Title I School (SW)
	Jeremiah E Burke High	09	12	CA-S	Public School	Title I School (SW)
	The English High	09	12	RST-A	Public School	Title I School (SW)
Fall River	John J Doran	K	05	RST-A	Public School	Title I School (SW)
	Henry Lord Middle	06	08	RST-A	Public School	Title I School (SW)
	Matthew J Kuss Middle	06	08	RST-A	Public School	Title I School (SW)
Holyoke	Morgan Elem	K	08	RST-A	Public School	Title I School (SW)
	Dean Voc Tech High	09	12	RST-A	Public School	Title I School (SW)
Lawrence	Arlington Elementary	K	04	CA-A	Public School	Title I School (SW)
	S. Lawrence E. Middle	05	08	RST-A	Public School	Title I School (SW)
Lowell	Charlotte M Murkland	PK	04	RST-A	Public School	Title I School (SW)
Lynn	Connery	K	05	RST-A	Public School	Title I School (SW)
	E J Harrington	PK	05	II-A	Public School	Title I School (SW)
New Bedford	John Avery Parker	K	05	CA-A	Public School	Title I School (SW)
Springfield	Brightwood	K	05	RST-A	Public School	Title I School (SW)
	Elias Brookings	K	08	RST-A	Public School	Title I School (SW)
	Homer Street	K	05	RST-A	Public School	Title I School (SW)
	Alfred G Zanetti	PK	08	CA-A	Public School	Title I School (SW)
	White Street	K	05	RST-A	Public School	Title I School (SW)
	Gerena	PK	05	RST-A	Public School	Title I School (SW)
	Chestnut Street Middle	06	08	RST-A	Public School	Title I School (SW)
	John F Kennedy Middle	06	08	RST-A	Public School	Title I School (SW)
	M Marcus Kiley Middle	06	08	RST-A	Public School	Title I School (SW)
	H.S. of Commerce	09	12	RST-A	Public School	Title I School (SW)
Worcester	Chandler Elem Comm.	PK	06	RST-A	Public School	Title I School (SW)
	Union Hill School	K	06	CA-S	Public School	Title I School (SW)

District	School	PK	K	KF	KP	KT	@01	@02	@03	@04	@05	@06	@07
Boston	Agassiz	31	75	75	0	0	87	84	71	73	71	0	0
	Dearborn	0	0	0	0	0	0	0	0	0	0	67	83
	Elihu Greenwood	0	40	40	0	0	61	62	78	50	56	0	0
	John F Kennedy	0	56	56	0	0	54	64	62	63	53	0	0
	John P Holland	30	93	93	0	0	109	123	109	97	97	0	0
	Orchard Gardens	25	63	63	0	0	58	64	69	74	73	98	87
	Paul A Dever	23	72	72	0	0	88	84	87	64	62	0	0
	William Monroe Trotter	3	48	48	0	0	76	65	54	47	62	0	0
	Blackstone	60	91	91	0	0	86	89	88	82	73	0	0
	Harbor School	0	0	0	0	0	0	0	0	0	0	107	88
	Jeremiah E Burke High	0	0	0	0	0	0	0	0	0	0	0	0
	The English High	0	0	0	0	0	0	0	0	0	0	0	0
Fall River	John J Doran	0	73	73	0	0	78	63	78	58	55	0	0
	Henry Lord Middle	0	0	0	0	0	0	0	0	0	0	175	162
	Matthew J Kuss Middle	0	0	0	0	0	0	0	0	0	0	232	195
Holyoke	Morgan Elem	0	40	40	0	0	45	39	60	47	56	40	59
	Dean Voc Tech High	0	0	0	0	0	0	0	0	0	0	0	0
Lawrence	Arlington Elementary	0	59	59	0	0	108	119	106	89	0	0	0
	S. Lawrence E. Middle	0	0	0	0	0	0	0	0	0	127	123	116
Lowell	Charlotte M Murkland	61	73	73	0	0	87	81	86	93	0	0	0
Lynn	Connery	0	96	96	0	0	98	90	103	94	93	0	0
	E J Harrington	60	92	92	0	0	92	83	96	86	66	0	0
New Bedford	John Avery Parker	0	42	42	0	0	52	51	41	37	53	0	0
Springfield	Brightwood	0	58	58	0	0	69	66	77	61	85	0	0
	Elias Brookings	37	48	48	0	0	60	56	52	53	57	0	0
	Homer Street	0	64	64	0	0	79	60	54	75	79	0	0
	Alfred G Zanetti	103	54	54	0	0	60	53	47	46	46	25	23
	White Street	0	63	63	0	0	72	54	63	64	66	0	0
	Gerena	206	104	104	0	0	97	91	82	72	74	0	0
	Chestnut Street Middle	0	0	0	0	0	0	0	0	0	0	337	341
	John F Kennedy Middle	0	0	0	0	0	0	0	0	0	0	223	187
	M Marcus Kiley Middle	0	0	0	0	0	0	0	0	0	0	300	275
	H.S. of Commerce	0	0	0	0	0	0	0	0	0	0	0	0
Worcester	Chandler Elem Comm.	24	65	65	0	0	55	35	33	54	47	34	0
	Union Hill School	0	44	44	0	0	50	42	45	42	41	47	0

District	School	@08	@09	@10	@11	@12	SP	Status_ ELA09	Status_ MTH09
Boston	Agassiz	0	0	0	0	0	0	RST2-A	CA-S
	Dearborn	137	0	0	0	0	0	RST2-A	RST2-A
	Elihu Greenwood	0	0	0	0	0	0	RST1-A	II2-A
	John F Kennedy	0	0	0	0	0	0	RST1-A	CA-S
	John P Holland	0	0	0	0	0	0	RST2-A	RST2-A
	Orchard Gardens	89	0	0	0	0	0	RST1-A	RST1-A
	Paul A Dever	0	0	0	0	0	0	RST2-A	II2-A
	William Monroe Trotter	0	0	0	0	0	0	RST2-A	RST2-A
	Blackstone	0	0	0	0	0	0	RST2-A	II1-A
	Harbor School	92	0	0	0	0	0	CA-A	RST1-A
	Jeremiah E Burke High	0	282	180	184	129	4	II2-S	CA-A
	The English High	0	225	213	164	186	3	RST2-S	RST2-A
Fall River	John J Doran	0	0	0	0	0	0	RST2-A	CA-A
	Henry Lord Middle	180	0	0	0	0	0	RST2-A	RST2-S
	Matthew J Kuss Middle	169	0	0	0	0	0	II2-S	RST2-A
Holyoke	Morgan Elem	56	0	0	0	0	0	RST2-A	RST2-A
	Dean Voc Tech High	0	260	158	124	110	0	RST2-S	RST2-A
Lawrence	Arlington Elementary	0	0	0	0	0	0	CA-A	II1-S
	S. Lawrence E. Middle	137	0	0	0	0	0	CA-A	RST2-A
Lowell	Charlotte M Murkland	0	0	0	0	0	0	RST2-A	RST2-A
Lynn	Connery	0	0	0	0	0	0	RST1-A	II2-S
	E J Harrington	0	0	0	0	0	0	II2-A	II2-A
New Bedford	John Avery Parker	0	0	0	0	0	0	CA-A	CA-S
Springfield	Brightwood	0	0	0	0	0	0	RST2-A	RST2-A
	Elias Brookings	0	0	0	0	0	0	RST2-A	RST2-A
	Homer Street	0	0	0	0	0	0	RST2-A	RST2-A
	Alfred G Zanetti	14	0	0	0	0	0	CA-S	CA-A
	White Street	0	0	0	0	0	0	RST2-A	RST2-A
	Gerena	0	0	0	0	0	0	RST2-A	RST2-A
	Chestnut Street Middle	360	0	0	0	0	0	RST2-A	RST2-A
	John F Kennedy Middle	229	0	0	0	0	0	RST2-A	RST2-A
	M Marcus Kiley Middle	266	0	0	0	0	0	RST2-A	RST2-A
	H.S. of Commerce	0	658	297	240	182	3	RST2-A	RST2-A
Worcester	Chandler Elem Comm.	0	0	0	0	0	0	RST2-A	RST2-A
	Union Hill School	0	0	0	0	0	0	II2-A	CA-S

District	School	eCPI06	eCPI07	eCPI08	eCPI09	eWF06	eWF07	eWF08	eWF09
Boston	Agassiz	54.31	59.40	55.80	64.00	29	24	31	22
	Dearborn	60.17	61.40	58.60	57.10	27	26	33	35
	Elihu Greenwood	56.09	59.20	58.90	58.40	31	28	28	31
	John F Kennedy	60.16	58.40	56.00	58.70	24	33	32	28
	John P Holland	52.17	49.10	50.10	50.30	35	42	44	36
	Orchard Gardens	49.07	56.10	53.70	54.60	46	36	40	35
	Paul A Dever	63.67	58.70	53.90	54.90	25	28	36	31
	William Monroe Trotter	50.46	52.00	49.60	52.30	38	37	41	37
	Blackstone	51.85	53.40	44.50	48.90	41	37	49	41
	Harbor School	69.36	70.30	70.70	69.90	15	11	17	20
	Jeremiah E Burke High	57.60	63.70	63.70	67.30	27	21	23	16
	The English High	59.94	68.20	68.90	72.70	26	17	17	16
Fall River	John J Doran	63.02	63.00	54.80	59.20	22	21	34	24
	Henry Lord Middle	73.06	78.10	76.80	75.30	13	10	10	12
	Matthew J Kuss Middle	75.05	78.70	73.70	79.60	11	10	16	12
Holyoke	Morgan Elem	43.63	41.70	39.20	41.70	50	55	56	56
	Dean Voc Tech High	59.39	61.80	62.70	61.50	30	23	20	25
Lawrence	Arlington Elementary	50.55	57.70	55.20	61.10	39	29	36	26
	S. Lawrence E. Middle	68.02	68.00	67.80	71.70	19	21	20	13
Lowell	Charlotte M Murkland	53.74	50.20	47.80	52.10	37	43	46	43
Lynn	Connery	61.22	57.30	56.00	56.60	27	33	35	32
	E J Harrington	63.08	59.80	55.80	56.10	19	27	36	33
New Bedford	John Avery Parker	63.26	62.90	59.00	65.70	19	21	29	21
Springfield	Brightwood	50.65	53.50	49.60	43.40	44	40	40	52
	Elias Brookings	65.30	57.70	50.40	54.30	22	33	44	40
	Homer Street	60.88	62.90	58.20	56.30	27	27	28	33
	Alfred G Zanetti	66.53	66.10	63.10	68.40	22	22	24	21
	White Street	59.06	55.50	52.10	54.90	30	29	37	34
	Gerena	66.57	53.40	43.20	43.60	20	36	55	52
	Chestnut Street Middle	71.09	70.50	67.50	66.80	21	23	25	26
	John F Kennedy Middle	69.40	68.50	65.30	73.20	17	18	25	16
	M Marcus Kiley Middle	64.88	63.00	68.70	67.70	22	26	20	21
	H.S. of Commerce	65.73	68.50	74.30	75.00	19	23	10	15
Worcester	Chandler Elem Comm.	53.09	47.50	47.80	51.60	41	49	50	41
	Union Hill School	56.84	52.40	45.30	54.30	30	41	53	37

District	School	mCPI06	mCPI07	mCPI08	mCPI09	mWF06	mWF07	mWF08
Boston	Agassiz	54.58	57.60	60.00	54.40	35	33	28
	Dearborn	39.72	45.10	44.00	41.30	61	52	59
	Elihu Greenwood	57.09	59.40	60.50	56.10	36	29	30
	John F Kennedy	52.62	49.10	55.90	53.80	38	49	36
	John P Holland	47.84	46.00	51.20	48.20	50	51	47
	Orchard Gardens	32.22	39.60	41.40	38.30	73	65	61
	Paul A Dever	57.63	54.30	50.10	45.90	33	38	42
	William Monroe Trotter	44.04	39.40	42.50	46.40	53	61	57
	Blackstone	49.03	60.00	52.30	46.90	44	31	44
	Harbor School	41.98	46.40	43.50	43.20	54	49	59
	Jeremiah E Burke High	45.47	62.30	57.30	70.60	53	23	34
	The English High	56.78	65.70	66.50	66.40	39	23	22
Fall River	John J Doran	52.07	53.20	58.70	54.20	37	36	36
	Henry Lord Middle	45.44	50.00	59.00	60.70	52	47	36
	Matthew J Kuss Middle	48.15	53.60	56.50	64.30	49	40	42
Holyoke	Morgan Elem	35.75	30.30	30.50	32.10	69	76	73
	Dean Voc Tech High	53.29	62.60	57.60	59.80	43	28	32
Lawrence	Arlington Elementary	43.65	56.90	61.50	61.20	50	37	27
	S. Lawrence E. Middle	42.86	47.20	44.30	46.90	58	53	57
Lowell	Charlotte M Murkland	53.23	49.80	59.90	57.90	39	46	33
Lynn	Connery	50.42	54.00	59.30	63.70	46	40	35
	E J Harrington	54.04	50.90	53.10	49.20	40	41	43
New Bedford	John Avery Parker	48.20	59.70	54.10	57.80	47	25	38
Springfield	Brightwood	43.06	49.00	45.50	42.60	61	50	55
	Elias Brookings	43.51	38.30	38.60	42.80	57	65	63
	Homer Street	46.76	52.70	51.90	50.60	49	43	40
	Alfred G Zanetti	48.18	51.40	49.40	52.50	46	44	47
	White Street	48.53	46.10	49.10	51.40	44	52	51
	Gerena	61.49	44.50	30.60	32.40	31	54	77
	Chestnut Street Middle	44.02	44.10	46.00	47.70	59	58	57
	John F Kennedy Middle	40.56	47.10	43.20	44.40	62	52	58
	M Marcus Kiley Middle	36.17	39.00	45.40	43.90	69	64	55
	H.S. of Commerce	58.22	59.40	55.50	60.70	36	35	35
Worcester	Chandler Elem Comm.	43.75	38.30	45.00	42.20	55	63	55
	Union Hill School	40.95	39.80	46.50	48.40	60	60	51

District	School	mWF09	ELAgrowth08	ELAgrowth09	Mgrowth08	Mgrowth09
Boston	Agassiz	31	46.50	45.50	43.50	27.00
	Dearborn	58	40.50	44.50	39.00	45.00
	Elihu Greenwood	36	31.00	38.00	48.00	37.00
	John F Kennedy	43	37.00	38.00	49.00	42.00
	John P Holland	48	32.00	36.50	40.50	29.00
	Orchard Gardens	65	38.00	40.00	35.00	29.00
	Paul A Dever	49	41.50	36.00	41.00	34.50
	William Monroe Trotter	51	37.00	37.00	29.00	44.00
	Blackstone	50	28.50	40.00	49.00	31.00
	Harbor School	57	42.00	37.00	28.00	36.50
	Jeremiah E Burke High	18		35.00		38.00
	The English High	24		32.00		39.50
Fall River	John J Doran	42	47.00	34.00	59.00	44.00
	Henry Lord Middle	34	36.00	36.00	58.00	61.00
	Matthew J Kuss Middle	31	41.00	52.00	45.00	59.00
Holyoke	Morgan Elem	73	16.00	33.00	20.50	40.00
	Dean Voc Tech High	34		17.00		31.00
Lawrence	Arlington Elementary	29	36.00	27.00	41.00	33.50
	S. Lawrence E. Middle	54	41.00	42.00	24.00	29.00
Lowell	Charlotte M Murkland	35	26.50	22.50	46.50	41.00
Lynn	Connery	30	33.00	27.00	48.00	56.00
	E J Harrington	45	40.00	28.00	43.00	32.00
New Bedford	John Avery Parker	33	37.50	47.00	36.00	46.00
Springfield	Brightwood	53	37.00	17.00	25.00	17.00
	Elias Brookings	57	19.00	32.00	23.00	39.00
	Homer Street	42	27.50	22.00	28.00	26.00
	Alfred G Zanetti	47	35.00	43.00	37.00	52.00
	White Street	38	40.00	35.00	33.00	44.00
	Gerena	73	11.00	33.00	11.00	44.50
	Chestnut Street Middle	55	38.00	37.00	28.00	30.00
	John F Kennedy Middle	57	33.00	45.00	33.00	31.00
	M Marcus Kiley Middle	57	39.00	35.00	43.00	30.00
	H.S. of Commerce	31		33.00		26.00
Worcester	Chandler Elem Comm.	58	30.00	41.00	47.00	33.00
	Union Hill School	44	19.00	42.50	53.00	49.50

District	School	DRoutRate06	DRoutRate07	DRoutRate08	2009 4yr Gradrate	2008 4yr Gradrate
Boston	Agassiz					
	Dearborn					
	Elihu Greenwood					
	John F Kennedy					
	John P Holland					
	Orchard Gardens					
	Paul A Dever					
	William Monroe Trotter					
	Blackstone					
	Harbor School					
	Jeremiah E Burke High	14.9	15.7	21	41.10	40.19
	The English High	10.4	13.7	6	54.20	51.87
Fall River	John J Doran					
	Henry Lord Middle					
	Matthew J Kuss Middle					
Holyoke	Morgan Elem					
	Dean Voc Tech High	12.3	13.6	16	36.70	32.73
Lawrence	Arlington Elementary					
	S. Lawrence E. Middle					
Lowell	Charlotte M Murkland					
Lynn	Connery					
	E J Harrington					
New Bedford	John Avery Parker					
Springfield	Brightwood					
	Elias Brookings					
	Homer Street					
	Alfred G Zanetti					
	White Street					
	Gerena					
	Chestnut Street Middle					
	John F Kennedy Middle					
	M Marcus Kiley Middle					
	H.S. of Commerce	10.4	13.4	15	42.50	43.46
Worcester	Chandler Elem					
	Comm.					
	Union Hill School					

Appendix E13: Overview of Massachusetts' Amazing Teachers Recruitment Campaign, Spring 2010

I. Summary:

Governor Deval Patrick and Massachusetts Department of Elementary and Secondary Education officials launched a statewide public awareness campaign to broaden the pipeline of outstanding teachers applying for positions in the lowest-performing schools.

Target Market: Experienced, effective teachers around MA (and beyond)

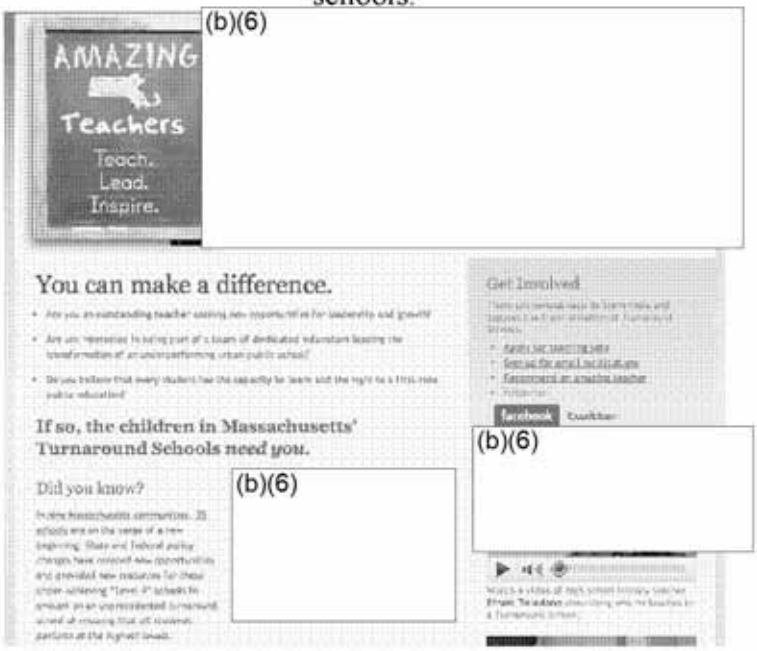
Purpose: Help districts create a positive "buzz" around the opportunity for outstanding teachers to help lead the "turnaround" of our lowest performing schools. Create a *call to action* to excellent educators to consider putting their talents and expertise to work on behalf of the students in greatest need of improvement (17,000 students in Level 4 schools: 1 in 4 ELL, 1 in 5 SpEd, nearly 9 out of 10 free/reduced lunch)

Message: Emphasize positive message (teachers are the solution, not the problem) and the benefits of teaching in a turnaround school, such as extra resources and services for the school, leadership opportunities for teachers, additional compensation for additional time/responsibilities, great new principals, etc.

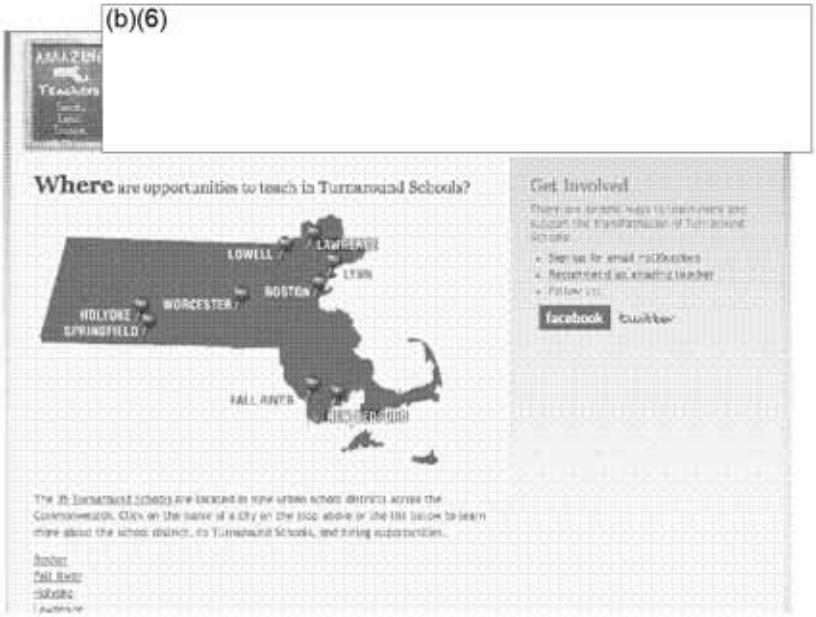
Focus: 35 Level 4 "turnaround" schools in 9 urban districts: Boston, Fall River, Holyoke, Lawrence, Lowell, Lynn, New Bedford, Springfield, Worcester

II. Website:

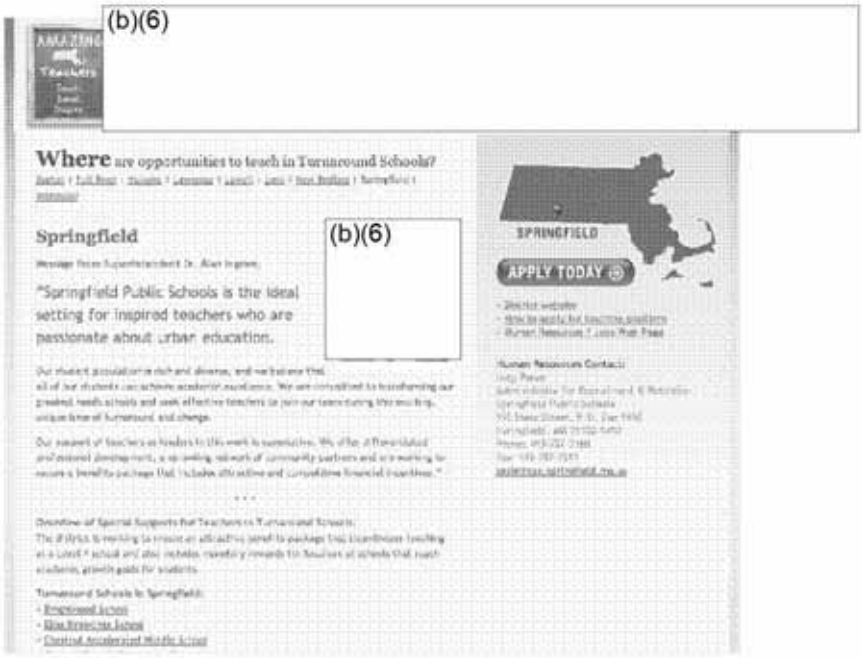
New website (amazingteachers.org) provides more information about turnaround schools in Massachusetts and features videos of teachers describing why they choose to teach in turnaround schools.



The website provides information about the nine districts and 35 schools in those districts. Interested teachers can sign up for more information and visitors can recommend great teachers they know.



After learning more about the opportunities to teach in turnaround schools, candidates are connected directly to the districts to apply.



III. Early Results:

- Over **13,000** unique visitors to the website in **first 4 days**
- **Extensive media coverage:**
  Print/Web – Boston Globe (front page), Boston Herald, MassLive.com (Springfield), Bay State Banner, Siglo21 (Spanish); Television – WCVB/Channel 5, New England Cable News, Springfield ABC40/Fox6; Radio – WBZ, WBUR; Online media – Twitter, Facebook and blogs
- Districts reporting an **increased number of applicants** since the launch of the campaign


The Boston Globe

Monday, May 10, 2010

In the news

(b)(6)

Kagan is nominee, Democrats say

Obama to announce high court choice today

(b)(6)

FRESH CAUSE FOR CONFRONTING VIOLENCE

(b)(6)

Mass. hunting for star teachers

Recruits would go to toughest schools

US blames

IV. Ongoing Efforts:

The current campaign will continue over through the spring and summer with:

- Online advertising
- Email outreach to educator associations, Teach for America alums, education schools
- Twitter and Facebook
- Bus shelter posters
- Recruitment materials for districts to customize (HTML email, banner ad, flyers, etc.)

The Department of Elementary and Secondary Education will continue to support districts to strengthen their capacity to respond to applicants, effectively screen and select teachers and put together meaningful incentives packages (monetary and non-monetary) to attract great teachers to their lowest performing schools.

Appendix E14: Summary of Level 4 Schools Network (L4N) Activities, March 2010 – May 2010

An Act Relative to the Achievement Gap was signed into law in January 2010 establishing a clear process for the Department to identify and intervene in the Commonwealth's 35 lowest performing (Level 4) schools. This new state law was enacted shortly before USDOE released final regulations for the distribution of School Turnaround Grant funding.

The Level 4 Schools Network (L4N) was convened by the Department to offer assistance to the nine districts and facilitate knowledge-sharing among them. The following is a brief summary of the L4N Network activities:

February 24, 2010 – Meeting with Superintendents to Introduce Process
Participants: Superintendents and key district staff from all nine districts; ESE staff
Content of the Meeting:

- Overview of the Level 4 Schools Context and Process: state law requirements; federal grant requirements; analysis of why "turnaround" has low success rate
- Focus on District Systems of Support: district leadership of the turnaround work with schools; collecting and analyzing data; importance of teacher selection and support
- Managing the Message: networking activity to develop a positive and clear public message once the schools are officially announced; inform ESE assistance activities

March 2, 2010 – Webinar Announcing Level 4 Schools Process
Participants: Superintendents, local union presidents, and school committee chairs from all nine districts; ESE staff
Content of the Webinar:

- Announcement of the Level 4 Schools: the names of the schools were released to each district team prior to the call; the formal announcement to the press of the names would not be until March 4
- Overview of the Level 4 Schools Context and Process

March 24, 2010 – Workshop with District Teams on Using Data to Inform School Redesign Strategies
Participants: Superintendents and their key district staff and local union presidents from all nine districts; ESE staff; Community Training and Assistance Center (CTAC) staff
Content of the Workshop:

- Presentation on Data-Based Root Cause Analysis: demonstration of triangulating performance, perception, and observational data to draw conclusions about appropriate intervention strategies
- Activity Using Sample Data from a School

April 7, 2010 – Conference Call on Leadership Analysis and Data Collection
Participants: Superintendents and their key district staff and local union presidents; ESE staff
Content of the Call:

- School Leadership Decisions: options and expectations for recruiting and selecting new leadership in Level 4 schools; suggestions for analyzing existing leadership teams
- Baseline Data Collection: options and expectations for how to collect performance, perception, and observational data from which to set goals

April 9, 2010 – Meeting with Superintendents
Monthly meeting with Superintendents of Level 4 Schools to clarify processes and timeline and share ideas

April 15, 2010 – Workshop with District Teams on Local Stakeholder Groups and Quick Wins
Participants: Superintendents and their key district staff and local union presidents; ESE staff
Content of the Workshop:

- Local Stakeholder Groups (state requirement): launching and organizing local stakeholder groups; balancing the expectations of local stakeholder groups and school-level redesign teams; learning from Boston's early launch of the local stakeholder groups
- Quick Wins: sharing research about the role of "quick wins" in successful turnaround; workshop to identify criteria to apply when deciding which quick wins to pursue in order to ensure strategic alignment with the long-term redesign plan

April 28, 2010 – Conference Call on Early Implementation Grants
Participants: Superintendents and their key district staff and local union presidents; ESE staff
Content of the Call:

- Technical Assistance: clarity around technical requirements of early implementation grants
- LEA Capacity: emphasized grant submissions as early evidence of district capacity

May 7, 2010 – Meeting with Superintendents
Monthly meeting with Superintendents of Level 4 Schools to clarify processes and timelines and share ideas

May 12, 2010 – Conference Call on Local Stakeholder Groups and Process Timelines
Participants: Superintendents and their key district staff and local union presidents; ESE staff
Content of the Call: Discussion of ESE guidance on School-Level Redesign Teams, Local Stakeholder Groups, and Process Timelines

May 18, 2010 – Meeting to Discuss Proposed School Turnaround Grant Rubric
Participants: Superintendents and their key district staff and local union presidents from all eligible districts; ESE staff
Content of the Call: Discussion of draft scoring rubric

May 21, 2010 – Conference Call on Alternative Programs for English-Language Learners
Participants: Superintendents and their key district staff and local union presidents; ESE staff
Content of the Call: Discussion of ESE guidance on Alternative Programs for ELLs

May 23, 2010 – Meeting to Discuss Draft Measurable Annual Goals (state requirement)
Participants: Superintendents and their key district staff and local union presidents; ESE staff
Content of the Call: Discussion of draft ESE guidance for measurable annual goals

Transforming a Public School Into a Center of Education and Social Services: Design Elements and Early Promising Trends

Thomas T. Kochanek, Ph.D.

The Integrated, Comprehensive Resources in Schools Initiative is underwritten by the Massachusetts Departments of Elementary and Secondary Education, Children and Families, and Mental Health. This independent program evaluation is supported by funds from the Barr Foundation that are administered by the United Way of Massachusetts Bay and Merrimack Valley. The comments and interpretation of evidence presented are solely the responsibility of the author and do not represent the official views of these funding agencies, nor does publication in any way constitute an endorsement by these agencies.

September, 2009

Executive Summary

Contemporary science on child growth and development has firmly established that viewing the school and its surrounding community as the unit of support and intervention for promoting child and family well being holds infinite promise for future investments. In an earnest attempt to apply this universe of knowledge in a practical, concrete manner, the ***Integrated, Comprehensive Resources in Schools (ICRS)*** initiative was launched to test the feasibility and desirability of creating an integrated system of education, support, and care using the assets of schools, behavioral health organizations, state agencies, and community based organizations (CBOs).

The conceptual framework of the ***ICRS*** model involves three integrated components as its nucleus: academic support, community partnerships, and family engagement. Peripheral to this core are two facilitating forces: human capital development and the integration of the behavioral health system. Sixteen school districts served as target implementation sites in FY 2009. While common program implementation data were gathered in all communities, three schools were selected for a more thorough examination due to their advanced status on the implementation of ***ICRS*** concepts. Major discoveries in these schools were as follows.

S. Christa McAuliffe School
Lowell, MA

The S. Christa McAuliffe School is a large elementary school (i.e. 520 preschool-Grade 4 students) in Lowell. Seventy percent of the enrolled population qualifies for Free/Reduced lunch, 46% have been identified as LEP, and 15% receive some form of special education service.

With a backdrop of distributive school leadership, a wide array of programs, initiatives and supports have been launched that focus on academic and social competence in children, parent engagement and collaboration, and sustained investments in classroom teachers that promote instructional competence as well as the ability to nurture social skills development in children. Data gathered have revealed:

- **Within the last four years, the percentage of students in Grade 4 scoring "Advanced" and "Proficient" on the MCAS ELA subtest doubled, and in Math, the**

percentage of students in these categories increased three-fold. Furthermore, while McAuliffe scored lower than its sister schools in Lowell in 2005, MCAS scores were equal to (Math) and exceeded (ELA) the performance of Lowell students in the aggregate in 2008.

- **For student social behavior, the number of Office Discipline Referrals has decreased from 222 to 10 in a two year period. School suspensions have been reduced by 50%.**
- **Regarding school climate, teachers reported that the current, overarching context of the school promotes student academic success, appropriate social behavior and relationships, parental trust and support, and improved teaching in the classroom.**

Carlos Pacheco School
New Bedford, MA

The Carlos Pacheco School enrolls 316 students from preschool through Grade 5. The school population presents significant challenges including: (1) a high rate of family poverty (93%); (2) 60% of students reside with non-English speaking families; (3) 20% of enrolled students receive special education services; and (4) 10% of students are enrolled in total or sheltered LEP programs. Additionally, students contend with rival gang violence, nutritional deficiencies, absence of routine medical and dental care, unstructured time after school, and limited opportunities for experiential learning in the community.

The Pacheco School has experienced a remarkable transformation over the last decade. Beginning with prevailing circumstances of academic underachievement, disruptive student behavior, discouraged teacher attitudes, and low parental perceptions of school, positive trends and reversals have been noted. **More specifically, in contrasting literacy performance data for SY 2000 vs. 2009, results revealed that while 6% of Grade 4 students scored >50th percentile in 2000, this number dramatically increased to 44% in 2009. A similar trend was evident in math (i.e. percent of students scoring > 50th percentile increased from 14% to 89%).**

Within the area of school participation, similar impressive trends were evident in that the average number of missed school days has decreased by approximately 50% over the last decade. Furthermore, while one of every ten students (11.4%) at Pacheco was suspended from school in 1999, the number currently is < 1%. Finally, the number of

Office Discipline Referrals, student conduct cards, and number of CHINS cases have also decreased over the last five years.

School and Behavioral Health Partnership
Beverly Public Schools

The Beverly School Department and the Center for Family Development (i.e. a unit within HES, Inc.) have entered into a partnership to enhance the capacity of schools to respond to the social emotional needs of children. The core of the partnership has three components: (1) classroom-based teacher consultation for children with documented behavioral challenges; (2) professional development for school staff; and (3) information, guidance, and direct intervention for families. Behavioral health clinicians are integrated into the fabric of a school and maintain a presence of 6-8 hours per week (i.e. LICSW/LMHC clinician and MSW or MA Counseling graduate intern).

In reviewing the outcomes of consultations provided to individual teachers, data revealed significant reductions in disruptive classroom behavior and in poor self-regulation and emotions management skills. Classroom teachers disclosed substantive benefits from this behavioral health affiliation. More precisely, teachers indicated that their ability to create strategies to resolve problematic behaviors prior to escalation has dramatically improved. Moreover, their ability to become a more insightful interpreter and observer of behavior has also increased.

With respect to parent support, a wide array of information brochures and discussion sessions were offered to families which received highly positive reviews. Examples of topics addressed included: "Childhood Anger: Techniques to Avoid the Buildup"; "Psychotropic Medications: Rewards and Risks"; "Using a Continuum of Discipline Approaches"; and "How Parents Can Enhance the Behaviors and Learning Skills Needed for School".

In summary, dominant headlines that emerge from this comprehensive evaluation study are as follows.

A Deep Commitment by School Leadership is Essential if the Capability of the Human Service System is to be Integrated Into the Context of Schools.

Given that the core components of the ***ICRS*** model touch all aspects of school operations (i.e. curriculum development, student support services, human capital development, family

engagement, community partnerships), meaningful and sustainable commitments from school leadership are critical. While this clearly includes the Superintendent, other key individuals include administrators of curriculum and instruction, pupil personnel services, special education, and budget and finance. The successful implementation of ***ICRS*** concepts necessitates program, procedural, policy, and financing changes and as such, the core leadership team in a school district must participate in and oversee the execution of these changes.

School Principals and Classroom Teachers Create the Pathway for Achieving a Truly Integrated System of Education, Support, and Care.

Data gathered in this evaluation study underscore the pivotal role of principals and classroom teachers in successful resource integration efforts. Characteristics that exert enormous influence include:

- Strong beliefs in a systems-based approach to student success and family well being.
- Willingness to experiment with new ideas that are created from current science on child growth and development.
- Willingness to invite and actively engage community partners into the process of public education.
- Robust beliefs that all children can be and want to be successful, and that families are assets, not liabilities, to favorable outcomes.
- Commitment to ongoing, professional self-growth and development.

The Most Significant Challenge in Service Integration is Not the Implementation of Any Single Program But Rather the Process and Method Used for Creating the Tapestry.

Data gathered in this study have suggested that single resource investments are insufficient to produce substantive and sustainable changes in children, families, and school climate. Alternatively, the totality of the investment portrait, and the manner in which each component links with and strengthens other components, is the key to understanding and achieving positive outcomes for children and families.

Collateral Benefits Are a Significant By-Product and Inherent Within Service Integration.

Data gathered herein imply that linear relationships do not exist between investments and outcomes, and that collateral benefits are often observed. For example, development of an

initiative in child social competency and/or family engagement may be associated with improvement in academic areas. As such, in assessing the impact of any specific program or resource, data must be collected in ancillary areas that may demonstrate more significant change than the narrow target originally specified.

No Single Indicator or Index Will Accurately and Fully Disclose the Merits of Service Integration.

Data examined in this study revealed that despite intense, comprehensive, and sustained commitments to specific skill areas (e.g. literacy), the trajectory of change and growth is positively accelerated but also very gradual over time. Moreover, since different indicators measure different skills, even within the same area, caution must be exercised in over or under-estimating program effects on the basic of any single index.

The Availability of Financial Resources is a Necessary But Not Sufficient Condition to Achieve Service Integration.

While a solid, varied, and extensive financial foundation is essential for service integration, it is interesting to note that communities in this project which have advanced most rapidly are not necessarily those with the largest reservoir of funds. As such, continued evaluation effort must be committed to uncovering the subtle interactions between financial assets and other equally significant program and human capital resources.

Public Schools, the Behavioral Health System, and Institutions of Higher Education Must Achieve Common Ground on Their Respective Views of the Role and Function That Behavioral Health Assumes in Schools.

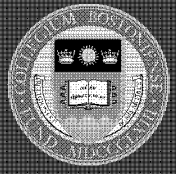
In examining the partners within school and behavioral health relationships, data suggest that varying views prevail concerning how these systems should be integrated. While public schools and behavioral health agencies are the principal parties to collaboration, institutions of higher education exert influence in that they develop and nurture attitudes and skills in teachers, school leaders, and behavioral health clinicians. While new opportunities in children's mental health will be created by Court-Ordered stipulations and perhaps other initiatives crafted by the Massachusetts Legislature, unless there is a receptive context in which these options can be used productively, system enhancements are likely to be uneven and variable in quality.

In summary, three governmental agencies in Massachusetts have collaborated to embark on a bold, ambitious initiative to create an integrated education and human service system. While early evidence suggests that progress has been achieved over the last 24 months, significant challenges must be addressed if the concept of systems creation is to be fully tested. Massachusetts has made enormous financial investments in public education and the human services industry. As resources become scarcer, economic conditions become more perilous, and academic and social/emotional challenges of children increase, it is imperative to craft strategies that guarantee the prudent expenditure of resources on verified, favorable outcomes. The *Ready for 21st Century Success* plan recently released by Governor's Commonwealth Readiness Project includes imperatives in public education that are directly linked with the ***ICRS*** initiative. The authors of this plan, the taxpayers of Massachusetts, and the children and families needing the ideal dose of preventive and supportive resources urge that this project be successful.

The Impact of Boston Connects

Summary Report 2008-2009

Boston College Center for Child, Family and Community Partnerships



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Current Support

New Balance Foundation

Charles Hayden Foundation

Strategic Grant Partners

Ludcke Foundation

Boston College

Introduction

It is widely agreed that the achievement gap cannot be closed until out-of-school factors that impact students' success are addressed through effective approaches to student support. Districts tend to take one of three approaches to coordinating student support activities. Some take a passive approach, in which schools do not break out student support as a unique activity, but view it as the responsibility of teachers or school leaders to provide necessary services to students, or connect students with the right services. Other districts take a mental-health approach, in which a small, select number of students receive counseling at the school or in the community. A third approach is the full-service community school approach, in which a variety of after-school, health, mental health, and related services for students and their families are offered at the school site.

This report provides an overview of an entirely fresh and innovative approach to student support—Boston Connects (BCNX). BCNX brings together the Boston Public Schools, community agency partners, and Boston College to help children engage and learn in school by matching each student to a tailored set of services he or she needs to thrive. BCNX is fully implemented in twelve Boston public elementary schools, with an additional seven randomly selected schools serving as comparison schools for evaluation.

This report is an abridged version of the quantitative and qualitative outcomes of the Boston Connects ongoing evaluation. Our full annual report for 2008-09 presents more detailed information about the Boston Connects intervention, its phased rollout in two Boston Public Schools clusters, and the demographics of the schools involved. The full report also describes in detail the data sources and methodologies employed, and the full results of the quantitative and qualitative analyses of those data.

This summary, like the full report, emphasizes the analyses we conducted in the academic years 2008-09. Quantitative analyses drew on a rich variety of sources, including report card scores, state test scores, student and teacher surveys, and publicly available demographic data. In order to supplement and illuminate the quantitative data, BCNX also rigorously analyzed qualitative data from key participants at the heart of the intervention: teachers, principals, and BCNX staff. Because quantitative data from the Boston Public Schools and the state do not become available until fall of 2009, the quantitative analyses are based on data from 2007-08 and previous years. Qualitative data were gathered and analyzed in academic year 2008-09.

After briefly outlining the Boston Connects intervention, we will present quantitative and qualitative findings on the impact of BCNX on students, schools, community agencies and families. First, we provide information on the context in which the BCNX intervention is embedded.

Context

The demographics of the city of Boston, its public schools, and the Boston Connects schools are important to the interpretation and understanding of the impact of the Boston Connects intervention. In the full report, we provide a wider-ranging description of the Boston context. Here, we concentrate on one segment of the context: BPS elementary schools.

Table 1.

Percentage of students with different demographic characteristics within BPS, Pilot, Charter, BCNX, and Comparison Elementary Schools, 2008-09.

	BPS	Pilot	Charter	BCNX	COMP
A. Poverty Status (receiving free or reduced-price lunch)	78.2%	65.4%	74.3%	83.4%	84.8%
B. Race Ethnicity					
Asian	5.9%	6.0%	3.3%	16.7%	10.6%
Black	36.0%	33.2%	57.3%	28.0%	36.4%
Hispanic	42.0%	40.2%	24.3%	41.5%	36.9%
White	13.5%	17.3%	12.0%	11.8%	13.8%
C. Native Language other than English	35.1%	29.4%	19.2%	53.1%	57.1%
D. Limited English Proficient	21.4%	18.9%	4.0%	18.6%	10.1%
E. Special Education	19.8%	19.0%	10.7%	19.7%	19.0%

Data source: Massachusetts Department of Education enrollment data.

As shown in Table 1:

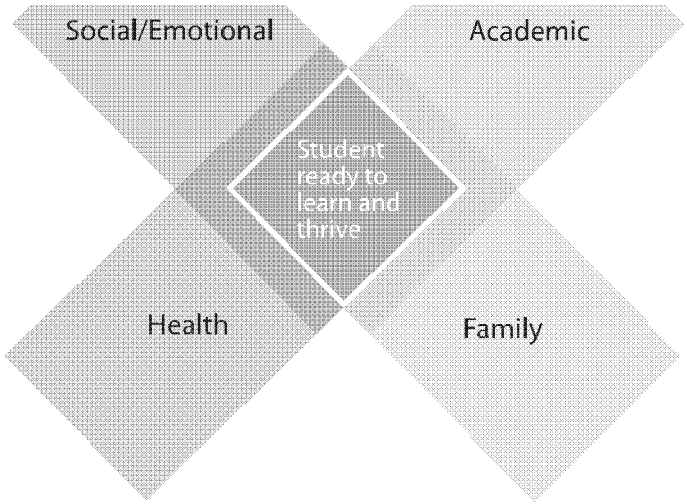
- BCNX schools have a higher percentage of students receiving free or reduced-price lunch than BPS as a whole, pilot schools, or charter schools.
- Despite a random lottery process, charter school students are more likely to be black and less likely to be Hispanic than BCNX students.
- Pilot schools, charter schools, and BPS as a whole serve a far smaller proportion of students whose native language is other than English than BCNX schools do.
- Charter schools serve a smaller proportion of SPED students, and a far smaller proportion of students who are Limited English Proficient, than BCNX schools do.

The Boston Connects Intervention

Success in school is predicated on students' readiness to engage and thrive. Boston Connects sees this readiness as the convergence of strengths and needs across four dimensions: academic, social-emotional, health and family. See Figure 1.

Figure 1.

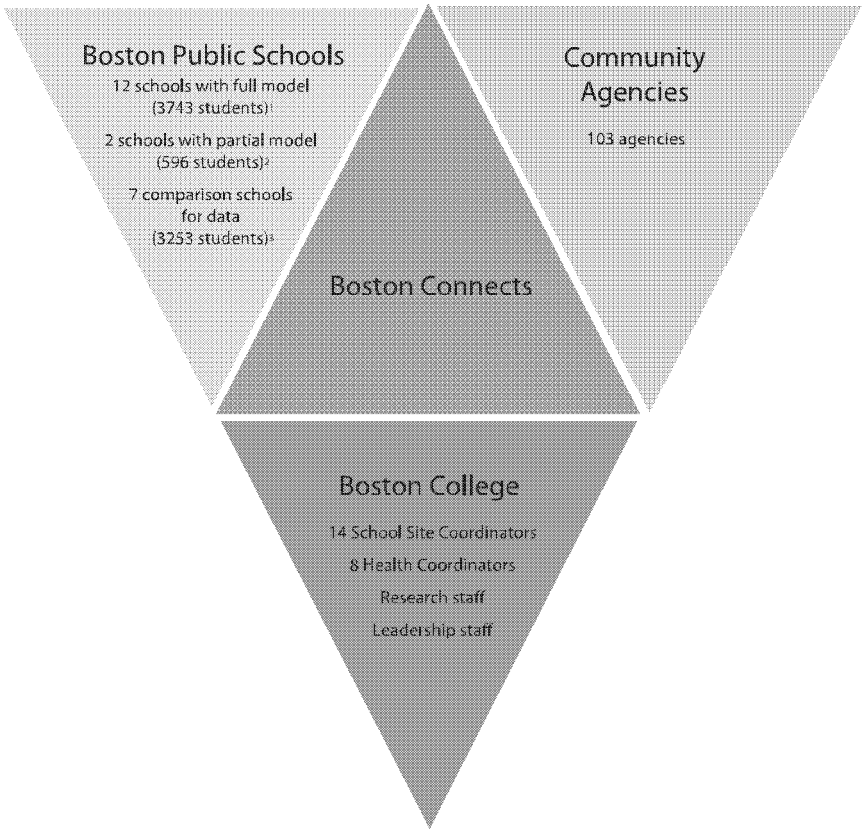
Academic success is predicated on students' readiness to engage and thrive in school.



Boston Connects is a partnership that addresses this full range of students' strengths and needs across the four dimensions. Figure 2 shows the partners that together form Boston Connects: the Boston Public Schools, a wide range of community agencies, and Boston College.

Two clusters within the Boston Public Schools are the focus of the intervention. An additional 7 schools provide comparison data to measure the effects of BCNX. Community agency partners from the beginning have provided many of the services needed to address the strengths and needs of BCNX students and their families. The fulcrum of Boston Connects is Boston College, which developed and delivers the Boston Connects intervention. Boston College is the home of the leadership, implementation, and research and evaluation teams, as shown in Figure 2.

Figure 2.
The BCNX partnership.

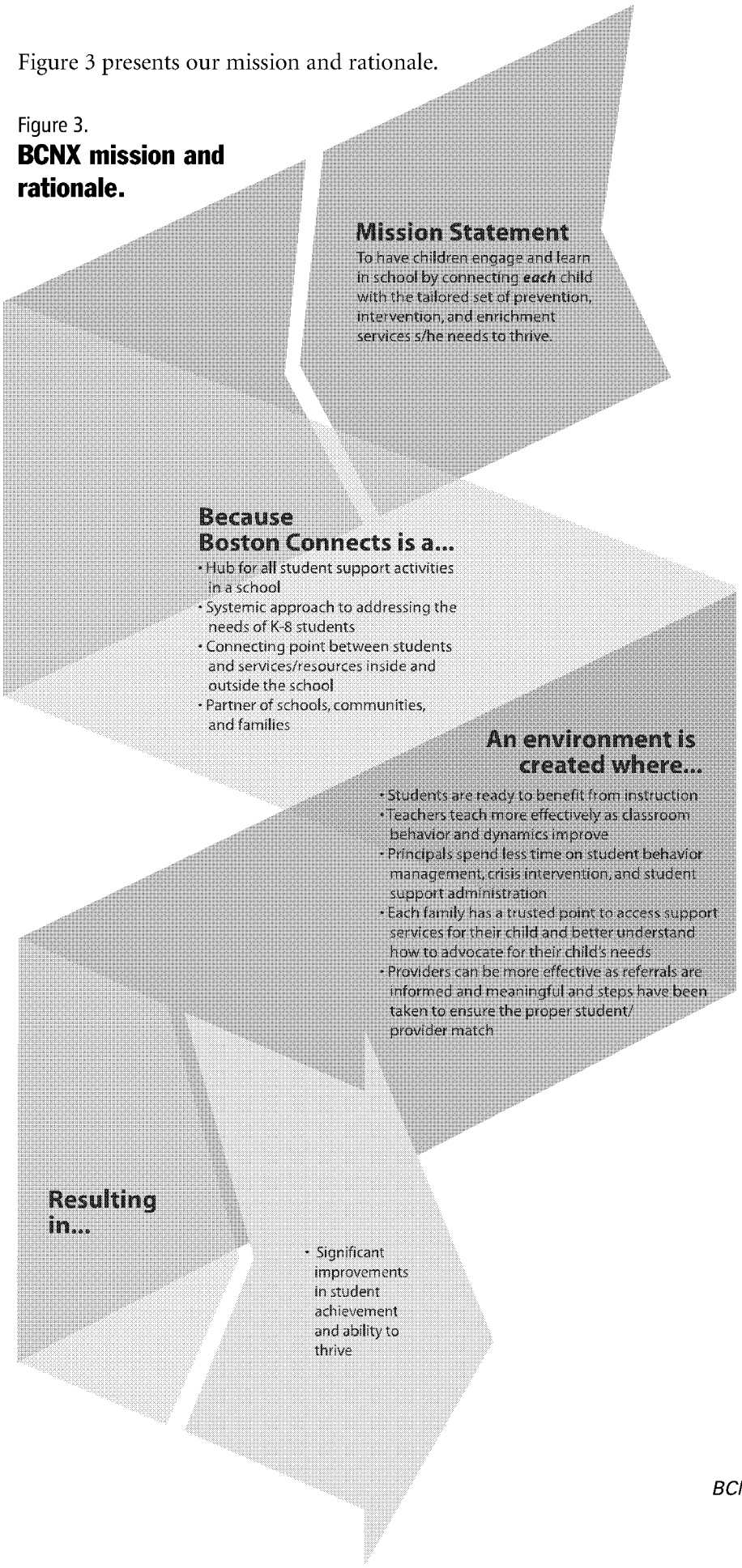


1 Data source: BCNX Student Support Information System database, 2008-09.

2 Data source: Massachusetts Department of Education enrollment data, 2007-08.

Figure 3 presents our mission and rationale.

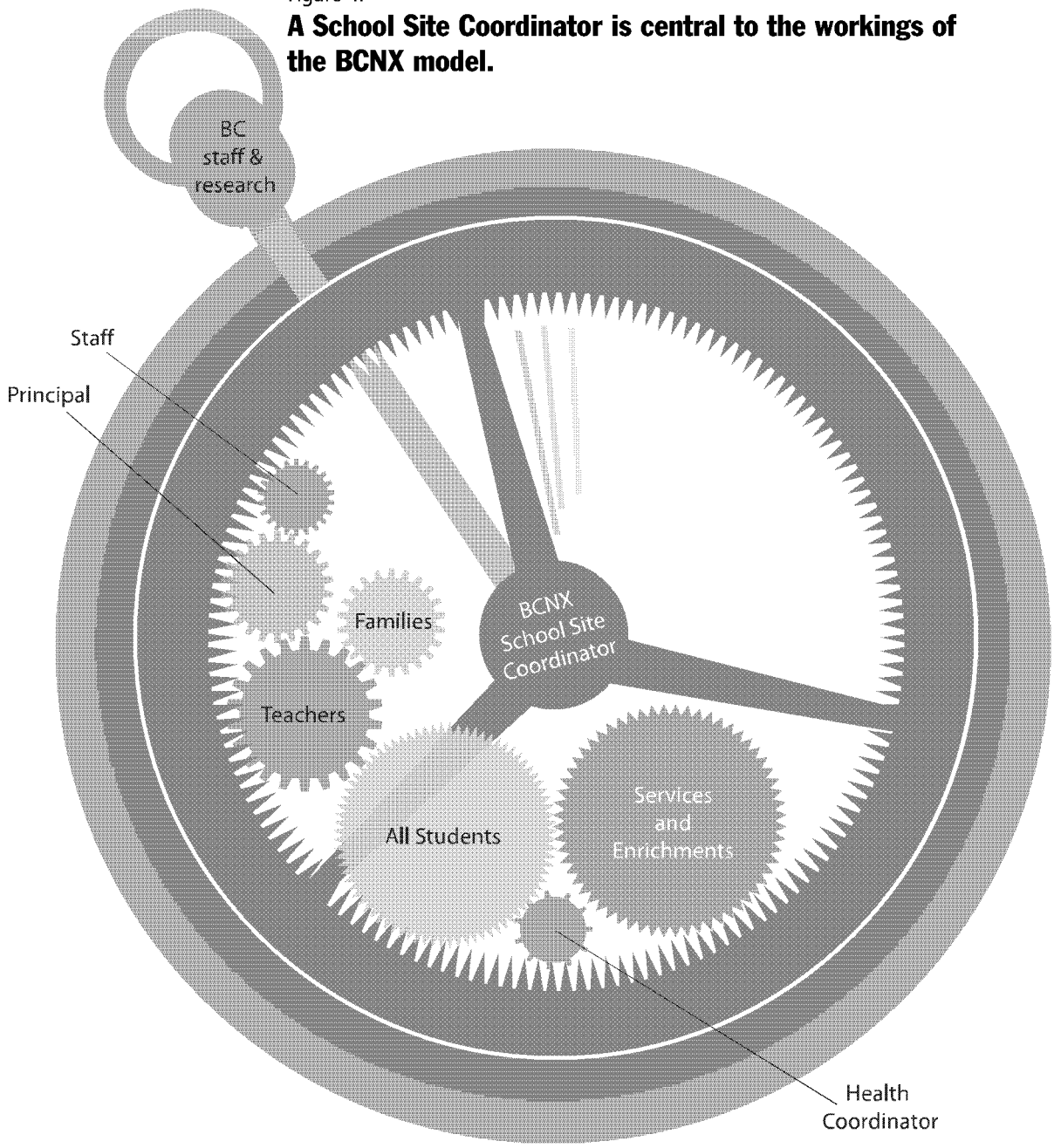
Figure 3.
BCNX mission and rationale.



At the core of the intervention is a full-time Site Coordinator in each school (a Masters-level school counselor or school social worker) who serves as a hub for connecting students to a customized set of services. The Site Coordinator works with the New Balance Foundation Health Coordinator, who delivers a key prevention service: the New Balance Health and Wellness Program. The Site Coordinator collaborates with families, with school faculty and staff, and with the Boston College leadership and research staff in this work. The inner workings of the BCNX model are shown in Figure 4.

Figure 4.

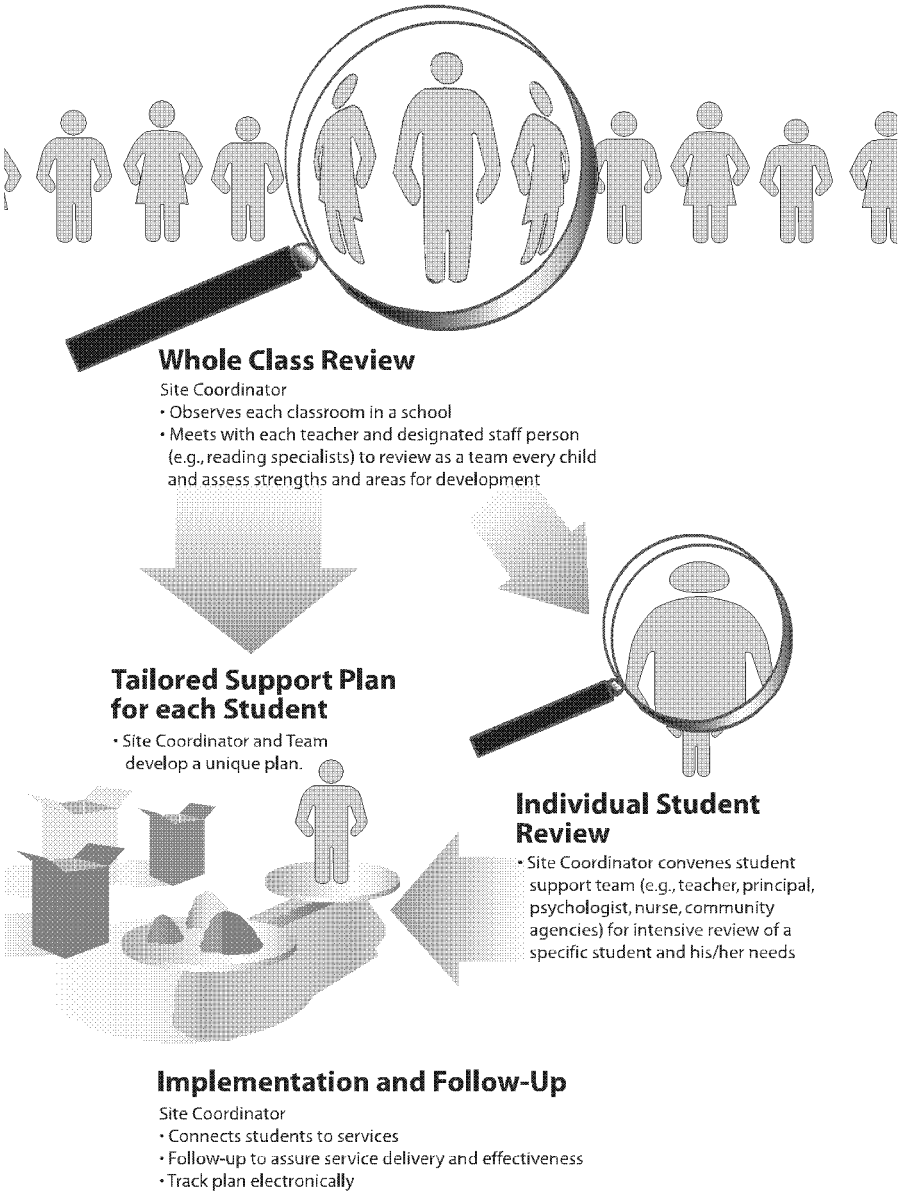
A School Site Coordinator is central to the workings of the BCNX model.



The Site Coordinator works with classroom teachers and others to systematically assess each and every student and develop a customized plan for support. Figure 5 depicts this process.

Figure 5.

Every student is systematically assessed and receives a tailored plan.



As shown in Figure 5, each student in every classroom is reviewed through the Whole Class Review (WCR) process. Site Coordinators and teachers discuss strengths and needs of each student across four domains (academic, social/emotional/behavioral, health, and family). In addition, Figure 5 shows that students with intensive needs also receive an Individual Student Review

"I just got an email that one of my 4th grade students made it into [Program Name]! She has come so far and grown so much that it is remarkable to see her growing into such a smart young woman with direction. I truly believe getting her connected with [Agency Name] has contributed a great deal to her success."

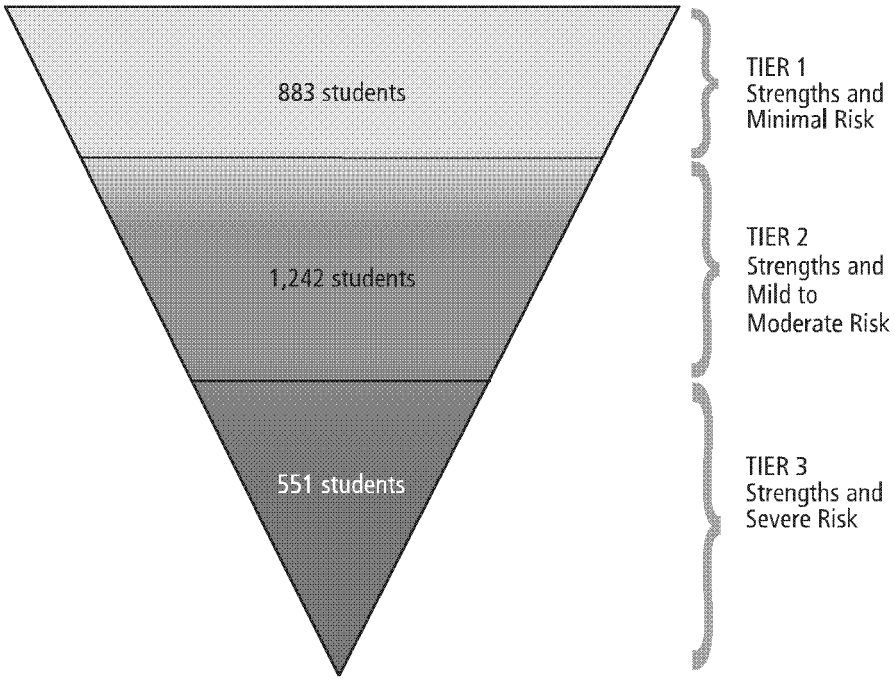
—Site Coordinator

(ISR), where a wider team of professionals discuss goals and strategies. The ISR takes place at meetings of the Student Support Team (SST)—a structure in every Boston public school that brings together a varied group of school staff members (e.g., Educational Team Facilitators, school psychologists, teachers, principals, nurses, and occasional community agency staff members) who play various roles in supporting students. The BCNX Site Coordinator sits on the SST and typically plays a major coordinating role.

As they conduct the WCR, the teacher and Site Coordinator use a triangle tool both to identify the intensity of strengths and needs and to develop a tailored service plan. See Figure 6.

Figure 6.

Tiers in the BCNX triangle, with number of students placed in each tier.

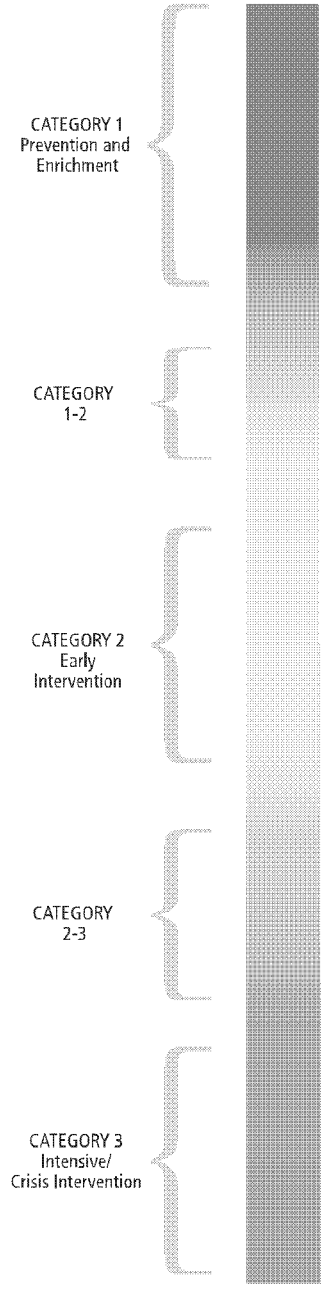


Data source: BCNX Student Support Information System database, 2008-09. Numbers based on Whole Class Reviews. Students who entered the school after the WCR process was completed are not included in this figure, although they were monitored by coordinators and received services when the need arose.

The Site Coordinator connects students to a set of school- and community-based services that are tailored to student- and family-specific strengths and needs. The tailoring is accomplished through different combinations of quantity and type of services from Figure 7, resulting in a unique set of services for each student. *For any single student, regardless of tier, the tailored set might include a combination of prevention and enrichment, early intervention, and/or intensive services.*

Figure 7.

Total number of services delivered to students, by service category.



		# Services Delivered	% of Category	% of Total
CATEGORY 1 Prevention and Enrichment	NBF Health Program	2006	28	18
	NBF Social Competence Program	2006	28	18
	Enrichment	1837	26	16
	Sports/Physical Activity	649	9	6
	BPS-Social Competence	521	7	5
	Before School Programs	128	2	1
	Category Total	**7147**	**100**	**63**
CATEGORY 1-2	After School Programs	636	87	6
	Summer Program	99	13	1
	Category Total	**735**	**100**	**6**
CATEGORY 2 Early Intervention	Tutoring/Academic Support	1045	46	9
	Adult Mentoring	723	32	6
	Small Social Skills Groups	317	14	3
	Behavior Plan/Special Observation	145	6	1
	Classroom Interventions	51	2	0
	Category Total	**2281**	**100**	**20**
CATEGORY 2-3	Family Outreach	261	52	2
	Supplemental Educational Services	194	39	2
	Pre-Rreferral Diagnostic	44	9	0
	Category Total	**499**	**100**	**4**
CATEGORY 3 Intensive/ Crisis Intervention	Mental Health Counseling	385	55	3
	Daily Check-In/Site Coordinators	187	27	2
	Medical Services	54	8	0
	Crisis Intervention	43	6	0
	Special Education Evaluation[1]	34	5	0
	Category Total	**703**	**100**	**6**
	TOTAL # All Services.....	**11,365**	**100**	**100**

Data source: BCNX Student Support Information System database, 2008-09.

1 This category includes only Special Education evaluations resulting from the Whole Class Review or Individual Student Review process.

Table 2 shows first that the mean number of services per student is smallest at tier 1 and largest at tier 3, and the differences between these means for tiers 1 through 3 are all statistically significant. Second, the proportion of students receiving 1-2 services is highest for tier 1 students and lowest for tier 3. Third, the corresponding proportions for 5 or more services are the mirror image: the proportion of students receiving 5 or more services is smallest for tier 1 and largest for tier 3. (See Figure 8.) The total N for this table is smaller than the total number of students in BCNX schools because the table includes only students in grades K-5, and does not include students who entered BCNX schools after the Whole Class Review had been completed.

Table 2.

Proportion of students in each tier receiving different numbers of services, grades K-5.

				1-2 Service		3-4 Services		5+ Services	
	N	Mean[1]	St. Dev.	#	%	#	%	#	%
Tier 1	883	3.22	1.87	376	**43**	289	**33**	218	**25**
Tier 2	1242	3.83	2.22	411	**33**	407	**33**	424	**34**
Tier 3	551	4.58	2.70	125	**23**	185	**34**	241	**44**
No Tier Assigned[2]	353	3.55	1.91	126	36	126	36	101	29
Total	3029	3.76	2.24	1038	34	1007	34	984	33

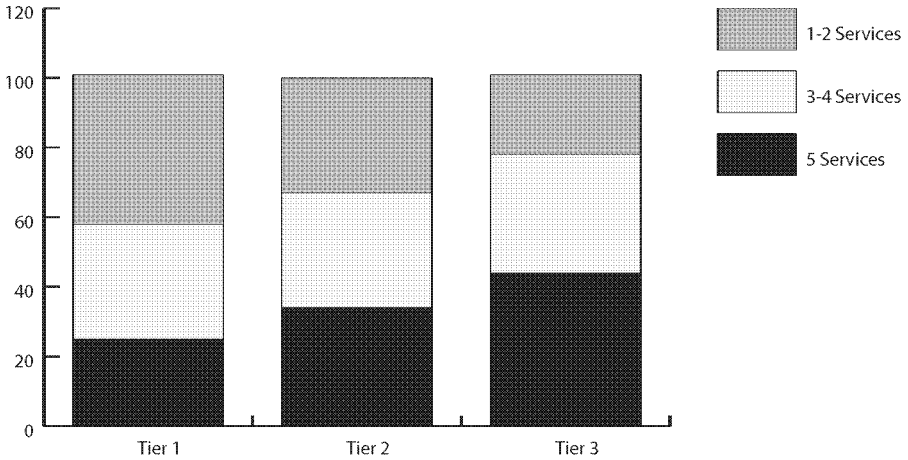
Data source: BCNX Student Support Information System database, 2008-09.

1 All comparisons of mean differences for tiers 1 through 3 are statistically significant ($p<0.05$).

2 These students were assessed in a Whole Class Review but did not have a tier entered in the database.

Figure 8.

Proportion of students in each tier receiving 1-2, 3-4, or 5 or more services.



Data source: BCNX Student Support Information System database, 2008-09.

Student Outcomes

Boston Connects helps students achieve academically

In this section, we present a range of quantitative and qualitative evidence that Boston Connects positively impacts student academic achievement.

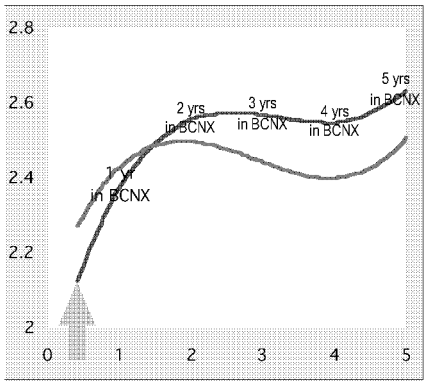
An analysis of students' academic growth over time in report card scores in Reading, Writing and Math shows that even though students in BCNX schools overall start with lower report card scores, the beneficial effects of BCNX change their growth trajectories soon after they enter a BCNX school, leading their academic achievement to surpass that of their counterparts in comparison schools.

Figure 9.

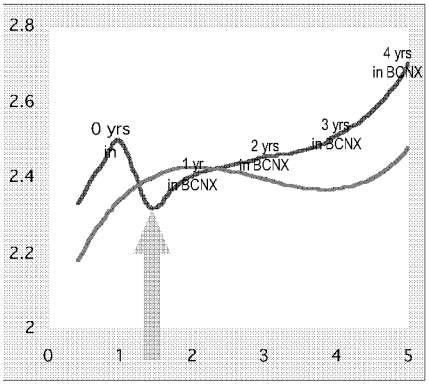
Longitudinal change in Reading, Writing and Math report card scores, BNCX vs. comparison-school students.

READING

In BCNX 1st-5th grade v. Comparison

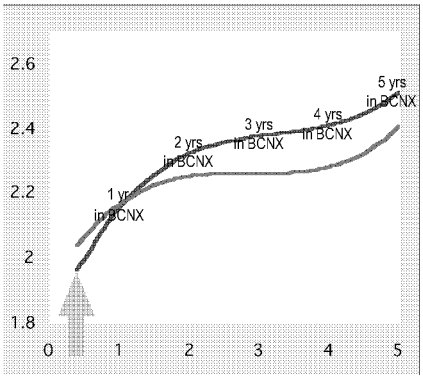


In BCNX 2nd-5th grade v. Comparison

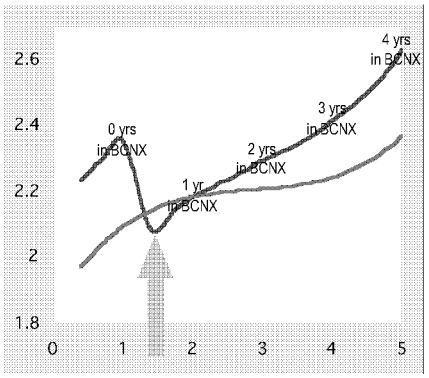


WRITING

In BCNX 1st-5th grade v. Comparison

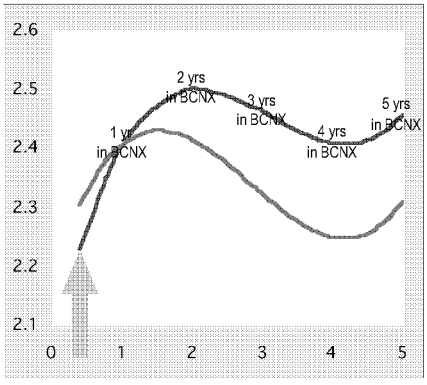


In BCNX 2nd-5th grade v. Comparison

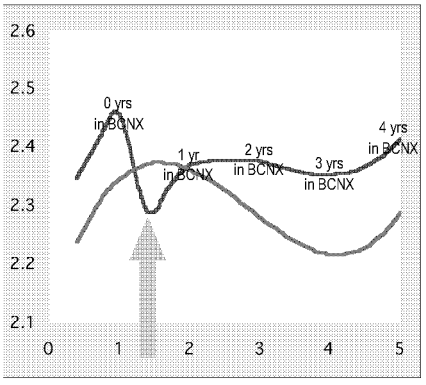


MATH

In BCNX 1st-5th grade v. Comparison

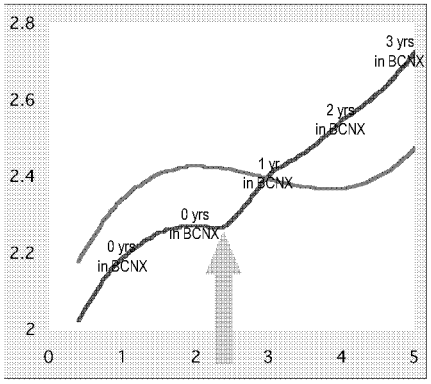


In BCNX 2nd-5th grade v. Comparison

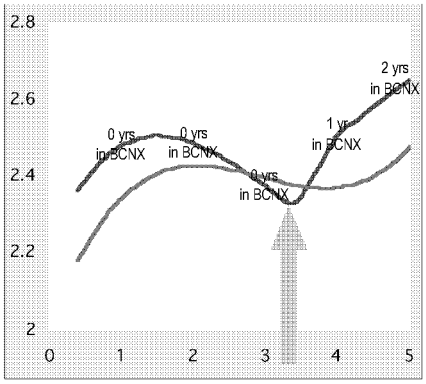


Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

In BCNX 3rd-5th grade v. Comparison



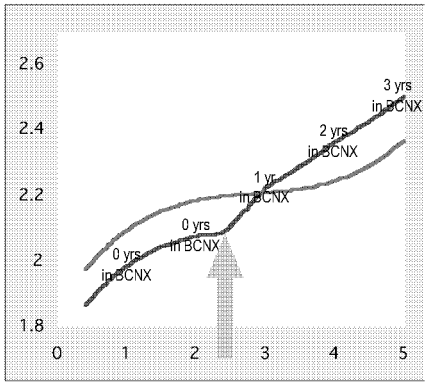
In BCNX 4th-5th grade v. Comparison



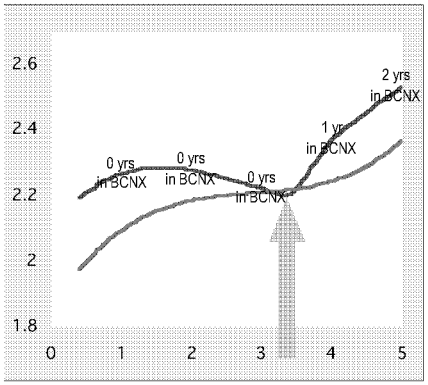
In BCNX 5th grade only v. Comparison

No Effect

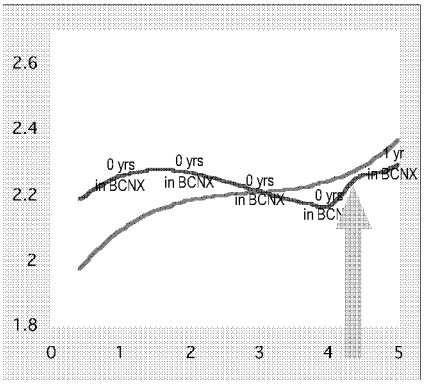
In BCNX 3rd-5th grade v. Comparison



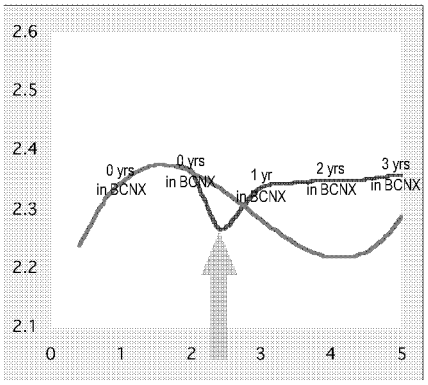
In BCNX 4th-5th grade v. Comparison



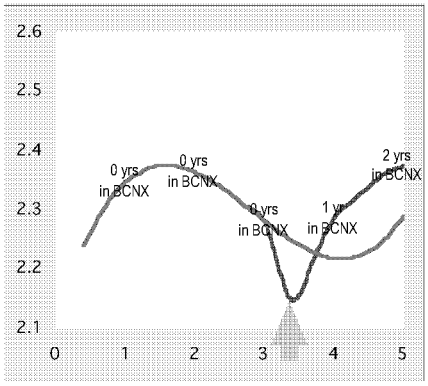
In BCNX 5th grade only v. Comparison



In BCNX 3rd-5th grade v. Comparison



In BCNX 4th-5th grade v. Comparison



In BCNX 5th grade only v. Comparison

No Effect

Figure 9 shows the results of the analysis for all three academic subjects. Each row corresponds to one subject (Reading, Writing or Math). For BCNX students, the different columns of graphs represent different grades of entry into BCNX from grade 1 to 5, followed by continuous enrollment in BCNX through grade 5. For example, in the first column, the blue line represents students who entered BCNX in grade 1 and remained in BCNX through grade 5. These are the students with the largest dosage of BCNX.

Within each graph, the blue line shows the trajectory of the BCNX students' report card scores. The red line shows the trajectory of the comparison students' report card scores. Additionally, each graph contains an arrow marking the entrance into BCNX. For example, in the third column, the arrow denotes entrance into a BCNX school at third grade.

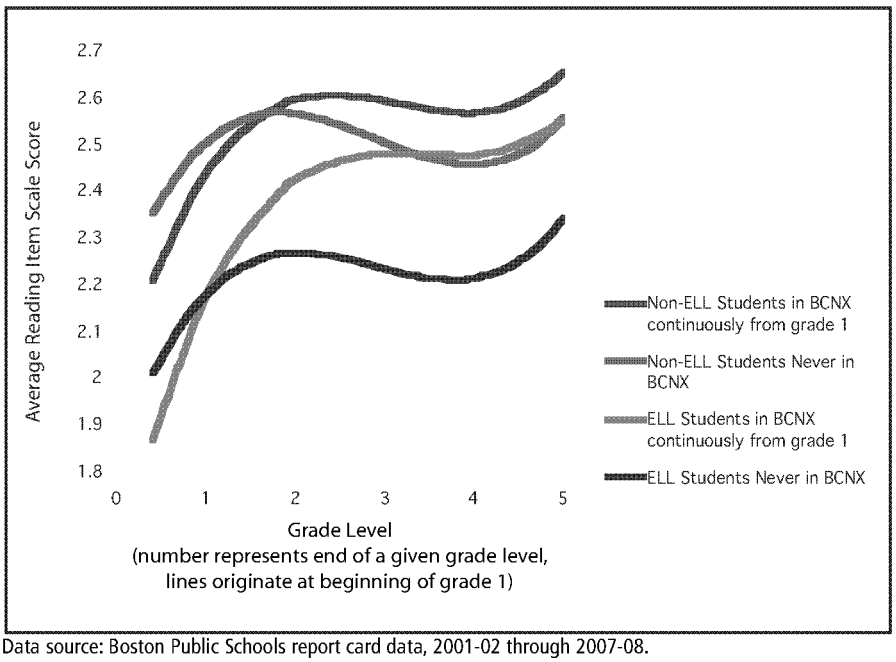
- In all graphs in the matrix, after their initial entrance into a BCNX school, BCNX students had significantly greater improvement over time in report card outcomes in Reading, Writing and Math than students who were never in BCNX. (We did not find any BCNX effects in Reading and Math for those who entered in the fifth grade.)[1]
- The first column—that is, those students who start in first grade and remained in BCNX through fifth grade—shows the largest student dosage of BCNX represented in these graphs (5 years). For these students, the BCNX trajectory starts lower in all subjects than that of the comparison students, but the BCNX trajectory always moves higher by around the end of grade 2, and these differences persist through the end of grade 5. For both groups, scores rise until the start of grade 3, although at a faster rate for BCNX students. After grade 3, scores begin to level off or dip, and then recover for both groups along nearly parallel trajectories.

Figure 10 disaggregates the Reading findings by English Language Limited (ELL) status for students enrolled in BCNX for five years, and for comparison-group students.

1. For students who entered BCNX in grade 5, the rate of change on Writing scores was higher than that of comparison school students, even though they did not surpass comparison school students by the end of the fifth grade.

Figure 10.

Longitudinal change in Reading report card scores, BNCX vs. comparison-school students, disaggregated by ELL status.



Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

- Both ELL and non-ELL students who were in BCNX schools started, on average, with significantly lower Reading scores than their respective comparison students. Both ELL and non-ELL students who were continuously in BCNX schools from grades 1 through 5 had significantly greater improvement over time in Reading scores than students who were never in BCNX.
- The effect of BCNX on both Reading and Writing score improvements was largest for ELL students. By third grade, ELL students in Boston Connects schools demonstrated similar Reading and Writing report card scores to those proficient in English in the comparison schools, **thereby eliminating the achievement gap in Reading and Writing between ELL and non-ELL students.**

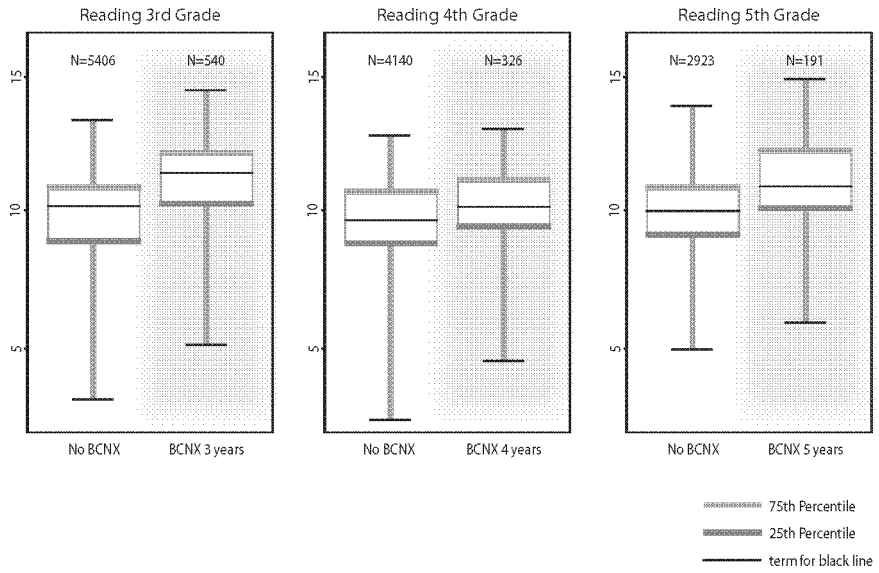
The growth curves compare the rate of improvement for BCNX vs. comparison-group students. A second technique, propensity-score matching, was used to analyze the differences in Reading, Writing and Math report card outcomes between BCNX and comparison-group students at the end of third, fourth and fifth grade.

- In almost all cases, BCNX has a statistically significant positive impact on report card scores in Reading, Writing, and Math. The sole exception to this pattern is Reading scores at the end of fourth grade, where there was no significant difference between BCNX and comparison group. **With this sole exception, in all three areas at all of these grade levels, the BCNX students had significantly higher report card scores on average than comparison-group students.**
- Beyond statistical significance, these BCNX impacts have practical significance. The BCNX intervention appears to move the average (median) student up to or near the 75th percentile, and the students at the 25th percentile up to or near average.

Figures 11-13 illustrate these findings.

Figure 11.

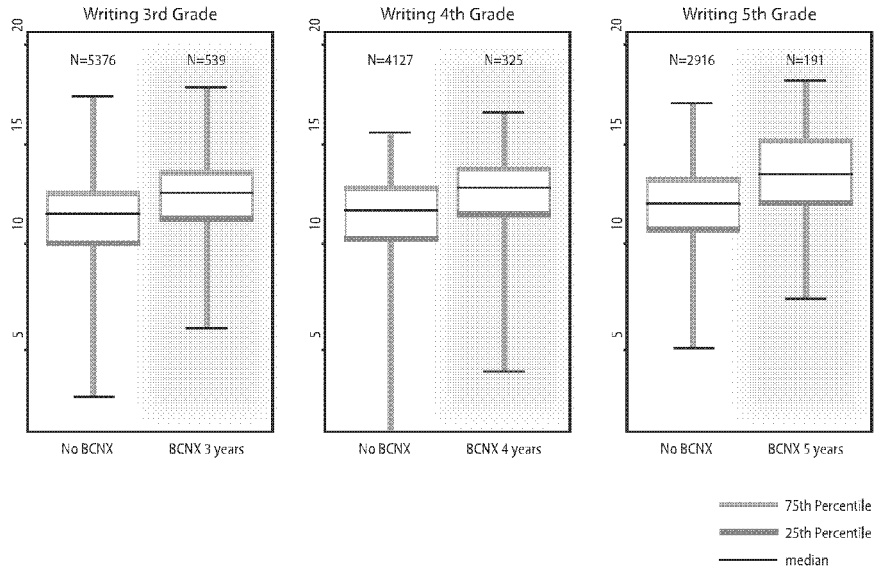
Reading report card scores, BNCX vs. comparison-school students.



Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

Figure 12.

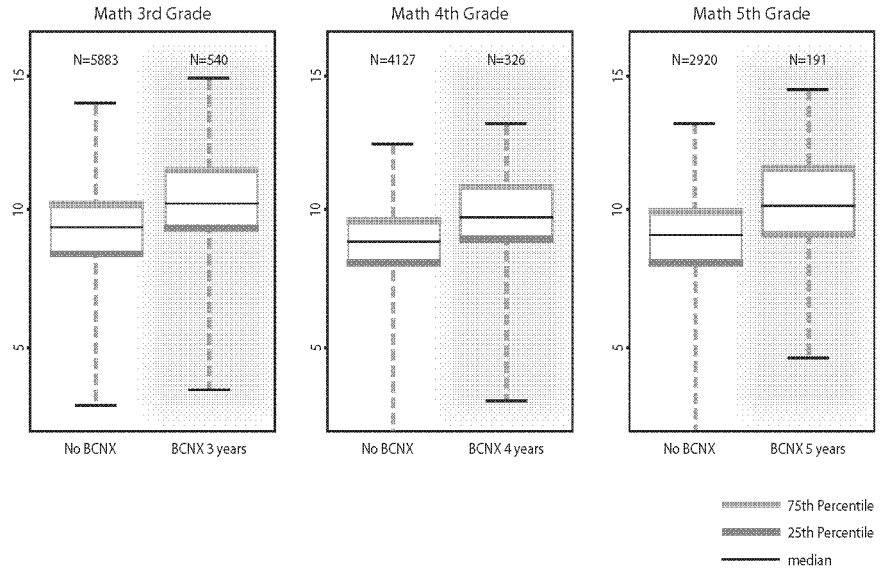
Writing report card scores, BNCX vs. comparison-school students.



Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

Figure 13.

Math report card scores, BNCX vs. comparison-school students.



Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

In addition to its impact on report card scores, BCNX has a longer-term positive impact on students' state test scores. In this section we examine the effects of BCNX on Massachusetts Comprehensive Assessment System scores (MCAS) in English Language Arts (ELA) and Mathematics (Math). MCAS is a series of high-stakes tests administered to all students and used to determine Annual Yearly Progress as part of the No Child Left Behind Act (NCLB).

For interpretive purposes, it is worth considering that Massachusetts uses the results of the grade 10 tests in ELA and Math to determine high school graduation. This high-stakes use of MCAS results generates pressure to prep students for the tests—pressure that is felt across all of the grades, and is further exacerbated by local newspaper coverage of results. This test preparation also includes programs outside school designed to boost these scores (e.g., supplemental educational services, SES, defined by the NCLB Act). The potential for BCNX to boost scores above and beyond this intense universal preparation is limited.

Table 3 reports comparative results on the MCAS for grades 3 through 8 for students in BCNX and comparison schools. The analysis for grades 6 through 8 follows students from BCNX and comparison schools after leaving the elementary grades to determine the longer-term impacts of BCNX. The numbers in Table 3 are effect sizes—statistical indicators of the size of the impact of BCNX. That is, the effect sizes indicate how large the MCAS score differences are between the BCNX and comparison groups.

We estimated BCNX intervention effects by dose (a variable simply indicating whether or not a student has ever been enrolled in a BCNX school) and dosage (which reflects the total number of years a student has been in a BCNX school). Bolded/italicized effects are statistically significant.

Figures 14 and 15 show the BCNX effect sizes for MCAS scores in ELA and Math respectively. Effect sizes for poverty are also in the figures in order to directly compare the beneficial effects of BCNX to the harmful effects of poverty (free lunch). Note that the effect sizes for poverty are negative and are almost always larger in absolute size than the beneficial effects of being in BCNX. Note also that there is no "dose" or "dosage" for poverty. Together, the table and figures tell a story:

- With two exceptions, results for students in grades 3 through 5 do not show significant positive impacts for BCNX.
- Nonetheless, after grade 5, when students have left the BCNX intervention and are in middle school, a long-term BCNX treatment effect emerges. All BCNX treatment effects on MCAS scores are positive, and half are statistically significant, including most of the effects for dosage. (We return to this below.)
- Furthermore, when compared to the negative effects of poverty (as indicated by the free lunch variable in Figures 14 and 15), the positive effects of BCNX on MCAS scores in grades 6-8 are noteworthy. The bars in these graphs labeled "dosage" take into account all the years students were enrolled in BCNX, and represent the average yearly effect of being in BCNX. These average yearly beneficial effects of BCNX on MCAS scores—long-term effects after leaving the intervention—were between

47% and 66% as large as the negative effects of poverty on the ELA exam, and between 45% and 131% on the math exam.

- In almost all cases, the effects of dosage exceed dose, indicating that the effects of being in a BCNX school on MCAS are greatest for students spending the most time in the intervention. The effect sizes for dosage indicate the average impact of being in BCNX on MCAS scores. These effects on students' MCAS scores are cumulative. For example, for students in grade 6 who had been in the BCNX intervention for five years, the average effect size is over .20, indicating moderate effects of the intervention that exceed effects found for similar interventions that focused on children in poverty. For details, see the long report.

Table 3.

Effect sizes:

Effect on MCAS scores of being in a BCNX school for at least one year (dose) and length of time in a BCNX school (dosage).

English Language Arts			Math		
	Dosage	Dose		Dosage	Dose
Grade 3	-0.07*	-0.06*	Grade 3	0.05*	0.04
Grade 4	0.03	0.05*	Grade 4	-0.04	0.00
Grade 5	0.02	-0.03	Grade 5	-0.03	-0.01
Grade 6	0.13*	0.07	Grade 6	0.14*	0.09*
Grade 7	0.11*	0.05	Grade 7	0.17*	0.10*
Grade 8	0.08	0.05	Grade 8	0.09*	0.04

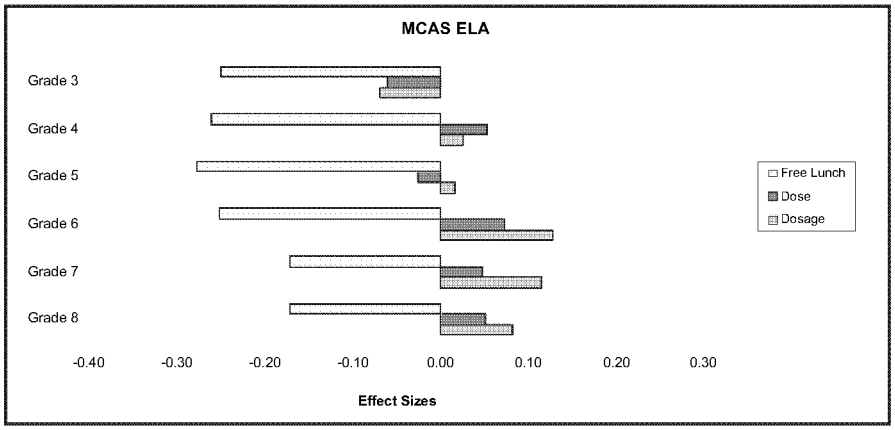
*Effect size is statistically significant

Note: An effect size is a measure of the impact of the BCNX intervention on MCAS scores. A positive effect size indicates positive impacts on MCAS scores, and a negative effect size indicates a negative impact on MCAS scores.

Figures 14 & 15

Effect sizes:

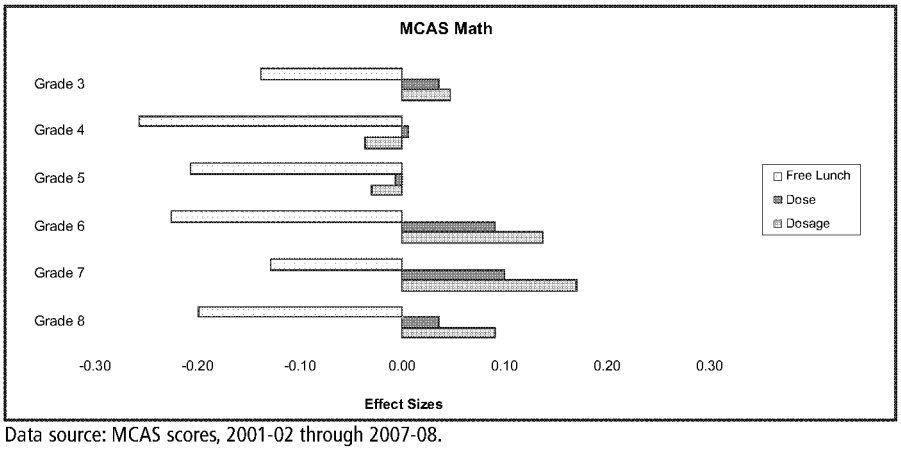
Effect on MCAS scores of (a) poverty, (b) being in a BCNX school for at least one year (dose), and (c) length of time in a BCNX school (dosage), ELA scores.



Data source: MCAS scores, 2001-02 through 2007-08.

Effect sizes:

Effect on MCAS scores of (a) poverty, (b) being in BCNX for at least one year (dose), and (c) length of time in BCNX (dosage), Math.



Data source: MCAS scores, 2001-02 through 2007-08.

Table 3 and Figures 14-15 show a beneficial effect of BCNX on MCAS scores, but not until middle school. There are at least two possible explanations for the delayed appearance of the positive effect. First, the BCNX intervention in elementary school may be focused not directly on MCAS but on issues of greater long-term importance, leading to later achievement. Second, as seen above, BCNX students start at a disadvantage academically, which takes time to overcome.

The numbers tell an encouraging story. Both report card scores and MCAS scores show a significant beneficial impact of BCNX, often for students at greatest risk. What story do educators tell?

To gain a deeper understanding of how educators see the impact of BCNX, we conducted interviews with principals (N=12) and a stratified random sample of teachers (N=17), and drew a sample of Site Coordinators' weekly written reports (48 narratives across the 14 Site Coordinators at 12 schools). A rigorous data analysis using the qualitative software Atlas-ti confirms the positive impact on academic achievement. (See the full report for details on methodology and weight of findings.)

All principals reported that BCNX had an impact on academic achievement in their schools. They identified two key reasons for the impact:

- **BCNX provides enhanced enrichment services.** Many specified that services like afterschool programs, in-class tutoring, and extra resources provided by BCNX contribute to increased academic achievement.

  "Having those enrichment activities goes a long way in helping them look at the five hours they spend in the classroom focused on academics. It allows them to have that other outlet and they see the school as part of that."

  –Principal

- **BCNX addresses multiple levels of student need.** Others specified that BCNX impacts student academic achievement because it meets the needs of the whole child (social, emotional, physical, etc.), which for these principals also included addressing non-academic barriers to learning.

"It's the hierarchy of need. If my basic needs are met then I'm going to be able to do my work, so if my home life is better, if I can talk to someone about my problems, if there's food on my table at night, then I can do my work. Then all of those things are part of the role that [the Site Coordinator] has created here. She is making sure that people have what they need in so many different ways."

–Principal

A majority of the principals interviewed reported an association between Boston Connects and MCAS scores. Despite the quantitative findings, most believed that Boston Connects positively impacts current MCAS scores. Consistent with the quantitative findings, one principal felt that an impact will be seen in the future. Some of these principals felt that the help BCNX provides in addressing non-academic barriers to learning leads to improved test-taking skills.

"… I think that if we're providing the support for a student to experience success as a learner, and both academically, emotionally and socially that it ultimately will impact our MCAS scores, particularly with [respect to] stamina."

–Principal

In summary, the qualitative analysis confirms the quantitative finding that the BCNX intervention positively impacts academic achievement.

Boston Connects helps students thrive

Beyond academic achievement, Boston Connects helps students to thrive across a host of other important outcomes that may contribute to school success and life chances. Indicators of these outcomes are classroom behavior, effort at learning, academic work habits, and health knowledge and behavior.

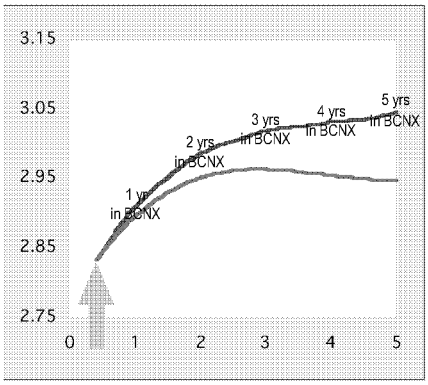
An analysis of students' academic growth over time in report card scores in Behavior, Effort and Work Habits shows that after entry in a BCNX school, students surpass their counterparts in comparison schools in these three areas of thriving. See Figure 16, and see above for the interpretation of these figures.

Figure 16.

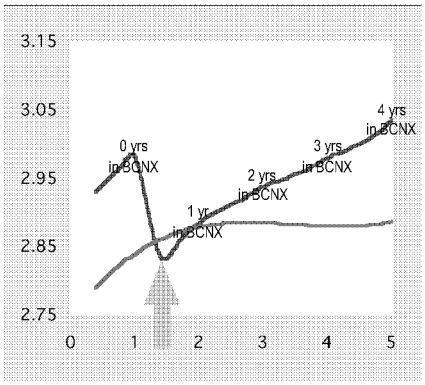
Longitudinal change in Behavior, Effort and Work Habits report card scores, BNCX vs. comparison-school students.

BEHAVIOR

In BCNX 1st-5th grade v. Comparison

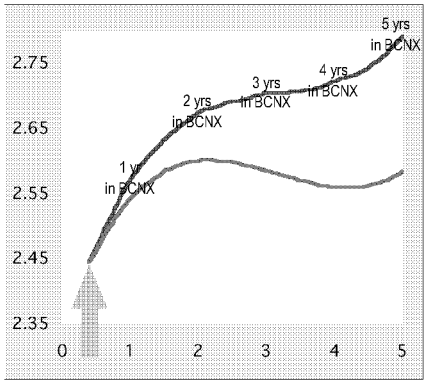


In BCNX 2nd-5th grade v. Comparison

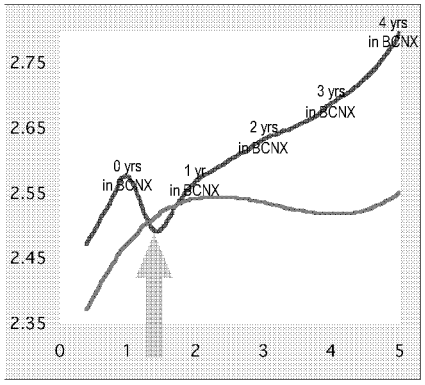


EFFORT

In BCNX 1st-5th grade v. Comparison

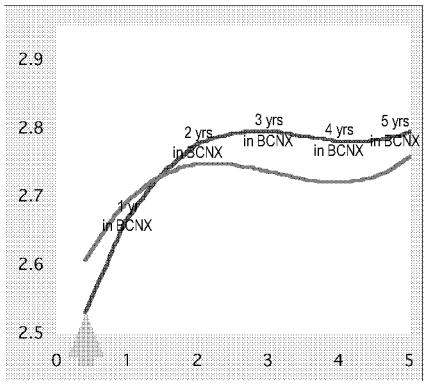


In BCNX 2nd-5th grade v. Comparison

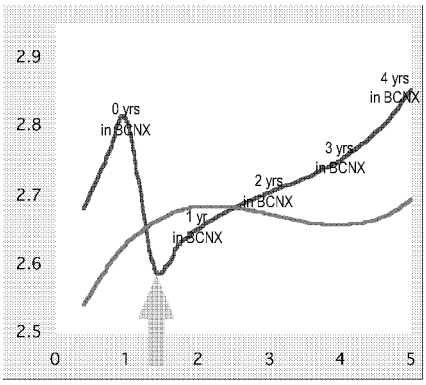


WORK

In BCNX 1st-5th grade v. Comparison

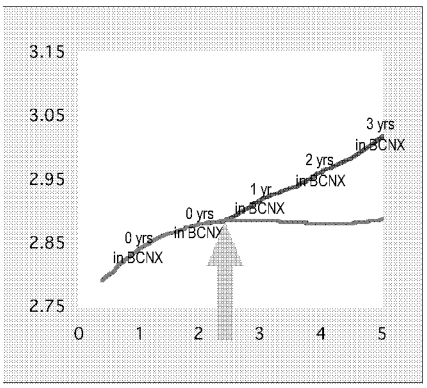


In BCNX 2nd-5th grade v. Comparison

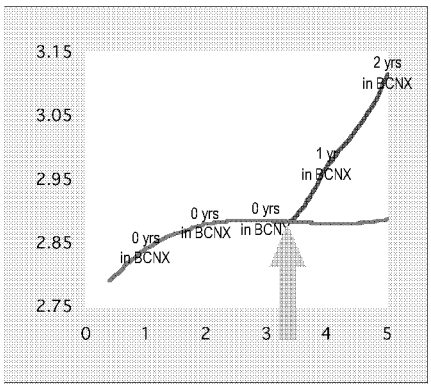


Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

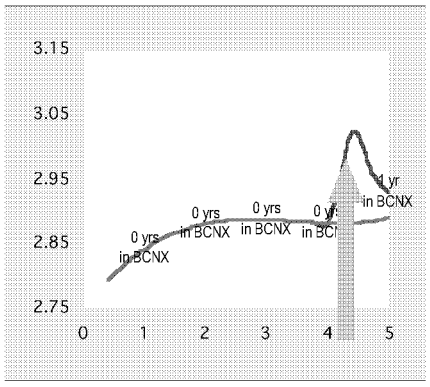
In BCNX 3rd-5th grade v. Comparison



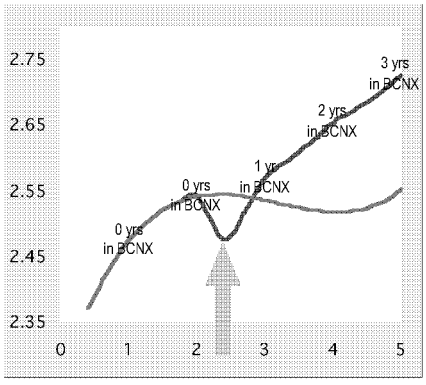
In BCNX 4th-5th grade v. Comparison



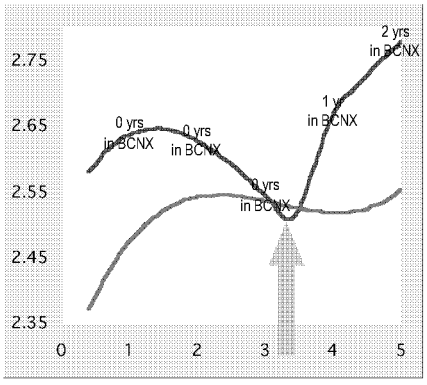
In BCNX 5th grade only v. Comparison



In BCNX 3rd-5th grade v. Comparison



In BCNX 4th-5th grade v. Comparison



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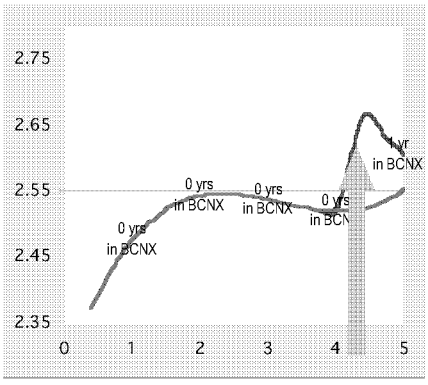
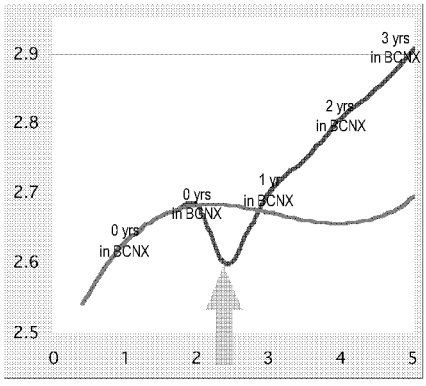
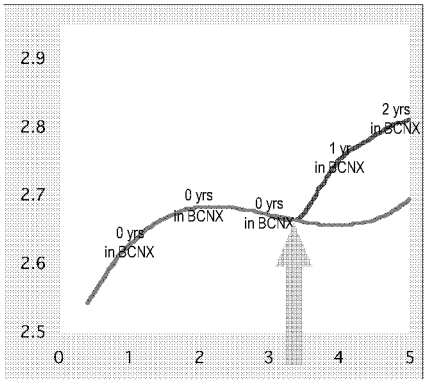


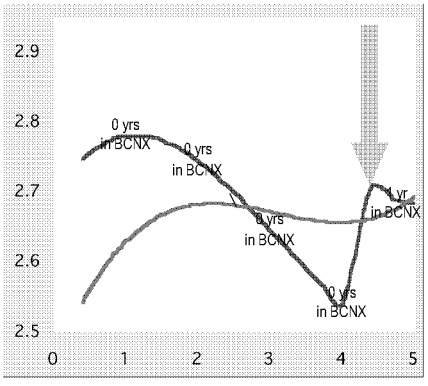
In BCNX 3rd-5th grade v. Comparison



In BCNX 4th-5th grade v. Comparison



In BCNX 5th grade only v. Comparison



- In all Behavior graphs, after their initial entrance into a BCNX school, BCNX students had significantly greater improvement over time in report card outcomes than students who were never in BCNX.
- The first Behavior graph shows that the largest student dosage of BCNX (5 years) results in a trajectory that immediately begins to increase more rapidly and steeply than that of the comparison group, and the difference persists through the end of grade 5. Moreover, although the comparison students' Behavior scores begin to level off around 3rd grade, the BCNX students' trajectory continues to rise.
- In all Effort and Work Habits graphs in the matrix, after their initial entrance into a BCNX school, BCNX students had significantly greater improvement over time in report card outcomes in Effort and Work Habits than students who were never in BCNX.

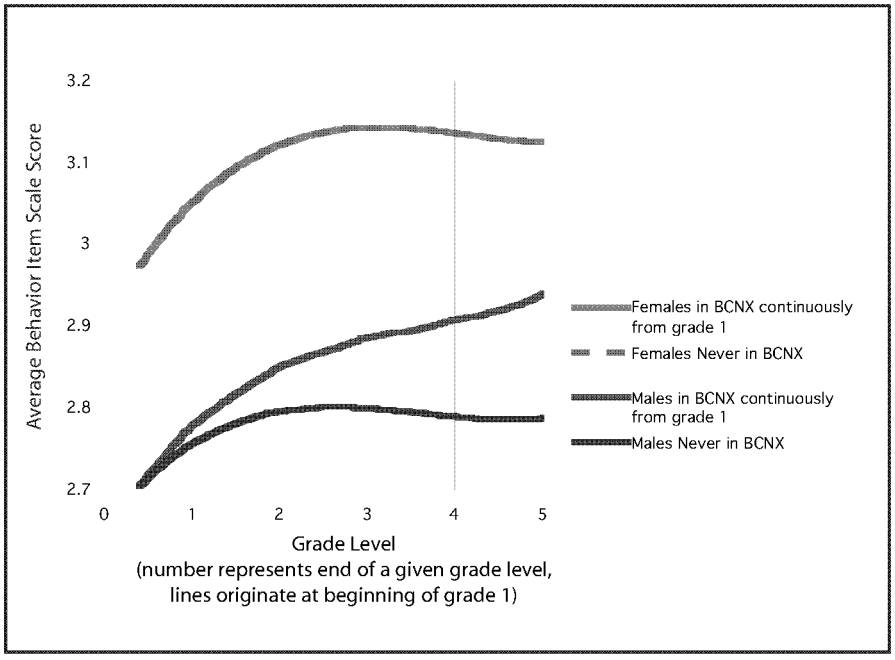
As in the academic achievement section, the growth curves for outcomes related to thriving compare the rate of improvement for BCNX vs. comparison-group students. A second technique, propensity-score matching, was used again for the indicators of thriving.

- In almost all cases, BCNX has a statistically significant positive impact on report card scores in Behavior, Work Habits and Effort at the end of grades 3, 4 and 5. The exceptions to this pattern are Behavior at the end of grades 4 and 5, and Work Habits at the end of grade 5, where there were no significant differences between BCNX and comparison group. **With these exceptions, in all three areas at all of these grade levels, the BCNX students had significantly higher report card scores on average than comparison-group students.**

Figure 17 disaggregates the Behavior findings by gender for students enrolled in BCNX for five years, and for comparison-group students.

Figure 17.

Longitudinal change in Behavior report card scores,
BNCX vs. comparison-school students, disaggregated by gender.



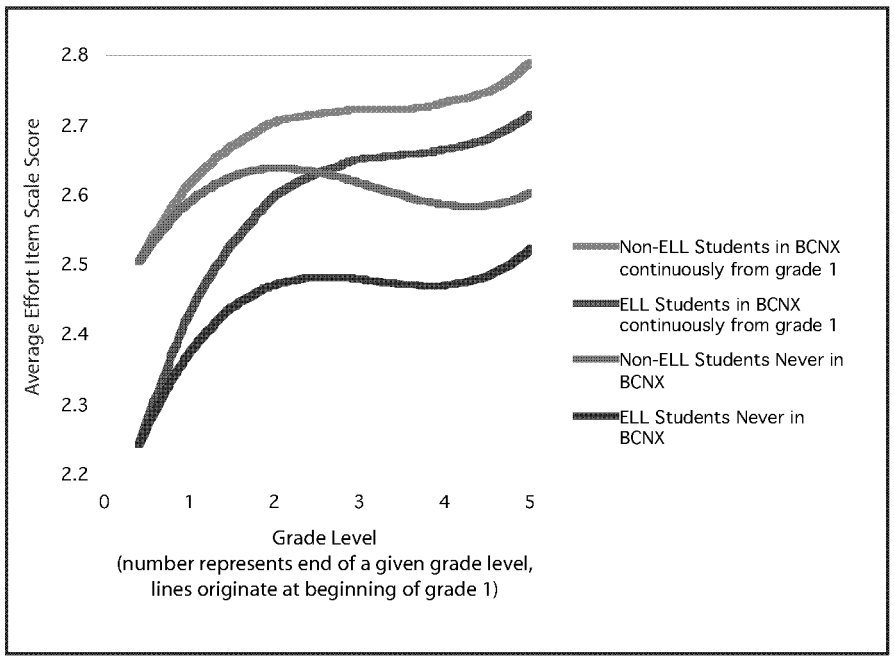
Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

- Figure 17 shows that that there is no BCNX effect for Behavior for female students. The female BCNX and comparison lines fall basically on top of each other – see dotted line. However, boys who were continuously in BCNX schools from grades 1 through 5 had significantly greater improvement over time in Behavior scores than boys who were never in BCNX. That is, the treatment effects were largest for boys, a group generally at greatest risk for behavior problems.

Figure 18 disaggregates the Effort findings by English Language Limited (ELL) status for students enrolled in BCNX for five years, and for comparison-group students.

Figure 18.

Longitudinal change in Effort report card scores,
BNCX vs. comparison-school students, disaggregated by ELL status.



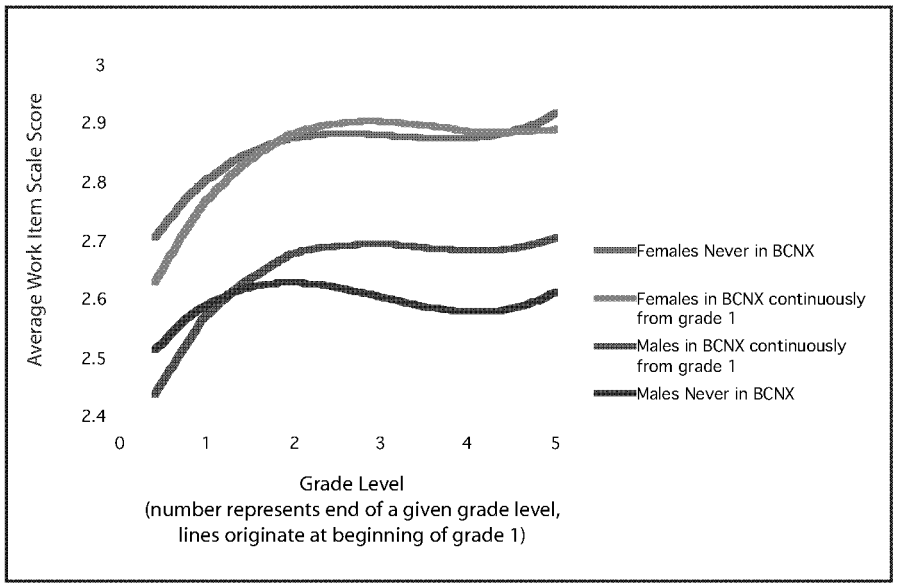
Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

- Both ELL and non-ELL students who were continuously in BCNX schools from grades 1 through 5 had significantly greater improvement over time in Effort scores than students who were never in BCNX. Notably, the effect of BCNX on Effort score improvements was largest for ELL students. In fact, by third grade the Effort of ELL students in BCNX schools surpassed the Effort of those proficient in English in the comparison schools, eliminating the gap in Effort scores between ELL and non-ELL students.

Figure 19 disaggregates the Work Habits findings by gender for students enrolled in BCNX for five years, and for comparison-group students.

Figure 19.

Longitudinal change in Work Habits report card scores,
BNCX vs. comparison-school students, disaggregated by gender.



Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

- Both girls and boys who were in BCNX schools started, on average, with significantly lower Work Habits scores than their respective comparison students. Both girls and boys who were continuously in BCNX schools from grades 1 through 5 had significantly greater improvement over time in Work Habits scores than students who were never in BCNX. Notably, the effect of BCNX on Work Habits score improvements was largest for boys.

Once again, the quantitative analysis tells an encouraging story. BCNX has a significant positive impact on indicators of students' thriving in school. We turn again to the story that educators tell.

All principals agreed that BCNX impacts students' classroom behavior. In their explanations of how BCNX impacted classroom behavior, principals focused on two major mechanisms:

- BCNX provides direct support to individual students, which included one-to-one Site Coordinator check-ins with students or small social skills groups.

"[The Site Coordinator] helps with giving kids breaks … trying to work with kids before they escalate to a point where they can't de-escalate on their own regularly or monitor themselves. She's been a great help there, as well as setting up counseling sessions during school."

–Principal

- BCNX provides behavior and discipline supports, both inside and outside the classroom.

"[Site Coordinators] help with teachers strategizing what to do in the classroom, and they really help monitoring those more challenging students."

–Principal

Some teachers told stories of transformations in student behavior as a result of the work of BCNX. While some of these transformations reduced disruptive behavior, others resulted from an effort to build on students' strengths, promoting engagement.

"… [One of my students] had been through a horrendous family scene…and the class scene was extremely difficult with him. He could not maintain sitting in a seat, he was out of his seat all day, constantly talking out, very hyper vigilant to his environment, and [Site Coordinator Name] was my savior. She worked with that boy every morning …She put certain things in place, she was also a liaison [with the family]... She has been instrumental, and everyone tells me he's unbelievably changed."

–Teacher

"A child got involved in [an arts group] in one of the lunch enrichment programs, and it was a very soft spoken girl, and she shined in the enrichment group, and then started talking in class. Her mother enrolled her in an arts summer program, and she said the girl really came out of her shell."

–Teacher

Additionally, teachers mentioned that the work of the Site Coordinator has helped students build more positive relationships with peers in the classroom, which in turn can lead to increased time on academic tasks.

"[One student] had a history of extreme bullying … and through the support systems that we've been able to give at the school, she now, really, is making conscious efforts to be a better friend with people, she's completing her work, she's made huge academic gains in the past few months, and she's just able to stay on task."

–Teacher

Both quantitative and qualitative findings provide evidence that Boston Connects helps students to thrive in another area that may contribute to school success and life chances: health knowledge and behavior.

This year, BCNX improved its student survey for measuring change in health knowledge and behavior. We revised and/or developed questions that more closely reflect the program. As a result, we are able to more accurately measure student change in these areas.

Exposure to the New Balance Foundation Health Program makes a significant difference in students' health knowledge and behaviors as measured by the pre- and post-tests in the annual student survey. Students demonstrated significantly higher Well-being Knowledge. In addition, students reported significantly lower Unhealthy Nutrition Behavior. In both of these areas, students' post-test scores were significantly higher than their pre-test scores for grades 4 and 5, as shown in Table 4.

Table 4.

Health knowledge and reported behavior, pre-test vs. post-test, grades 4 and 5.

	Mean		Mean Diff (Post- vs. Pre-)	t	p-value
Nutrition Efficacy	2.07	2.11	0.05	1.77	0.078
Unhealthy Nutrition Behavior[1]	3.13	3.21	0.08	*3.61**	0.000
Healthy Nutrition Behavior	2.54	2.53	-0.01	-0.30	0.766
Physical Activity Behavior	2.48	2.48	0.00	0.10	0.923
Screen Time	3.56	3.62	0.06	1.54	0.125
WellBeing Knowledge	12.78	14.06	1.32	*7.85**	0.000

Data source: BCNX student health survey, 2008-09.

*Statistically significant.

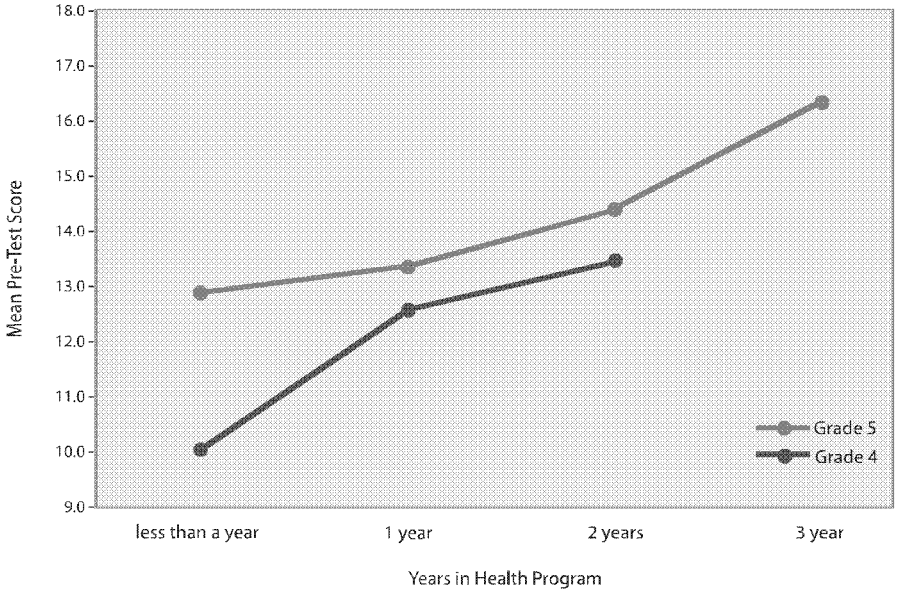
1 Higher scores for "Unhealthy Nutrition Behavior" represent higher reported avoidance of unhealthy choices.

Further, there is evidence that students enrolled in the New Balance Foundation Health Program longer outperformed students enrolled for a shorter periods on both the pre-test and post-test in the area of Well-being Knowledge. In other words, length of exposure to the program was a significant factor that positively influenced students' knowledge of the reasons behind various kinds of healthy nutrition and physical activity choices (e.g., the reasons we should eat fruits and vegetables, or the reasons we warm up before physical activity). As Figures 20-21 show, on average, the longer students were exposed to the program, the higher their pre-test and post-test scores in Well-being Knowledge were.

Figure 20.

Pre-test scores in Well-being Knowledge:

Effect of years in the New Balance Health Program.

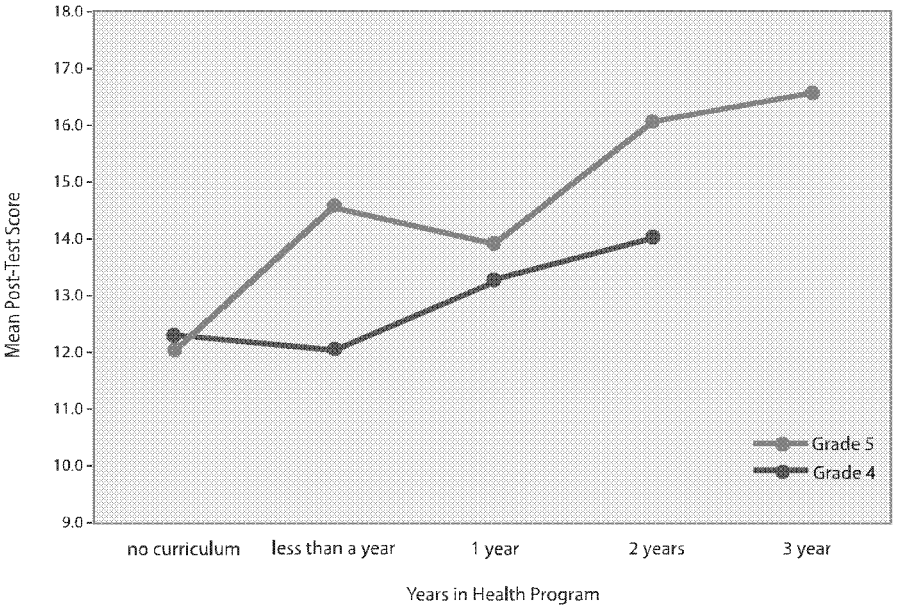


Data source: BCNX student health survey, 2008-09. Non-estimable means are not plotted.

Figure 21.

Post-test scores in Well-being Knowledge:

Effect of years in the New Balance Health Program.



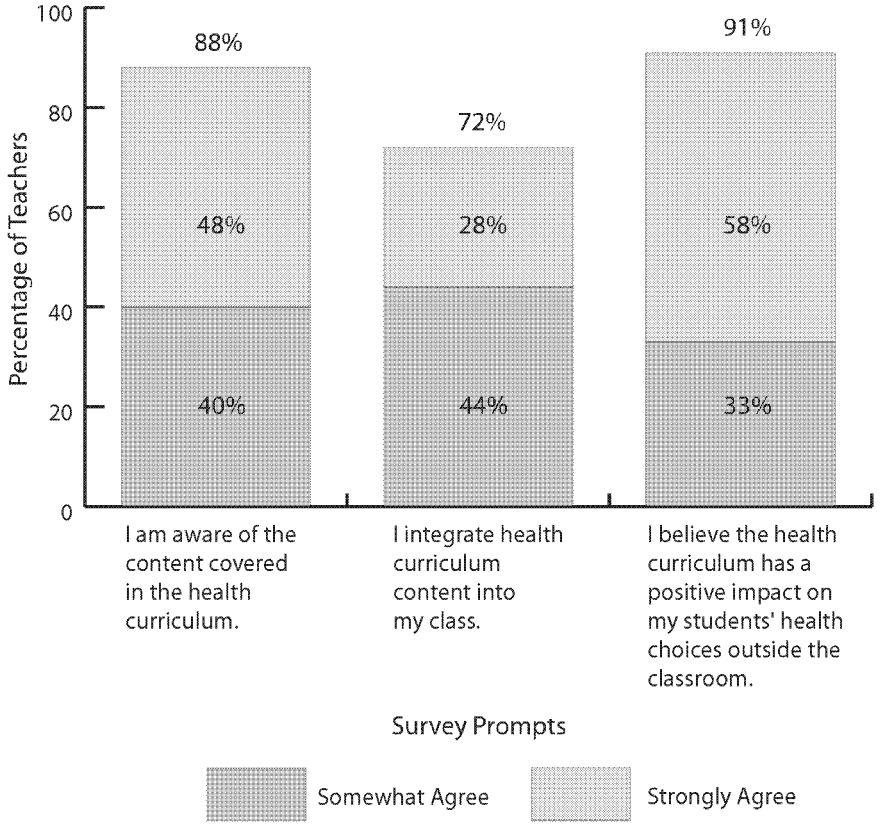
Data source: BCNX student health survey, 2008-09. Non-estimable means are not plotted.

It is important to note that students receive the health program for approximately four months each year, then receive no further exposure before the following year's pre-test. Therefore, the pre-test results on Well-being Knowledge demonstrate that the knowledge gains are persistent from one year to the next: despite this gap in time, students do not seem to lose the knowledge they gained the previous year.

In the electronic survey we conducted, teachers were asked about the New Balance Foundation Health Program. Teachers report high levels of engagement with the health and wellness program: they know the content covered, they integrate it into their classes, and they believe that the curriculum has a positive impact on students' healthy choices (see Figure 22). In addition to reporting that they are engaged with the program, teachers report that they perceive an impact on students' healthy food choices, comments on food choices, and comments on exercise and physical activity; they report lower levels of agreement that Boston Connects impacts comments on body image (see Figure 23).

Figure 22.

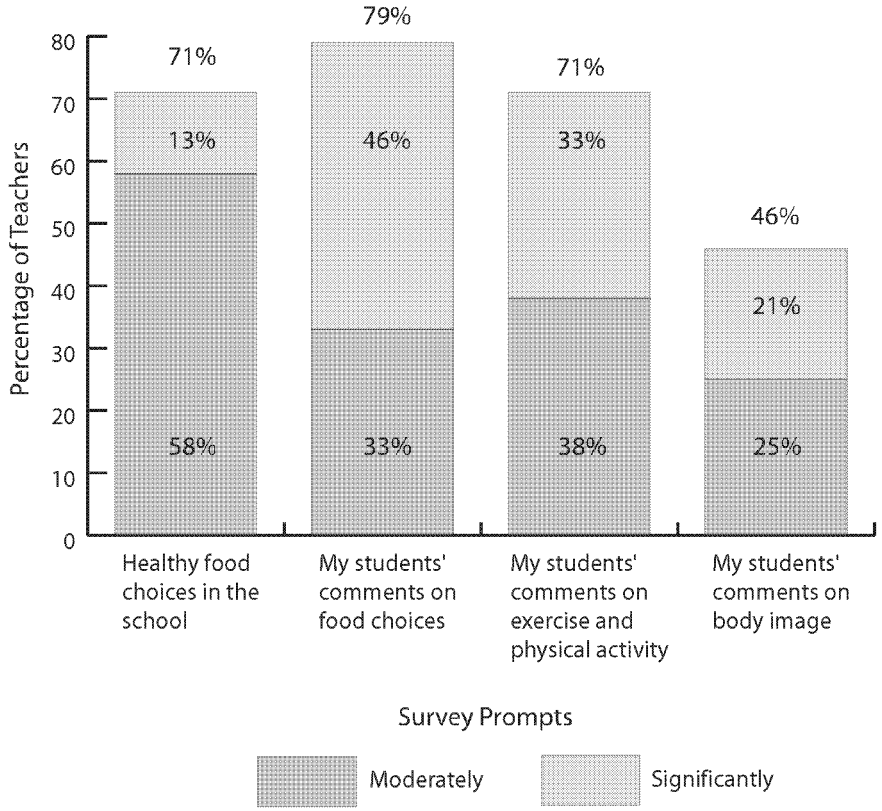
Teacher engagement with the NBF Health Program.



Data source: BCNX teacher survey, 2008-09.

Figure 23.

Teacher perceptions of the impact of the NBF Health Program on students.



Data source: BCNX teacher survey, 2008-09.

When asked in interviews about changes in student behavior or attitudes as a result of Boston Connects, all teachers who had the health curriculum at their school (i.e., teachers from grades 2-5) observed an impact of the curriculum. They reported hearing conversations between students that reflect knowledge gained from the curriculum, and they also observed students making connections between the health curriculum and other areas of classroom instruction. For example, one teacher stated that she had a student who, without any prompt at all, wanted to write about what he learned in health. Students are also able to distinguish between healthy and unhealthy snacks, and teachers reported seeing students reading nutrition labels.

> *"Like the other day, one of [the students] brought something, some tonic for break time…So then, the other one says, 'Oops, wait a minute. Did you look at the label? Let's read the ingredients here…look at that, you're drinking sugar, 37 grams!' And then she took out the calculator and said, 'Remember the formula? This is how much sugar you're drinking in that soda.'…[then] the other girl threw it away."*
>
> *–Teacher*

"The kids are becoming more interested in healthful foods that are giving them stronger bodies and perhaps save them from some terrible disease in the future. When an opportunity to go to a cooking class with their parents was presented, lots of kids though that would be really fun, and parents came. And guess what? It was fun."

–Teacher

The positive effects of BCNX cannot be explained by differences across schools in race or poverty

All of the growth curve and propensity score matching analyses control for demographic and other differences between comparison and BCNX students. We have also taken the additional step of conducting a Partitioning Analysis, which allows us to determine how much of the observed difference between comparison-group and BCNX-group mean scores can be attributed to the treatment, and how much can be attributed to differences in the racial categories and free/reduced-price lunch status of the comparison and BCNX groups.

The results for race for the six different report card categories are presented in Table 5, and the results for free/reduced-price lunch are shown in Table 6. The rows represent the different report card scales. The difference between comparison-group and BCNX mean scores appears in the first highlighted column. The next three columns show how much of the mean difference can be attributed to the BCNX intervention, to racial (Table 5) or free/reduced-price lunch (Table 6) differences, and the interaction effect.

Table 5.

Partitioning report card scores into BCNX effects and racial differences.

Report Card Outcomes	Comparison Scale Score	BCNX Scale Score	Mean Difference	Partitioned Effects: BCNX	Race[1]	Interaction[2]
Reading	8.038	**8.738**	0.700	0.543*	0.135	0.022
Writing	10.153	**10.940**	0.787	0.561*	0.198	0.028
Math	7.208	**8.006**	0.797	0.564*	0.219	0.013
Academic Effort	12.899	**14.317**	1.418	1.105*	0.277	0.035
Work Habits	22.858	**24.207**	1.349	0.929*	0.349	0.072
Behavior	18.176	**18.916**	0.739	0.405	0.278	0.057

Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

*Significant at $p<0.05$.

1 Racial differences between BCNX and comparison schools do not explain any significant portions of the report card score differences between these schools.

2 None of the interactions is significant.

Table 6.

Partitioning report card scores into BCNX effects and and poverty differences.

Report Card Outcomes	Comparison Scale Score	BCNX Scale Score	Mean Difference[1]	Partitioned Effects: BCNX	Partitioned Effects: Poverty[2]	Partitioned Effects: Interaction[3]
Reading	8.038	8.738	0.700	0.715*	-0.007	-0.008
Writing	10.153	10.940	0.787	0.824*	-0.015	-0.023
Math	7.208	8.006	0.797	0.804*	-0.008	0.001
Academic Effort	12.899	14.317	1.418	1.459*	-0.018	-0.023
Work Habits	22.858	24.207	1.349	1.391*	-0.027	-0.014
Behavior	18.176	18.916	0.739	0.766*	-0.010	-0.016

Data source: Boston Public Schools report card data, 2001-02 through 2007-08.

*Significant at $p<0.05$.

1The BCNX treatment effects are larger than the mean differences because BCNX schools have fewer full-priced lunch students (i.e., more students in poverty). In other words, the mean differences likely underestimate the treatment effects because the BCNX schools have more economically disadvantaged students.

2Differences in free-lunch, reduced-lunch and full-priced-lunch status between BCNX and comparison schools do not explain any significant portions of the report card score differences between these schools.

3None of the interactions is significant.

- Neither race nor poverty differences between BCNX and comparison schools explain any significant part of the better performance of BCNX students in report card scores in reading, writing, math, behavior, work habits or effort. Moreover, after controlling for race, the BCNX effect is significant for every outcome except behavior, and after controlling for poverty, the BCNX effect is significant for every outcome. **Thus, it is not feasible to argue that the positive effect of BCNX is due to differences in racial or poverty makeup between BCNX and comparison schools.**

The positive effects of BCNX are meaningful in a practical sense

Beyond statistical significance, it is critical to examine the practical significance of BCNX. In other words, does the intervention have a meaningful impact on children's lives? If so, how large is that impact relative to that of factors known to affect academic achievement (i.e., the harmful effect of poverty)? And how large is the academic boost BCNX students experienced relative to students in comparison schools?

On average, the effect sizes for BCNX were similar to those for other interventions focused on children in poverty (e.g., SAGE, Head Start). It is worth noting, however, that the lack of random assignment in the BCNX intervention resulted in students in the intervention group starting out lower in achievement than comparison students. This reality makes our effect size estimates more conservative than those from random assignment interventions. Indeed, we find that the impacts of the BCNX intervention were of significant practical importance:

- The beneficial impact of BCNX on student growth in academic achievement (across grades 1 to 5) was, on average, approximately three times the harmful impact of poverty.

- By the end of grade 5, achievement differences between BCNX and comparison students indicated that the BCNX intervention moves students at the 50th percentile up to or near the 75th percentile, and the students at the 25th percentile up to or near the 50th.

- For multiple outcomes, the treatment effects were largest for students at greatest risk for academic failure. For example, English language learners experienced the largest treatment benefits on literacy outcomes, by third grade demonstrating similar report card scores to those proficient in English in comparison schools. In fact, as a result of BCNX, there was no longer an achievement gap between these students.

- After grade 5, the lasting positive effects of the BCNX intervention can be seen in middle-school MCAS scores. The size of the positive effect of BCNX ranged from approximately 50% to 130% as large as the negative effects of poverty on these scores.

Impact on Schools

While demonstrating that BCNX helps students achieve academically and thrive in school is necessary to claim that the intervention is effective, it is not sufficient. Students learn and grow in a school community. To understand the impact of BCNX on students, it is also necessary to probe the intervention's effects on the processes, context, and people that affect them in school, including the Special Education evaluation referral process, school climate, teachers, principals, and the partnerships schools have with agencies that provide services.

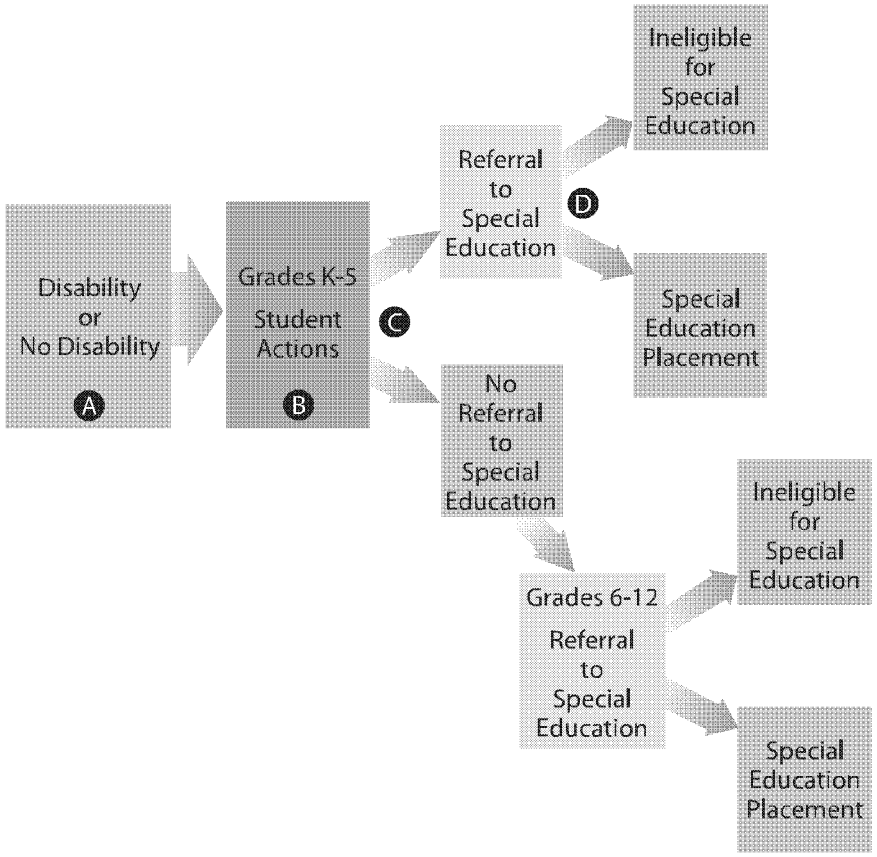
Impact on Special Education

One of the main goals of BCNX is to broaden the options available for supporting students. While Special Education services are clearly the right option for some students, BCNX recognizes that it should not be the only option for all students. Academic and social development requires a range of prevention, early intervention, and intensive supports, of which Special Education is only one.

We assume that Special Education referrals originate with "evidence of a need." The evidence may be a series of observations by a teacher, parent, or other person. The evidence may also go unnoticed. The evidence may either lead to a referral to Special Education or not. Once a student is referred to Special Education, the student may either be placed or be deemed ineligible for Special Education placement. If a student is not referred to Special Education in elementary school, or is referred and deemed ineligible, the student may or may not be placed in Special Education after elementary school. This logic is schematized in Figure 24.

Figure. 24

Flowchart of steps before and after referral to Special Education



In this flowchart, A represents the number of students within the school who have a real disability, which BCNX cannot influence. B and C show where in the referral process BCNX could have an impact. First, BCNX might influence what gets noticed as "evidence" of a disability B Second, BCNX might influence whether the observation leads to a Special Education referral by influencing the interpretation of the evidence and/or offering alternative approaches to meet the student's needs C. Boston Connects is neither designed to nor able to influence the placement decision after referral D.

To determine whether BCNX has an impact on Special Education referrals at points B and C, we examined the accuracy of Special Education referrals, where an "accurate" referral is one that is not deemed "ineligible" and that results in Special Education placements aligned with student learning needs. This analysis is important for at least two reasons. First, Special Education referrals are costly and, therefore, reducing the number of inappropriate referrals (i.e., those "deemed ineligible") would amount to cost

savings. Second, and more importantly, appropriate Special Education referrals result in students receiving services that correctly address the student's barriers to learning.

We examined the impact of BCNX on Special Education referral accuracy from two vantage points:

- First, we examined ***inappropriate referrals***. That is, we examined whether referrals in BCNX schools were less likely to result in students being deemed ineligible for Special Education across grades 1-5 than referrals in comparison schools.
- Second, we examined ***failure to appropriately refer***. Because one potential unintended consequence of reducing inappropriate referrals could be failing to refer students with real disabilities, we examined whether students from BCNX schools and comparison schools received Special Education placements in grade 6 or beyond. We make the assumption here that these later placements (grades 6-12) indicated a failure to appropriately refer during grades 1-5.

For the analysis of inappropriate referrals, we focus on the number of students deemed ineligible relative to the number placed into Special Education with up to 25% time or less removal from regular education classes (Special Education levels 0.1 and 0.2, reflecting mild disabilities) because more severe developmental disabilities are less difficult to recognize. For example, a student with Down's syndrome (e.g., 0.3 or 0.4 level Special Education) is highly unlikely to be deemed ineligible for Special Education services. Our analysis reveals the following:

- For grades K-5, BCNX schools are more accurate at referring students who display evidence of mild special needs:
  - Comparison school students who are referred for mild special needs are 22% more likely to be deemed ineligible than similar students in BCNX schools.
- Accuracy was also indicated by the fact that BCNX schools are not missing students who should have been referred. Among students who were not referred to Special Education in grades K-5, former BCNX students in grades 6-12 do not have significantly lower or higher probabilities of being placed into Special Education (into any category) than grade 6-12 students who were never enrolled in a BCNX school.

Together, these two results on the accuracy of Special Education referrals indicate that BCNX elementary schools have lower rates of inappropriate referrals without increasing rate of failure to appropriately refer.

Examining the impact of BCNX on Special Education referrals has proven difficult. Our access to quantitative data in this area has been substantially limited. Qualitative data, however, illuminate how educators in BCNX schools see changes in Special Education referrals and processes.

- Both principals and teachers reported in interviews that **BCNX has added new systems and processes that have changed the Special Education referral process**.
- Almost all principals report that the BCNX intervention has changed the Special Education referral process at their schools.
- Additionally, some principals stated that they believe Special Education referrals are down in their schools as a result of Boston Connects.

"So what would typically happen... before Boston Connects was you'd have a child … in a mental health crisis. They did get referred often to Special Education, so our over referral into special ed was much higher. Now I can make a case that I know this child is not-- does not need special ed and I don't want them to go to a special class because that's not going to help them…So it does help, and without Boston Connects we wouldn't be able to do half of what we're doing."

–Principal

"I think that for years, teachers felt they had one direction to go in. 'This child isn't learning, they have behavioral problems, etc.' It's very difficult to look into complex background situations without staffing to help …You really need that sort of, third party person to intervene, and to ask the hard questions, and to gather that information, and to share that information with both the classroom teacher and whoever is appropriate…in the past, all you had was SPED…that's not going to be the fixer…it's not appropriate."

–Teacher

"If there are a couple students that are really struggling, let's dig down and find out why that is. And I think before, it was, 'Oh, they need to be referred or they need this,' whereas, [now it's], 'Ok; we need to sit around as a team; let's brainstorm.'"

–Principal

Impact on school climate

In interviews with principals and teachers, it was clear that Boston Connects was seen as having a broad impact on the climate in their schools.

"And the reality is, a principal in a school alone is never going to be able to do[all that BCNX does]. So [BCNX] impact[s] climate … when people [feel] supported … they're happier at work, kids are happier, there's this general feel that this is a good place to be and to work in and to learn, and people want to come back … when you have the support and you have the resources you can do much more."

–Principal

"Boston Connects helps me do my job...if there's something going on, I have support in the classroom…And the beautiful thing about all of it is that if I have support, then I can support [the students]. And there are a lot of teachers who don't have support."

–Teacher

"So, [the Site Coordinator] has made an impact in this school … climate. Not just for the students but also the outreach she has done to parents and also just her relationship building and rapport she has established with the teaching staff too."

–Principal

Specific explanations from principals of why Boston Connects impacts school climate included **direct support to students, Site Coordinators' presence and leadership at a variety of school meetings**, and **the New Balance Health and Wellness program**.

"We had a wonderful Health Fair this year that was coordinated by our Boston Connects support staff. We've had children who have really taken on the importance of proper nutrition and being able to bring those things together and being able to share their learning with other children and build upon each other. Absolutely those kinds of things affect climate."

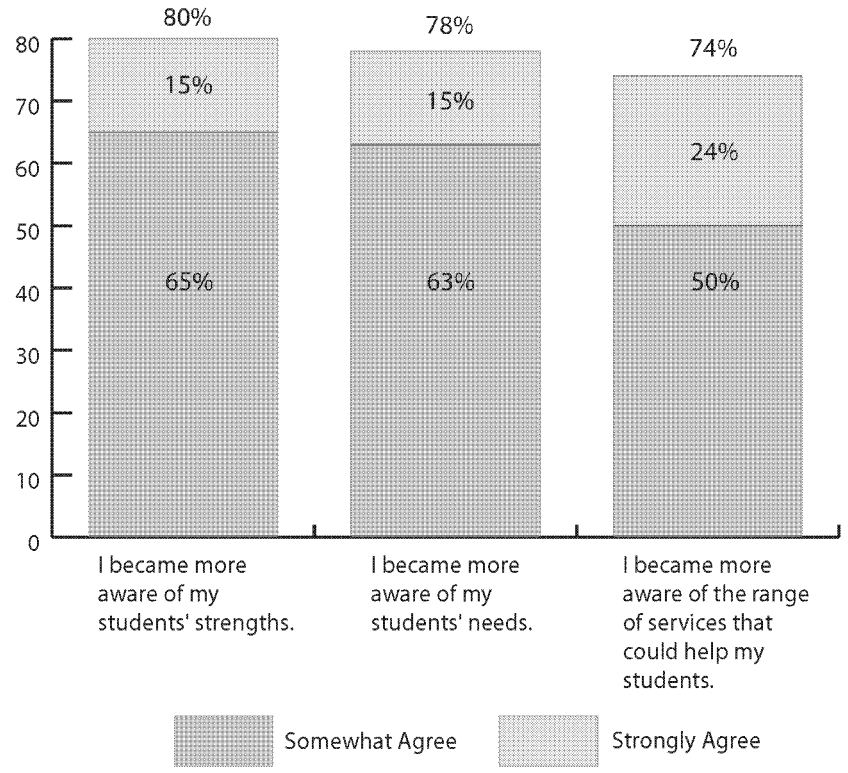
–Principal

Impact on teachers

This year provided our first opportunity to explore the reasons for the high teacher satisfaction levels reported last year. The exploration occurred through in-depth interviews with a stratified random sample of teachers as well as an electronic survey of randomly selected teachers.

- Results from our electronic survey of teachers provided evidence that Boston Connects enhances teachers' knowledge of their students in three key areas. Figure 25 shows that 70 to 80% of the teachers indicated that BCNX made them more aware of students' strengths and needs and of services available to them.

Figure 25.
How BCNX affects teacher perceptions of students



Data source: BCNX teacher survey, 2008-09.

Not only are teachers gaining knowledge of their students through BCNX, but they are also applying this knowledge to their interactions and views of students in the classroom.

"When you have 25 students, some get lost in the shuffle. And I think that's what Boston Connects does. Whole class. Every single kid. Let's account for them... It's a way to articulate how much a student has grown."

–Teacher

Among those teachers who talked about applying their knowledge of students to their classroom practices, many indicated that as a result of BCNX, they were now thinking about the needs of students who previously might have slipped under the radar.

"The Whole Class Review…makes you look at even the students you don't normally think of because you think they are doing fine. The ones that sometimes goes unnoticed because they sit in class and do what they are supposed to do and uh, we don't think about them as much and I think the whole class kind of forces to think about each child individually. And you know what each child brings to the classroom or doesn't bring you know so I think that was I really liked that I've never done that in any other schools. And when I first actually heard about it my first reaction was like 'well that kid doesn't have any problem' But when I sat down and really thought about each child individually I did."

–Teacher

"I don't have to do it myself. I don't have to seek out other immediate colleagues to put more on their plate to help me through it, even though that would be the idea to collaborate if Boston Connects didn't exist, but knowing that I have a support group, through Student Support Team or just through [Site Coordinator Name], I have someone that I can kind of collaborate with"

– Teacher

- Teachers also report that they now think about their class as a whole. That is, rather than simply thinking about each student individually, they now think about how students relate to one another and how these relationships affect the classroom climate. As one teacher put it, "[the BCNX Whole Class Review helps] *you really start to see your class dynamics.*"

- Teachers reported that BCNX increased the time they spent on instruction because they did not have to deal with behavioral issues in the classroom. One teacher describes this transformation as follows: "*…There was so much chaos and [Site Coordinator] actually helped me remove some of the chaos so that the other children could learn.*"

Teachers spontaneously describe several ways in which the BCNX Site Coordinators supported them.

- Site Coordinators serve as someone with whom the teacher can **strategize and collaborate.**
- Site Coordinators **provide "another point of view"** about, and "a different lens" on, their students. As one teacher put it, *"To have another person…that's also observed behavior…it's like a team that we're working together to help the child feel successful and move on.*"
- Teachers report that Site Coordinators **serve as a go-to resource person who listens to their needs**. One teacher put it this way: "*… I feel like [the BCNX Site Coordinators] really listen to what the teachers*

need, and it's not about 'this is what we are going to do and this is going to save your school' …with Boston Connects, it's …more, 'Okay, what do you guys need… what's not working?'"

–Teacher

Across all grade levels, classroom types, and years of teaching experience, teachers credited Boston Connects with improving Student Support procedures and communication within their schools. Teachers spontaneously spoke of one or more of the following benefits:

- **Having formalized processes** such as Whole Class Review (WCR) and the Individual Student Review (ISR) enhanced support systems in the school.
- As a result of the Site Coordinator bringing the appropriate people into the WCR and ISR conversations, **communication** among staff members within the school increased.
- As a result of the formalized BCNX processes, and especially through its requirement to follow-up and document, there has been an **increased accountability** within the school on addressing the needs of each child.

One teacher beautifully described the systemic impact of BCNX on the school community. *"So, having a formal group that you can take your concerns to, I think is not only wonderful for the children, because it means they are going to get a significant and a consistent type of support, it's going to be documented which means that as the child moves on from teacher to teacher, this isn't going to depend on whether or not a teacher comes and tells you there have been issues and these are the steps that have been taken. There is going to be actual documentation that says here is a list of strategies that we have tried, these are the ones that were effective, these are the ones that weren't. This is the history of family contact and you don't have to re-invent the wheel every year."*

–Teacher

Impact on principals

All of the principals provided the interviewers with specific examples of how BCNX is valuable to them.

- They described particular satisfaction with the Site Coordinator, who they saw as providing critical support to them, to students, and to teachers.
- Principals expressed satisfaction with the way BCNX enhances family connections, citing specific examples of Site Coordinators bringing families into the school, securing signatures on consent forms for services, and helping with transportation needs.

> *"[The Site Coordinator] knows our families, I don't have to ask her, she already knows the situation for a lot of different people and is proactive about it… So this one particular family has a meeting at school, she'll call, 'Do you need a ride? Do you need a translator?' So she's been really fantastic. She's at every student support meeting and just a great link between home and school."*
>
> *–Principal*

"It can be something as simple as if you have a homeless family and they need transportation; [the Site Coordinator] can do the legwork of working with the Boston Public School Department, Transportation Department to get that for the family. Or school based counseling—making sure that the consent form went home and following up with the family. If the family doesn't have any insurance, find out that there are other options. Just things that a principal does not have the time to do on a day-to-day operations, but [are] really necessary to make sure the child is fully developed and has the support."

–Principal

Principals were very satisfied with the changes that BCNX brought to the Student Support Process. One principal put it this way: *"Having worked here in the role as teacher and principal, I can't tell you how frustrating student support has been, particularly in the role of teacher. When you desperately want things to happen for kids and then it doesn't get done and I could never understand, where is the breakdown?"* – Principal

Impact on Families

The BCNX intervention depends in a substantial way on the involvement of families. The evidence from principal interviews and Site Coordinators' weekly written narratives suggests that the ties between schools and families are strengthened by the intervention.

- All principals saw Boston Connects as having an impact on families and/or reported specific ways the BCNX Site Coordinator works with families, serving as a **"connection," "link," or "bridge"** between the home and the school.

Principals' comments revealed that they view BCNX as impacting families in several ways:

- Principals reported that Site Coordinators **help families feel welcome and increased their visits to the school**. One principal put it this way: *"… families can now come into our building in a more welcoming way. Families can now know that there is someone to connect with when the need is great, whether it's at crisis-level or they're just beginning to seek potential resources."*
- Principals spoke of the way the Site Coordinators **connect families to family services**, e.g. connecting families to childcare, summer programs, and other family services.
- Principals also described how Site Coordinators ensured the linkage to services by **obtaining appropriate consents** for services, **securing funding and transportation** for families, **helping with language barriers**, and **obtaining help with basic needs** like housing and clothing.
- Principals described the Site Coordinators as **a supportive point of contact for families, developing strong relationships with families**, and serving as a sounding board for families who are challenged.

Like principals, the Site Coordinators also described the different ways in which they work with families.

- Site Coordinators serve as a **central point of contact** between families and school.
- Site Coordinators help families to **overcome the barriers to accessing services**, e.g. paperwork, finances, insurance, transportation, limited English proficiency, cultural barriers.
- Site Coordinators **help families secure basic resources** such as utilities, food, clothing, supplies, childcare, parenting skills, housing, and English language instruction.
- Site Coordinators **respond to family crises**, such as homelessness, death in the family, or utility shut-off.
- Site Coordinators **provide information to families on school processes or service options** (e.g. middle school choices, special education, or counseling).
- Site Coordinators assist parents to understand and address **disciplinary or behavior issues** at school or at home.
- Site Coordinators provide **emotional support to caregivers**, including helping parents transition their children into the school, talking about challenges in the home environment and neighborhood.

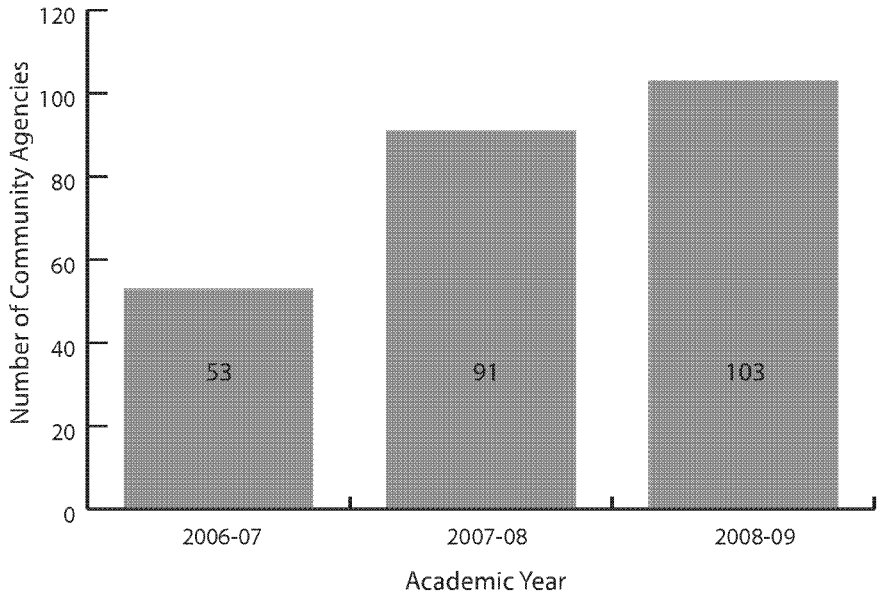
"My role with families has centered on listening to their struggles and concerns about their kids, encouraging them, offering support and providing them with resource options to meet their needs."

–Site Coordinator

Impact on Community Agencies

Figure 26 shows the number of community agencies that partnered with BCNX schools from 2006-07 to the present.

Figure 26.
Number of BCNX community agency partnerships, by year.



The number of community agency partners jumped in 2007-08 with the addition of five new schools. The further increase in 2008-09 reflects continued efforts to establish and maintain partnerships.

Fifty-one community agencies responded to an online survey about their experiences with Boston Connects. The agencies represented a wide range of service areas, including tutoring, enrichment, mentoring, after-school programming, mental health and health.

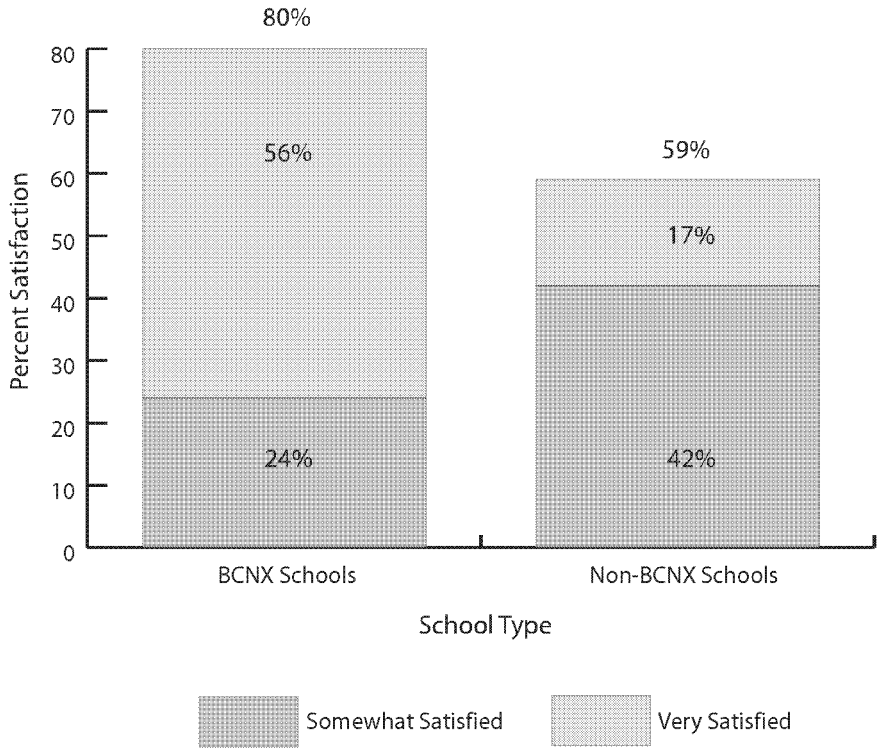
The majority of community agencies responded favorably to questions about the following aspects of the BCNX program.

- 95% of respondents agreed that they are "**generally satisfied with [their] agency's relationship with Boston Connects.**"
- 88% of respondents agreed that "**the Boston Connects student support process is effective at identifying students in need of services.**" (See Figure 27.)
- 88% of respondents agreed that "**the Boston Connects student support process is effective at addressing the needs of students.**"

The survey asked community agencies to compare their experience with Boston Connects schools and schools without Boston Connects in two key areas: partnership quality and partnership effectiveness.

Figure 27.

Community agencies' satisfaction with referral process at BCNX vs. non-BCNX schools.

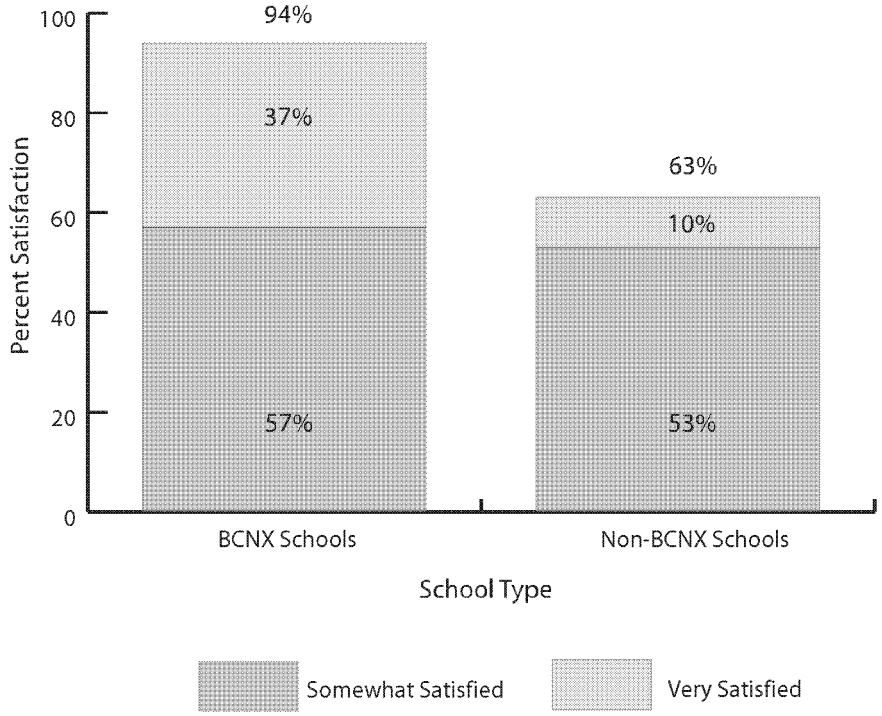


Data source: BCNX community agency survey, 2008-09.

Community agencies reported higher levels of satisfaction with the effectiveness of BCNX in tailoring services to students' unique needs in contrast to non-BCNX schools. Figure 28 illustrates this finding for tailoring services to the unique needs of students.

Figure 28.

Community agencies' satisfaction with BCNX effectiveness in tailoring services to the unique needs of students.



Data source: BCNX community agency survey, 2008-09.

Conclusion

The mission of Boston Connects matters. Boston Connects has shown that it is possible, in a high-impact, cost-effective way, to connect each student to the tailored set of services he or she needs to thrive in school. Attending to the well-being of each and every student makes a difference.

> *"[Boston Connects] provides the missing link in education for our elementary children."*
>
> *–Principal*

> *"[Boston Connects] is the missing piece in schools."*
>
> *–Teacher*

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Appendix E17: Detail on Turnaround Intermediary

Concept/mission
An intermediary organization whose mission is to build significant additional high quality capacity to conduct school turnaround within Massachusetts.

The organization will be a 501(c)(3) to eliminate the profit motive and to ensure mission focus. The intermediary will serve four primary functions:

- Incubate high quality school turnaround operator capacity based on best practices in the field of school turnaround today;
- Identify high quality school turnaround operators and recruit them to come work in Massachusetts;
- Contract with school turnaround providers that are the best fit for each school and hold the operator accountable for meeting aggressive but achievable improvements in student outcomes; and
- Support school turnaround operators and assist with overcoming obstacles.

In the beginning, it is not within the scope of this organization's activities to improve district capacity to do school turnaround. There are multiple existing organizations whose missions are to do this work. However, longer term our intention is that there will be substantial learnings that will be of interest to districts, and this function could be added to enhance the impact of the organization several years into its lifecycle.

To serve this purpose, ESE will identify an existing organization that is well positioned to build this capacity, or it will create this organization in partnership with private philanthropists. Initial research suggests that few organizations will be positioned well to take on this work and that incubation of a new organization may be necessary.

Governance
Authority over schools
When schools are determined to be Level 5 schools due to the lack of progress in raising student achievement, ESE will have receivership authority over the schools. ESE will identify an appropriate receiver at that point. In some cases it may be a school turnaround organization that is an obvious fit for the school, and in some cases it will be this intermediary organization. The intermediary organization will then be authorized to sub-contract with a school turnaround provider.

Governance of the Intermediary organization
The intermediary organization will be an independent nonprofit organization with a board of trustees. The board of trustees will be comprised of leaders in the field of school turnaround and individuals with experience growing entrepreneurial ventures.

Key activities
ESE anticipates moving the first struggling schools into level five in 2012. This will mean that ESE has the authority to require school restart and/or outsourcing the turnaround effort to an outside organization. This is when the intermediary organization must have capacity available to

contract with the state to take on these schools, and have school turnaround operators that have capacity to do the work with the schools.

From summer of 2010 through summer of 2012 the focus of the intermediary will be building the capacity of school turnaround operators in Massachusetts. This window of time is our opportunity to invest in the capacity ahead of when significant demand is likely to hit.

This effort will involve the incubation of local efforts that are based off of national best practice models and the start-up replication support for expansion by current high quality operators into Massachusetts. During this incubation phase, the intermediary would identify promising entrepreneurs and promising ideas, and would support their development.

Once demand begins to grow from ESE for the intermediary to act as a receiver for Level 5 schools, the intermediary will carefully assess the situation at each school and contract with the school turnaround operator that is the best fit for that school. The primary activities involved in this work will be identification of the best school operator, contracting, monitoring the contracts to carefully constructed performance targets.

Business model

There are two distinct elements of the business model: incubation and contracting/performance management.

Within incubation, the intermediary will raise funds through appropriate federal and state grant programs and through private philanthropic organizations. These funds will be used to cover the staff time that is required to support an incubation, and a portion of these funds will be re-granted to the start-up organization that has been incubated.

The contracting and performance management component of the work will involve staff members with a very wide variety of skills: staff with sophistication around assessing the unique needs of a school, assessing the unique qualities of a turnaround provider, understanding complex community dynamics, and driving to clear and powerful contracts.

Revenue coming in to turnaround schools will be primarily in the form of per student revenues associated with each school and any state or federal school improvement grant funds that come along with each school. The intermediary will take a small contract management fee to cover the cost of its staff that oversee the contracting process. This fee is still to be determined, but must be a low percentage of the overall dollars to ensure that the vast majority of the funds are passed along to the school operators and the students.

Intermediary development and milestones – next 12 months

Key activities	*Timing*
• Push initial design with expert input	Summer 2010
• RTTT funds secured	September 2010
• Local and national foundation funding secured	November 2010
• Launch national search for intermediary leader	Winter 2011
• Complete business plan	Summer 2011
• Hire small core incubation staff	Fall 2011
• Launch process for initial incubations	Fall 2010
• Begin working with 1-3 school turnaround entrepreneurs to incubate their efforts	Winter 2011-12

STRATEGIC GRANT PARTNERS

May 26, 2010

The Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan,

I would like to take this opportunity to express Strategic Grant Partners' interest in supporting the launch and growth of a turnaround intermediary in Massachusetts.

Creating dramatic and sustainable improvements in the most chronically underperforming schools in Massachusetts is a priority for the Commonwealth and of high interest to our foundation. We have been impressed and encouraged by recent state legislation that creates the conditions to enable school turnaround. Specifically, the flexibility granted to chronically underperforming schools in terms of collective bargaining agreements and school governance indicate a true commitment on the part of the Commonwealth to embark on significant school reforms, including contracting with organizations to takeover failing schools.

The lack of capacity nationally to drive high quality school turnaround efforts at any scale is well known. Organizations that are referred to as leaders in school turnaround work have often only done their work in a handful of schools, and are not prepared to scale to even serve 1% of the 5,000 lowest performing schools in the nation. We believe that creating an intermediary to both attract national operators to Massachusetts and incubate nascent organizations is critical to growing the market. To that end, Strategic Grant Partners' is working, in partnership with the state and in conjunction with thought leaders in the field, to design an effective and efficient intermediary organization that establishes a robust marketplace for school turnaround operators in Massachusetts.

In the absence of a school turnaround intermediary, SGP recently made a direct grant to UP Schools, a nascent, but promising, school turnaround management organization in Massachusetts. We are excited by the prospect of continuing to invest in school turnaround work via the establishment and support of a 501c3 school turnaround intermediary.

Sincerely,

(b)(6)

Joanna Jacobson
Managing Partner

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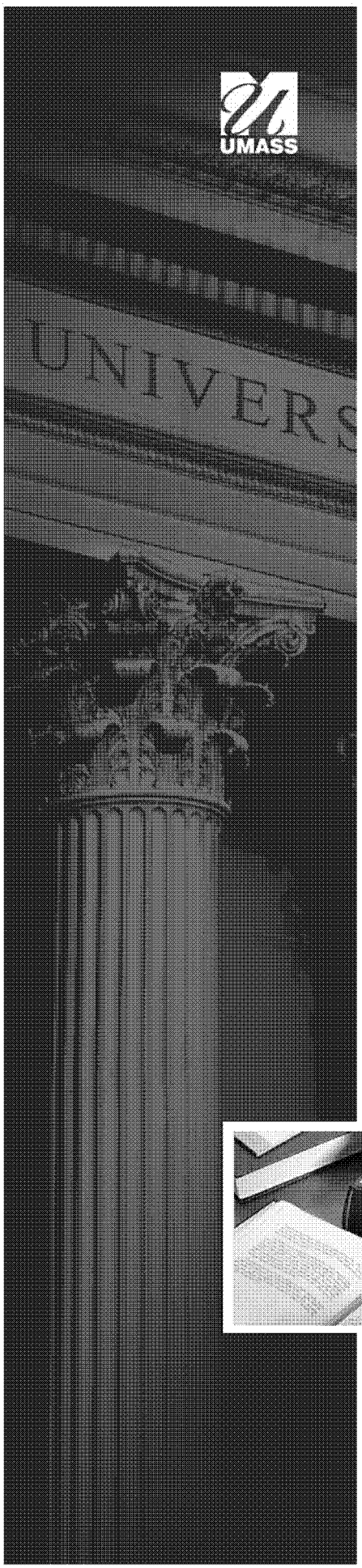
Strategic Grant Partners

About Strategic Grant Partners: In September 2002, fourteen families came together and created the foundation collaborative, Strategic Grant Partners. The families established the common mission of helping struggling individuals and families in Massachusetts improve their lives. SGP makes grants across multiple sectors, including education, youth development, and family self sufficiency. Since that time, SGP has granted $28,000,000. Strategic Grant Partners is both a foundation and a pro bono consulting firm. Once an organization becomes an SGP grantee, SGP staff continues to provide ongoing advice and strategic assistance as well as hands on, practical implementation support to ensure the organization is as successful as possible. SGP now includes 15 family foundations in Massachusetts and has raised a third round of funding to continue to support this work.



UMASS DONAHUE INSTITUTE • RESEARCH & EVALUATION GROUP

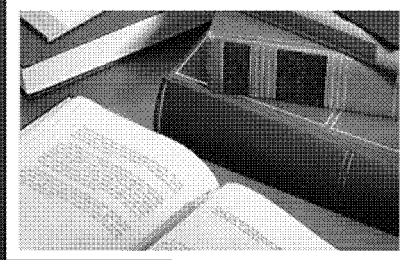
An Evaluation of the Commonwealth Pilot Schools Initiative

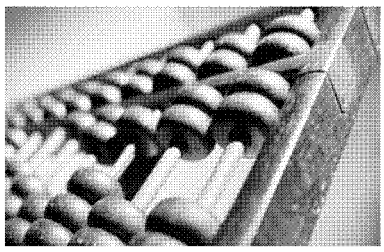
Policy Brief

Key Findings Following Two Years of Implementation

A briefing to the Massachusetts Department of Elementary and Secondary Education to inform ongoing dialog and strategy as it pertains to whole school reform and improvement in Massachusetts schools

November 2009





Introduction

In November 2006, four schools identified as candidates for designation as "chronically underperforming" schools were invited by the Massachusetts Board of Elementary and Secondary Education (the Board) to convert to Commonwealth Pilot schools. Each of these schools—Academy Middle School in Fitchburg, John J. Duggan Middle School in Springfield, Roger L. Putnam Vocational High School in Springfield, and The English High School in Boston—had been in underperforming status for four years or more. The following year, a fifth school, Homer Street Elementary School, also in Springfield, joined the Commonwealth Pilot Schools Initiative.

The Commonwealth Pilot Schools Initiative (the Initiative) is intended to introduce substantive reform to schools struggling with persistently low student achievement, and is patterned on a model in place in the Boston Public Schools (BPS). The Boston Pilot Schools model was developed by the BPS and the Boston Teachers Union in 1995. Since that time, the Center for Collaborative Education (CCE) has served as coordinator and advocate for the Boston Pilot Schools network. CCE has also served as a resource to the five Commonwealth Pilot schools, which are working to establish and use autonomy in five areas—staffing and hiring, school schedule and calendar, curriculum and assessment, governance, and budget—to their students' greatest advantage.

Under the direction of the Massachusetts Department of Elementary and Secondary Education (ESE), the University of Massachusetts Donahue Institute (the Institute) designed and implemented a comprehensive formative and summative evaluation of the Initiative. This evaluation remains ongoing as the schools enter the 2009–2010 school year (SY10). This briefing is intended to inform policy makers' and implementers' understanding of the findings to-date of that evaluation and their implications for the design, implementation, and management of this and other whole-school reform initiatives. Accordingly, this brief is organized into three succinct discussions:

- Implementation Progress
- Initial Impacts
- Lessons Learned

For an expanded view of evaluation findings, please consult the research publications website of ESE's Office of Strategic Planning, Research, and Evaluation (http://www.doe.mass.edu/research/reports/topic.html). Included under the "Commonwealth Pilot Schools" heading is a series of interim evaluation products, including annual reports featuring detailed summaries of the Initiative's implementation and initial impacts on school operations, culture, teaching, and learning, which are presented on a school-by-school basis.

Implementation Progress

The Initiative provides a tremendous opportunity to learn from participating Commonwealth Pilot schools' experiences, such that the introduction, design, and implementation of new models for school reform may proceed as smoothly and effectively as possible. An overarching finding derived from these schools' experience is the need to address reform systematically, allowing time for key structures and capacity to be developed, in advance of the pursuit of changes requiring high levels of staff expertise and collaboration, which may not be in place at the onset of reform.

After two years, findings reveal mixed progress in design plan implementation. Plans were developed rapidly in response to a schedule defined by ESE. They called for near-simultaneous development and implementation of an array of substantive changes to school staffing, structure, operations, and capacity. In Year One schools instituted a range of structural changes.[1] However, the effort associated with establishing these structures, training new and incumbent staff to use them effectively, and instilling new cultural norms was enormous, even with the support provided by ESE (in the form of targeted assistance grants and CCE technical assistance). As a result, many changes to curriculum, instruction, and assessment were deferred until Year Two.

Schools have experienced varying degrees of success in the implementation of their design plans. Findings highlight a variety of implementation and context-related factors that have influenced school-level implementation success, which may be instructive to future reform efforts. Following is a brief overview of implementation progress over the past two years, accompanied by an account of factors affecting progress.

Year One: Building a Foundation for Reform

Schools' initial focus was on the hiring and integration of new staff, with staff turnover rates exceeding 60% at two schools, including one in which a new principal was hired in June 2007. In addition to dramatic changes in staff, schools also needed to adjust to changes in student enrollment, with two dramatically reducing enrollment to meet Commonwealth Pilot guidelines, one remaining largely unchanged, and two others experiencing substantial change due to fluctuating demand. One of these schools experienced a decrease in enrollment, while the other experienced an increase. Changes at these latter two schools were unplanned and driven largely by school choice decisions in their communities.

Organizational structures were substantially revised in four of the five schools, with the two high schools adopting Smaller Learning Community (SLC) structures and one middle school adopting a new "house" and teacher team structure. The remaining middle school also grappled with a new organizational structure as it began implementing an Extended Learning Time grant. All of these changes represented significant reforms in their own right, with the potential to profoundly influence instructional planning, decision making, and delivery. Each of these reforms also required extensive organizational and staff development.

Revised school day schedules were implemented at four schools, with mixed impacts on instructional time. Expanded day schedules were implemented at two schools, both of which benefitted from substantial funding through other initiatives. Lacking such financial resources, time for instruction was decreased at two others in favor of increased collaborative professional time. The fifth school opted not to proceed with many of its intended scheduling changes following a self-assessment of its capacity to enact them. Instructional time was also affected by new student advisory and/or related programs in four schools (a fifth continued its existing advisory program).

[1] Throughout this report, Year One and Year Two refer to a school's first and second years as a Commonwealth Pilot, respectively. The Initiative's first cohort contained four schools, its second cohort just one. Therefore, Year One was SY08 for the first cohort and SY09 for the second. The first cohort completed Year Two in SY09; the second cohort has yet to complete Year Two.

New scheduling strategies enabled substantial increases in collaborative professional time at all schools. This was accomplished through the introduction of a weekly late start or early release day for students at four schools, among other strategies, and through the creation of additional afterschool time at the fifth. This time was largely used for professional development and for collaborative planning at the school, SLC, department, or grade level. Initially, much of this professional development activity focused on establishing new structures and on increasing staff capacity to leverage those structures in support of school improvement.

Compensation was provided to teachers at schools with increased teacher work weeks. The length of the teacher work week increased substantially at two schools and modestly at two others. Teachers received compensation for additional time worked, though the mechanism and source for this compensation varied by district. Lacking additional funding, a fifth school, part of the Initiative's second cohort, did not feel it could lengthen the teacher work week.

New governance structures were established to support school- and community-based decision making. Governance boards and leadership teams were established at all five schools by winter of Year One. With substantial outside facilitation and support, these boards developed capacity and focus throughout the year. Governing boards worked primarily on issues related to school policy, such as approving annual work election agreements and school budgets, and evaluating the school principal. Leadership teams focused more directly on operational matters and/or staff communication.

Great progress was realized in the development of new structures in Year One, but it was not always a straight or easy path, and some schools experienced greater success than others. Leaders and staff of all five schools reflected at length on the enormity of the change process and on the need to develop internal capacity to leverage the potential of these structures to support school improvement before tackling other, more complex, tasks. Leadership and staff time and expertise were stretched to a breaking point in Year One, particularly at schools from the first cohort. In this context, expectations of progress vis-à-vis implementing new curricula, assessments, and instructional practices were revised as the challenge and need to first accomplish "foundation" tasks became clearer. Notably, the second cohort school chose to maintain its existing instructional philosophy and district curriculum, focusing its efforts on improving the quality and consistency of instructional delivery.

A variety of factors were observed to impact implementation progress, including:

- **School and staff readiness to undertake critical tasks may vary**. Factors such as high rates of staff turnover, practical limits on leadership and staff capacity to manage and assimilate change, limited past experience with school-based decision-making models, and leadership transition (at one school), served to complicate and limit implementation progress. Each school displayed unique assets and limitations that affected readiness to undertake critical tasks defined in school design plans.

- **The scope of change being pursued overwhelmed some schools**. Comprehensive school reform is an extraordinary undertaking, even under the best of circumstances, and each of these schools entered the reform process following years of unsatisfactory accountability determinations. The complexity of this undertaking was sometimes underestimated. One school attempted to simultaneously implement both an Extended Learning Time grant and its Commonwealth Pilot design plan, which were thought to be complementary. Unfortunately, concurrent implementation of two major redesign initiatives dispersed limited resources, including administrative attention, too thinly, with adverse impacts on implementation and school stability.

- **Uncertainty regarding the extent of autonomy granted to schools complicated implementation**. Despite ongoing communication between ESE, CCE, and district leadership, schools expressed uncertainty regarding the extent of autonomy granted to them in all areas, but most particularly in relation to budget, as well as to curriculum, instruction, and assessment. This hampered their ability to move forward with intended changes and, potentially, to align budget resources with those changes.

- **Some schools lacked sufficient consensus with regard to aspects of their design plans**. At one school, the principal was selected subsequent to the planning phase, while at another the principal was noted to have limited engagement in the planning process. Where leadership was retained and active in the planning process, high staff turnover rates may also have complicated the equation. One school featured an engaged leader and articulated a plan to recruit staff who believed in the school's intended approach to reform. That school showed the greatest evidence of consensus buy-in to the new school design.

- **School characteristics complicated implementation of the pilot model**. Application of the model in vocational schools or schools that exceed enrollment guidelines (400 students), or in districts with a limited number of schools or in which a reduction in force occurs, may result in more complex implementation needs (such as building SLC structures) or complicate use of hiring or budget autonomy, in particular.

Ultimately, a phased approach to implementation of design plans, such as what evolved naturally during the first year of the Initiative, may offer a more feasible approach and set of expectations for intervening in under-performing schools. The design plan for the school entering as part of the Initiative's second cohort showed evidence of this phased approach, with less broad and ambitious goals for implementation of changes in its first year of operation as a Commonwealth Pilot school.

Year Two: Solidifying the Foundation, Impacting the Classroom

The four original Commonwealth Pilot schools continued their process of change in Year Two, with each having curriculum, instruction, and assessment (CIA) practice among its focal points. As the year began, each school found itself in a unique position relative to its capacity and status, and these factors greatly influenced their pursuit of stated goals vis-à-vis CIA. During periodic interviews, key administrative and instructional leaders in all four schools related a vision for what they intended and were able to accomplish in Year Two. Schools varied in their instructional leadership capacity, as well as in their existing instructional practice and knowledge. As a result, CIA goals varied widely across schools.

ESE support for school-level change was again substantial, taking the form of targeted grants and CCE technical assistance. The focus of support was defined through substantive engagement on the part of the schools receiving services. Much of the assistance was devoted to development or improvement of CIA, but some schools continued to exhibit an emphasis on developing school leadership and planning structures. This was particularly true at the increasingly large and organizationally complex vocational school. By the end of Year Two, all schools reported progress with respect to CIA, but none felt they were near an end point in their improvement process.

Three of the four schools undertook an examination of existing curricula as a basis for assessing needs, two of which made substantial progress in this regard. One school implemented a comprehensive English language arts (ELA) curriculum developed by its faculty under the guidance of a program director, and proposals for revised curricula were also submitted by its science, mathematics, and history departments in spring 2009. This school also sought to improve responsiveness to the needs of its English language learners. A second school engaged in curriculum mapping, adopted "power standards" (which continue to be refined), and developed a number of interdisciplinary "learning expeditions." This school also developed and implemented student assessments in four core subject areas, which it believes are more timely and better aligned with the school's curriculum than standard district assessments.

Less progress was achieved with regard to curriculum at two other schools. One of these experienced high turnover within its administrative leadership team and was still working to develop its SLC and instructional leadership structures. At this school, vocational and academic classroom teachers worked with CCE staff to begin curriculum evaluation and mapping, a process still in its beginning stages. The other school experienced 50% staff turnover prior to Year Two. The principal saw a need to focus on the fundamentals of instructional practice and classroom management and felt that staff were not yet ready to undertake a substantive revision of existing CIA.

A number of factors were observed to impact implementation of planned changes in Year Two, including:

- **Leadership and staff turnover affected readiness to build upon foundations established in Year One**. Following a year of structure and capacity building, turnover rates at the two middle schools exceeded 40%. Similarly, one high school experienced substantial administrative leadership turnover. These unplanned changes affected continuity of key initiatives and eroded capacity established in the prior year.

- **Two schools experienced significant external threats to design plan implementation**. For a variety of reasons, one district elected to close its Commonwealth Pilot school at the end of Year Two. Another school was informed that it would lose revenues supporting its extended day schedule and have a new principal at the end of Year Two. As these external "threats" became evident, they became a major distraction to faculty and diminished focus on, and possibly commitment to, design plan implementation.

- **Some schools reported increased autonomy, but others did not**. Interview data suggest continued tension regarding district accommodation of school-level autonomies, but reports vary by school, even within districts. This uncertainty, which is difficult to validate, may hamper schools' exercise of these rights.

- **Even where things went well, change proved a gradual process.** No school feels it accomplished all of its goals vis-à-vis CIA, despite their excitement at the progress they were able to achieve.

Initial Impacts

Design plan implementation has resulted in substantive changes to operations and practice at all five Commonwealth Pilot schools. The key question is whether these changes are resulting in the intended positive impacts on student learning and achievement. At this stage of implementation, the answer to that question remains unclear. Data suggest that important intermediate impacts such as improvements in school culture, capacity, and practice have been attained, but the scope—and even the direction—of impacts varies across schools. At the close of Year Two, some schools appeared better positioned to improve or accelerate student achievement than others, based on the proximity of realized changes to classroom instruction.

In Year One, staff of all five participating schools generally characterized the changes they had undertaken as the "right direction." In Year Two, this sentiment remained largely unchanged at two of these schools, but large proportions of staff expressed new uncertainty regarding their school's direction at two others. Not coincidentally, these were also the schools that faced uncertain futures due to planned closure or steep declines in available resources.

Preliminary Impacts

The Commonwealth Pilot Schools Staff Survey engaged returning staff from each school to understand the preliminary impacts of the Initiative on several measures of school vision, culture, and practice. A measure was considered to have improved, worsened, or remained the same if the largest number of staff selected that option.

As Reported by Returning Staff at the Conclusion of Year One (all five schools)

- **The first year of design plan implementation resulted in improvements in vision, culture, and practice at four schools**. Each of these schools' staff cited improvement on six or more of the nine key outcome measures, with no indication of worsening conditions. At the fifth school, impacts were mixed and directly reflected the school's struggle to implement its design plan.
- **Improvements in staff collaboration and in the schools' freedom to make decisions were reported at all five schools.** This finding reflects progress made in the institution of new schedules, governing boards, and SLC or instructional leadership team structures within the schools. These changes provided new time for collaboration and mechanisms through which leadership could be exercised.
- **Improvement was reported with regard to the quality of instruction, sense of direction, focus on student needs, and approach to student support services at four schools.** Returning staff of the remaining school generally reported no change on these measures, but they felt the school's sense of direction had worsened. Collegiality reportedly improved at three of the five schools and remained the same at two.
- **Mixed impacts were reported with regard to student behavior.** Returning staff at the two schools that systematically downsized enrollment overwhelmingly perceived improvement in student behavior, while staff at a third school indicated behavior had worsened. No change was reported at the remaining two schools.
- **Limited improvement was reported with respect to subject area curricula and the use of assessment data.** Returning staff of two schools reported improvement in the use of assessment data, with one reporting improvement in curricula. This reflects schools' decisions to defer many CIA design plan goals to Year Two.

As Reported by Returning Staff at the Conclusion of Year Two (the four original schools)

- **Progress continued in Year Two, as staff of all four schools cited improvement in vision, culture, and practice.** Two schools cited improvements on all nine key measures, while another cited seven. Notably, staff of the school that showed the least positive impacts in Year One noted modest improvement on five measures.
- **Improvements to curriculum, instruction, and assessment were evident at all schools.** This suggests the intended focus for SY09 was realized. Staff cited improvement in instructional quality and teachers' use of assessment data at all four schools. Improvements to curriculum were most commonly reported at three schools but were also in evidence at the fourth.
- **Improvements in staff collaboration and schools' focus on student needs were reported by staff of all four schools.** Data generally suggest continued progress in these areas. In addition, staff of three schools cited improvement in their collegiality and sense of direction.
- **Mixed impacts continued to be reported with regard to student behavior.** Further improvement was cited at the two schools where progress on this measure was reported in Year One, while behavior continued to worsen at a third. At the fourth school, staff generally continued to report no change in behavior, but a large minority of staff felt that it had worsened.
- **Substantial minorities of returning staff from two schools reported that freedom to make important decisions had diminished.** Both of these schools were affected by external changes (school closure, loss of revenue). Notably, many of their returning staff also cited improvement in decision-making freedom, underscoring the contradictory forces in play as governance and leadership structures continued to solidify, even in light of pending changes.

Catalysts of School Improvement

At the close of SY09, the Commonwealth Pilot Schools Staff Survey engaged all staff to assess the impact on school improvement of 12 specific changes that may have occurred in their schools. The goal of this exercise was to understand the connection between specific changes made and school improvement at this early point in the implementation process. Following are summary findings across the five schools.

Changes frequently reported to have a positive influence on school improvement

The development of school leadership teams, increased time for staff collaboration, and the introduction of new approaches to instruction received the highest overall rankings and were among the six most positive changes at most schools. At the two schools that systematically downsized enrollment as part of their design plan, this change was the single most positive factor in school improvement cited by staff. Similarly, staff of these schools highly valued decreased class sizes as a catalyst for improvement. No other school reported these findings.

Changes sometimes reported to have a positive influence on school improvement

Establishment of school governance boards, and changes to school staffing, professional development, assessment practices, and curriculum were all among the top six positive changes for two or three schools. The relative importance of these changes to school improvement varied widely by school and commonly reflected implementation priorities or contextual factors within the school or district.

Changes seldom reported to have a positive influence on school improvement

Increased school-level budget discretion and changes to instructional schedules were least frequently cited as contributing to school improvement, with no school's staff elevating them to a rank higher than seventh among the 12 changes that were assessed. It is unclear how well budget autonomy is understood at the staff level (many staff chose "don't know," which did not affect ranking) and the extent to which this autonomy exists and/or is exercised by schools is also not entirely clear.

Longer-Term Impact

The Initiative's long-term performance goals are linked directly to student MCAS achievement. In Year One, returning staff at three of the five schools reported improvement in their school's capacity to accelerate student learning, and there was evidence of at least some improvement at a fourth. Ratings were most positive at schools where the most improvement was reported with regard to intermediate outcomes pertaining to vision, culture, and practice. In Year Two, with implementation of key classroom-level changes still ongoing, returning staff at all four initial schools felt that their school had expanded their capacity to improve student learning.

Although perceptions of schools' capacity to improve student learning were generally positive, the Initiative does not yet appear to have had a substantial impact on school-level MCAS achievement. While three of the five schools experienced increases in their overall ELA CPI over the past two years, these increases are consistent with previously established improvement trends in these schools, and there is little evidence of acceleration in these trends.[2] It is notable that results at two other schools that recently experienced a decline in ELA achievement are also following previously established trends.

Trends in mathematics scores have been flat at three schools over the past two years. A fourth school had shown dramatic progress from 2005–2008 but experienced a modest decline in 2009. However, the fifth school may have begun to show acceleration in this subject area in 2009. While a single year of improvement does not constitute a trend, this school's particularly strong intermediate outcomes and specific emphasis on improving mathematics instruction during SY09 suggest it is an outcome worth monitoring.

[2] CPI, or composite performance index, is a calculation used to summarize MCAS achievement and illustrate progress towards proficiency. CPI scores are one factor used in determinations of adequate yearly progress (AYP) for accountability purposes. CPI scores included in this policy brief reflect overall scores for all tested grade levels at the school.

Lessons Learned

Examination of the experiences of the current Commonwealth Pilot schools suggests the need for a phased and nuanced approach to school reform. Design plans should engage the right leaders and reflect an objective assessment of school needs, such that they are built upon an awareness of the specific strengths, weaknesses, assets, and deficiencies that exist at both the school and district level. This ensures that priorities for both reform and technical assistance are grounded in knowledge of local context. From this point, new staff, structures, capacities, and tools can be developed strategically, with each phase supporting the success of the next and eventually leading to the goal of true whole-school reform.

Learning from these schools' experience, it is evident that change is not only a multi-step process, but one that is highly customized and open-ended in its duration, with implementation progress subject to changes in a landscape not entirely within the school's control. Nonetheless, several key developmental steps are evident, including:

Leadership Formation: Engage administrators, teachers, and other stakeholders with needed expertise and political/social capital

Planning: Assess assets and needs, develop a vision, and build an effective design plan

Foundation Building: Establish staffing and structures needed to support the vision and design plan

Capacity Building: Develop leader and staff skills and cultural norms to effectively leverage new structures and autonomies

Development: Leverage new capacity to develop new methods and tools related to CIA and student support

Diffusion: Implement new instructional and student support practices

These steps comprise a systematic approach to change that is grounded in Commonwealth Pilot schools' experience and is customizable to individual school and district needs. As these steps are considered, the role of leadership and technical assistance remains ongoing, as each school's change process must be managed to ensure that it builds successfully toward improvement and avoids implementation "meltdown." This management process should be informed by field-level knowledge of what is working, what is not, and why. This assessment can be further enhanced by measurement of specific short- and long-term benchmarks for success.

Several other observations emanating from this study may be relevant to ongoing management of school reform initiatives. These include:

- **Changes of great magnitude may commonly require an external imperative or other catalyst.** The autonomies associated with the Commonwealth Pilot Schools Initiative require concessions on the part of school districts and school staff that may be beyond the scope of what can be obtained in routine bargaining situations. Despite all parties being deeply invested in school improvement, these concessions may be hard to secure, as they affect chain of command, policy, and working conditions that are deeply institutionalized in public education. Absent an external impetus and accountability for change, certain autonomies may be difficult to realize, particularly those related to staffing, budget, and curriculum and instruction.

- **Successful change begins with an objective, deeply informed understanding of need and required support.** Assessment of district and school structures, skills, resources, and capacity can provide a greater understanding of a school's readiness to begin the proposed change process and of a district's ability to support the proposed change. Such a process would also help to define the technical assistance or support necessary to successfully pursue that change. This suggests the need for new or adapted diagnostic tools and

assessment protocols specific to this purpose, which can be applied at both the school and district level, as well as an expanded timeline for initial planning. The goal of assessment is to ensure an effective school design process, including a realistic plan for implementation.

Further, the assessment process may help identify whether schools (and districts) have characteristics and sufficient underlying capacity to make them suitable candidates for the type of substantive reform associated with the Commonwealth Pilot Schools Initiative. Experience suggests that some notable factors that may influence conversion include district size, school size and/or structural complexity, school specialty, the presence of engaged leadership within schools, the sufficiency of administrative resources, and the commitment of school and district leaders to autonomies.

- **Planning, technical assistance, and support may be required at both the school and district levels.** The implementation of autonomies central to the Commonwealth Pilot Schools model may require fundamental changes to existing school and district operations, with implications for budgeting, human resources, governance, and curriculum, instruction, and assessment systems. Further, to the extent that conversion leads to a substantial migration of students and staff, the process may have profound impacts on other district schools. Requiring districts to articulate plans early in the planning process and providing direct technical assistance in support of those plans may benefit schools' design plan implementation and, where applicable, help mitigate possible adverse effects on other schools.

- **Increased clarity regarding school and district accountability could facilitate program management and school success, so long as schools retain their freedom to innovate and refine plans.** As schools applied for Commonwealth Pilot school status, their design plans were carefully reviewed by an appointed committee of the Board of Education. However, accountability protocols associated with design plan implementation are not yet clearly articulated, and the initiative lacks a specified framework of short-term (implementation) and mid-term (culture and practice) performance benchmarks that anchor assessment of progress toward improvement. Lacking these benchmarks, AYP is perceived as the de facto success criteria, which may obscure important intermediate accomplishments. In addition, the establishment of attainable benchmarks for the early phases of implementation may help generate the "quick wins" for staff emphasized by technical assistance providers as a way to encourage buy-in and positive momentum for change.

- **Experience suggests that expedient solutions to financial resource constraints may in the long term complicate school reform.** Decisions that seem expedient may be problematic if they undermine the design process or the ability of a school to focus its resources, including administrative attention, on successful implementation of their design plan. In two instances, schools' plans leveraged financial resources associated with other initiatives. In each case, this co-mingling resulted in a substantial disruption in the school reform process. Although it is tempting to leverage any possible resource in support of school improvement, the implications of pursuing these resources for design plan implementation and sustainability should be carefully considered.

- **Uncertainty regarding commitment to the model complicates implementation.** Despite the provision of substantial technical assistance and targeted grants to the five participating schools, some leaders and staff have expressed uncertainty as to whether ESE is fully committed to the Commonwealth Pilot Schools model. This concern sometimes extends to the disposition of district and even school leaders, as well. Such uncertainty may complicate schools' ability to maintain staff buy-in and to develop and use autonomies, potentially retarding the reform process.

Lessons Learned by America's Choice from the Holyoke Turnaround Partnership

For America's Choice, the partnership with Holyoke Public Schools has been a challenging and rewarding experience. We have learned a great deal, as we have worked to make a difference for the students, teachers and administration across the school district. America's Choice is in agreement with The Meristerm Group's list of lessons learned from our partnership with ESE and the Holyoke School District. From our perspective, the list below includes the most important lessons America's Choice has learned.

A more thorough initial assessment of district strengths and needs at the onset of the Initiative would lead to better planning and implementation. While an initial assessment of schools was conducted in Holyoke, the recognition of effective practices might have been used as the foundation for the work with America's Choice, as well as other external partners. It is as vital to continue any practices and programs that are having positive impacts, as it is to end programs and practices that are not producing results and are not aligned with the proposed innovations in the Initiative.

Effective use of data must be a driving force in turning around a school district. Effective use of data must be at the core of developing leadership, establishing targets, allocating resources and improving instruction. By establishing measurable short-term and long-term targets, based on that data, stakeholders become well informed on school and district progress. Data collected, analyzed and used to plan by teachers, school leadership teams, and district administrators should include not only state assessments and standards based-benchmarks for reviewing student work, but also district/teacher developed assessments. The value of school-designed assessments that are aligned to state standards is an invaluable tool in driving instruction and improving performance.

Building district-level capacity and improving local school performance must go hand-in-hand. In as much as the role of the district is to support schools, attention to the district structure and operational capacity is a critical factor in a turnaround initiative. This focus must go hand-in-hand with school improvement efforts so that the capacity of district staff to work with schools on changing practice is built. In particular, the Curriculum Director, and those reporting to the Curriculum Director, must operate with laser-like focus on monitoring and implementation of standards-based instructional programs across the school district. Too often, people in this position are pulled in too many directions and their true purpose loses its urgency.

Differentiating instruction is critical to addressing the needs of all students. Future efforts with turnaround districts need to have an increased focus on the differentiated needs of learners. This work begins in the regular classroom with every teacher. The current year's efforts of America's Choice in Holyoke are intended to provide more support to English Language Learners. Likewise, through tiered intervention, ACI is increasingly assisting schools in the kind of instructional practices and programs required by Response to Intervention (RTI).

Careful coordination of Partnership in Holyoke builds synergy and assures good results. An effective Turnaround Initiative draws on the expertise and resources of the school community and external partners to improve district and school performance. This role has been played

effectively by DESE in terms of problem solving, dealing with conflicting agendas and keeping the focus. Creating, as The Meristerm Group suggests, a Turnaround Collaborative that includes external service providers and community-based organizations, would strengthen coordination. Great care must be taken to ensure consistent messages within the schools and across the district.

Making certain that parents, teachers, administrators and other members of the community understand the changes represented by the Initiative builds support for successful implementation. The establishment of a Turnaround Initiative is more likely to be effective if the district community believes that their opinions are valued and that they are playing a role in improving outcomes for students. Where new curriculum materials or instructional practices are being proposed a sincere dialogue between the community, the state and the partners nurtures an environment of mutual understanding and goal setting. Efforts must be made to provide access to these conversations for parents for whom English is not the primary language.

Appendix F1: Statute Governing Charter Schools

AN ACT RELATIVE TO THE ACHIEVEMENT GAP

SENATE NO. 2247

PASSED BY THE MASSACHUSETTS LEGISLATURE (GREAT AND GENERAL COURT), JANUARY 14, 2010

EXCERPTS RELATING TO CHARTER SCHOOLS

[Incentives for districts to sell or lease excess capacity to charter schools or charter school applicants]

SECTION 4. Subsection (b) of section 15 of chapter 70B of the General Laws, as so appearing, is hereby amended by adding the following paragraph:-

Before the sale or lease of an assisted structure or facility or a portion of that structure or facility, the school district in control of the structure or facility shall submit to the authority a district-wide school facility use plan that shall include, but not be limited to, a listing of all school facilities under the control of the school district, a detailed description of both the current use and proposed use of each school facility, the most recent enrollment data, by school facility, then available to the school district, a detailed floor plan of each school facility that shows and labels each space in the facility and whether it is used as a classroom or has some other use and any other information that may be required by the authority to understand the district's school facility use plan. If the plan includes the closure, sale or lease of a school facility or any part of a school facility, the authority may conduct, with the full cooperation of the district, an analysis of district-wide enrollment capacity and future enrollment trends for the district. If the capacity analysis and enrollment projection indicate an extended period of significant excess capacity within the district's educational facilities, the district may, prior to consideration of any other disposition of the identified excess capacity, make a good faith offer to sell or lease at fair market value the

identified excess capacity to a commonwealth charter school established pursuant to section 89 of chapter 71 or an applicant for a commonwealth charter school pursuant to said section 89 of said chapter 71 that serves or is seeking to serve students who live in the school district. The authority shall not recapture commonwealth and authority assistance for any such excess capacity that is sold or leased to a commonwealth charter school or applicant for a commonwealth charter school.

[Charter school statute]

SECTION 7. Said chapter 71 is hereby further amended by striking out section 89, as so appearing, and inserting in place thereof the following section:-

Section 89. (a) As used in this section the following words shall, unless the context clearly requires otherwise, have the following meanings:-

"Board", the board of elementary and secondary education.

"Charter school", commonwealth charter schools and Horace Mann charter schools unless specifically stated otherwise.

"Commissioner", the commissioner of elementary and secondary education.

"Department", the department of elementary and secondary education.

"District", or "school district", the school department of a city, town, regional school district, or county agricultural school.

"Superintendent", the superintendent of the district.

(b) The purposes of establishing charter schools are: (i) to stimulate the development of innovative programs within public education; (ii) to provide opportunities for innovative learning and assessments; (iii) to provide parents and students with greater options in selecting schools within and outside their school districts; (iv) to provide teachers with a vehicle for establishing

schools with alternative, innovative methods of educational instruction and school structure and management; (v) to encourage performance-based educational programs; (vi) to hold teachers and school administrators accountable for students' educational outcomes; and (vii) to provide models for replication in other public schools.

(c) A commonwealth charter school shall be a public school, operated under a charter granted by the board, which operates independently of a school committee and is managed by a board of trustees. The board of trustees of a commonwealth charter school, upon receiving a charter from the board, shall be deemed to be public agents authorized by the commonwealth to supervise and control the charter school.

A Horace Mann charter school shall be a public school or part of a public school operated under a charter approved by the school committee and the local collective bargaining unit in the district in which the school is located; provided that all charters shall be granted by the board of elementary and secondary education. A Horace Mann charter school shall have a memorandum of understanding with the school committee of the district in which the charter school is located which, at a minimum, defines the services and facilities to be provided by the district to the charter school and states the funding of the charter school by the district. A Horace Mann charter school established as a conversion of an existing public school shall not require approval of the local collective bargaining unit, but shall require a memorandum of understanding agreement regarding any waivers to applicable collective bargaining agreements; provided further, that the memorandum of understanding shall be approved by a majority of the school faculty; provided further, that Horace Mann charter schools that are conversion of existing public schools shall not be subject to clause (1) of subsection (i). A vote by the school faculty shall be held and finalized within 30 days of submission of the charter school application to the board of elementary and secondary education. A Horace Mann charter school shall be operated and managed by a board of

trustees independent of the school committee which approved the school. The board of trustees may include a member of the school committee.

(d) Persons or entities eligible to submit an application to establish a charter school shall include, but not be limited to: (i) a non-profit business or corporate entity; (ii) 2 or more certified teachers; or (iii) 10 or more parents; provided, however, that for profit business or corporate entities shall be prohibited from applying for a charter. The application may be filed in conjunction with a college, university, museum or other similar non-profit entity. Private and parochial schools shall not be eligible for charter school status. The board may authorize a single board of trustees to manage more than 1 charter school; provided, however, that each school is issued its own charter. The commissioner shall provide technical assistance to public school districts to assist in the development of proposals for Horace Mann charter schools.

(e) The board shall establish the information needed in an application for the approval of a charter school; provided that the application shall include, but not be limited to, a description of: (i) the mission, purpose, innovation and specialized focus of the proposed charter school; (ii) the innovative methods to be used in the charter school and how they differ from the district or districts from which the charter school is expected to enroll students; (iii) the organization of the school by ages of students or grades to be taught, an estimate of the total enrollment of the school and the district or districts from which the school will enroll students; (iv) the method for admission to the charter school; (v) the educational program, instructional methodology and services to be offered to students, including research on how the proposed program may improve the academic performance of the subgroups listed in the recruitment and retention plan; (vi) the school's capacity to address the particular needs of limited English-proficient students, if applicable, to learn English and learn content matter, including the employment of staff that meets the criteria established by the department; (vii) how the school shall involve parents as partners in the education of their children; (viii) the school governance and bylaws; (ix) a

proposed arrangement or contract with an organization that shall manage or operate the school, including any proposed or agreed upon payments to such organization; (x) the financial plan for the operation of the school; (xi) the provision of school facilities and pupil transportation; (xii) the number and qualifications of teachers and administrators to be employed; (xiii) procedures for evaluation and professional development for teachers and administrators; (xiv) a statement of equal educational opportunity which shall state that charter schools shall be open to all students, on a space available basis, and shall not discriminate on the basis of race, color, national origin, creed, sex, ethnicity, sexual orientation, mental or physical disability, age, ancestry, athletic performance, special need, proficiency in the English language or academic achievement; (xv) a student recruitment and retention plan, including deliberate, specific strategies the school will use to ensure the provision of equal educational opportunity as stated in clause (xiv) and to attract, enroll and retain a student population that, when compared to students in similar grades in schools from which the charter school is expected to enroll students, contains a comparable academic and demographic profile; and (xvi) plans for disseminating successes and innovations of the charter school to other non-charter public schools.

(f) The student recruitment and retention plan required under clause (xv) of subsection (e) shall include, but not be limited to, a detailed description of deliberate, specific strategies the school will use to maximize the number of students who successfully complete all school requirements and prevent students from dropping out. The student recruitment and retention plan shall be updated annually and shall include annual goals for: (i) recruitment activities; (ii) student retention activities; and (iii) student retention.

(g) To ensure that a commonwealth charter school shall fulfill its obligations under its recruitment and retention plan, the school district or districts from which the commonwealth charter school is expected to enroll students shall annually provide, at the request of a commonwealth charter school, to a third party mail house authorized by the department, the

addresses for all students in the district eligible to enroll in the school, unless a student's parent or guardian requests that the district withhold that student's information; provided, however, that the department may require the charter school to send the mailing in the most prevalent languages of the district or districts that the charter school is authorized to serve.

At the request of a school district from which a commonwealth charter school enrolls students, the charter school shall provide to a third party mail house the addresses for all students currently enrolled in the commonwealth charter school from the district; provided, however, that the information shall not be provided if a student's parent or guardian requests that the school withhold that student's information. Each district shall be permitted to supply a mailing to the third party mail house and pay for it to be copied and mailed to families of students from said district enrolled in the commonwealth charter school.

(h) An application submitted for the establishment of a commonwealth charter school shall: (i) be submitted to the board for approval under this section; and (ii) be filed with the local school committee for each school district from which the charter school is expected to enroll students. Before final approval to establish a commonwealth charter school, the board shall hold a public hearing on the application in the school district in which the proposed charter school is to be located and solicit and review comments on the application from the local school committee of each school district from which the charter school is expected to enroll students and any contiguous districts. At least 1 member of the board shall attend the public hearing. A comprehensive written summary of all materials prepared by the department or its administrative subdivisions, which evaluates or recommends approval or disapproval of a charter application must be delivered to the members of the board, the applicant, in support of, or in opposition to, the school submitted not later than 3 days before any board vote on the charter application.

All material in support of, or in opposition to, the school submitted to the department or the board shall be made available to the applicant and affected school districts before a vote by the board on a commonwealth charter school application.

(i) (1) Not more than 120 charter schools shall be allowed to operate in the commonwealth at any time, excluding those approved pursuant to paragraph (3); provided, however, that of the 120 charter schools, not more than 48 shall be Horace Mann charter schools; provided, however, notwithstanding subsection (c) the 14 new Horace Mann charter schools shall not be subject to the requirement of an agreement with the local collective bargaining unit prior to board approval; provided, further, that after the charter for these 14 new Horace Mann charter schools have been granted by the board, the schools shall develop a memorandum of understanding with the school committee and the local union regarding any waivers to applicable collective bargaining agreements; provided, further, that if an agreement is not reached on the memorandum of understanding at least 30 days before the scheduled opening of the school, the charter school shall operate under the terms of its charter until an agreement is reached; provided, further, that not less 4 of the new Horace Mann charter schools shall be located in a municipality with more than 500,000 residents; and not more than 72 shall be commonwealth charter schools. The board shall not approve a new commonwealth charter school in any community with a population of less than 30,000 as determined by the most recent United States Census estimate, unless it is a regional charter school.

Applications to establish a charter school shall be submitted to the board annually by November 15. The board shall review the applications and grant new charters in February of the following year.

(2) In any fiscal year, no public school district's total charter school tuition payment to commonwealth charter schools shall exceed 9 per cent of the district's net school spending;

provided, however, that a public school district's total charter tuition payment to commonwealth charter schools shall not exceed 18 per cent of the district's net school spending if the school district qualifies under paragraph (3). The commonwealth shall incur charter school tuition payments for siblings attending commonwealth charter schools to the extent that their attendance would otherwise cause the school district's charter school tuition payments to exceed 9 per cent of the school district's net school spending or 18 per cent for those districts that qualify under said paragraph (3).

Not less than 2 of the new commonwealth charters approved by the board in any year shall be granted for charter schools located in districts where overall student performance on the statewide assessment system approved by the board under section 1I of chapter 69 is in the lowest 10 per cent statewide in the 2 years preceding the charter application.

In any fiscal year, the board shall approve only 1 regional charter school application of any commonwealth charter school located in a school district where overall student performance on the statewide assessment system is in the top 10 per cent in the year preceding charter application. The board may give priority to applicants that have demonstrated broad community support, an innovative educational plan, a demonstrated commitment to assisting the district in which it is located in bringing about educational change and a record of operating at least 1 school or similar program that demonstrates academic success and organizational viability and serves student populations similar to those the proposed school seeks to serve.

(3) In any fiscal year, if the board determines based on student performance data collected pursuant to section 1I, said district is in the lowest 10 per cent of all statewide student performance scores released in the 2 consecutive school years before the date the charter school application is submitted, the school district's total charter school tuition payment to commonwealth charter schools may exceed 9 per cent of the district's net school spending but

shall not exceed 18 per cent. For a district qualifying under this paragraph whose charter school tuition payments exceed 9 per cent of the school district's net school spending, the board shall only approve an application for the establishment of a commonwealth charter school if an applicant, or a provider with which an applicant proposes to contract, has a record of operating at least 1 school or similar program that demonstrates academic success and organizational viability and serves student populations similar to those the proposed school seeks to serve, from the following categories of students, those: (i) eligible for free lunch; (ii) eligible for reduced price lunch; (iii) that require special education; (iv) limited English-proficient of similar language proficiency level as measured by the Massachusetts English Proficiency Assessment examination; (v) sub-proficient, which shall mean students who have scored in the "needs improvement", "warning" or "failing" categories on the mathematics or English language arts exams of the Massachusetts Comprehensive Assessment System for 2 of the past 3 years or as defined by the department using a similar measurement; (vi) who are designated as at risk of dropping out of school based on predictors determined by the department; (vii) who have dropped out of school; or (viii) other at-risk students who should be targeted to eliminate achievement gaps among different groups of students. For a district approaching its net school spending cap, the board shall give preference to applications from providers building networks of schools in more than 1 municipality.

The recruitment and retention plan of charter schools approved under this paragraph shall, in addition to the requirements under subsections (e) and (f), include, but not limited to: (i) a detailed description of deliberate, specific strategies the charter school shall use to attract, enroll and retain a student population that, when compared to students in similar grades in schools from which the charter school shall enroll students, contains a comparable or greater percentage of special education students or students who are limited English-proficient of similar language proficiency as measured by the Massachusetts English Proficiency Assessment examination and 2

or more of the following categories: students eligible for free lunch; (ii) students eligible for reduced price lunch; students who are sub-proficient, those students who have scored in the "needs improvement", "warning" or "failing" categories on the mathematics or English language arts exams of the Massachusetts Comprehensive Assessment System for 2 of the past 3 years or as defined by the department using a similar measurement; (iii) students who are determined to be at risk of dropping out of school based on predictors determined by the department; (iv) students who have dropped out of school; or (v) other at-risk students who should be targeted in order to eliminate achievement gaps among different groups of students. A charter school approved under this section shall supply a mailing in the most prevalent languages of the district the charter is authorized to serve to a third party mail house and pay for it to be copied and mailed to eligible students. If a school is or shall be located in a district with 10 per cent or more of limited English-proficient students, the recruitment strategies shall include a variety of outreach efforts in the most prevalent languages of the district. The recruitment and retention plan shall be updated each year to account for changes in both district and charter school enrollment.

If a district is no longer in the lowest 10 per cent, the net school spending cap shall be 9 per cent, unless the district net school spending was above 9 per cent in the year prior to moving out of the lowest 10 per cent in which case the net school spending cap shall remain at the higher level plus enrollment previous approved by the board. The department shall determine and make available to the public a list of the school districts in said lowest 10 per cent.

(j) The board shall make the final determination on granting charter school status and may condition charters on the applicant's taking certain actions or maintaining certain conditions. The board shall establish criteria for the approval of a charter application and recommendations to the board shall be based upon and reference those criteria.

If a final application is deemed inadequate by the department, the department may provide feedback to the applicant and invite it to submit a stronger application subsequently. Once a final application has been filed, only minor, non-substantive amendments shall be allowed. The department shall maintain a written detailed summary of interviews it conducts with final charter applicants and include that summary with the final application materials that are provided to the board, local school officials and the public.

(k) A charter school established under a charter granted by the board shall be a body politic and corporate with all powers necessary or desirable for carrying out its charter program, including, but not limited to, the power to:

(1) adopt a name and corporate seal; provided that any name selected must include the words "charter school";

(2) sue and be sued, but only to the same extent and upon the same conditions that a municipality can be sued;

(3) acquire real property, from public or private sources, by lease, lease with an option to purchase or by gift, for use as a school facility; provided, however, in the case of a Horace Mann charter school, the approval of the local school committee shall be obtained before acquisition of any such real property owned or controlled by the body;

(4) receive and disburse funds for school purposes;

(5) make contracts and leases for the procurement of services, equipment and supplies; provided, however, that if the charter school intends to procure substantially all educational services under contract with another person, the terms of such a contract must be approved by the board either as part of the original charter or by way of an amendment thereto; provided, further that the board shall not approve any such contract terms, the purpose or effect of which is to

avoid the prohibition of this section against charter school status for private and parochial schools;

(6) incur temporary debt in anticipation of receipt of funds; provided that a Horace Mann school shall obtain the approval of the local school committee and appropriate local appropriating authorities and officials relative to any proposed lien or encumbrance upon public school property or relative to any financial obligation for which the local school district shall become legally obligated; and provided further, that notwithstanding any general or special law to the contrary, the terms of repayment of any charter school's debt shall not exceed the duration of the school's charter without the approval of the board;

(7) solicit and accept grants or gifts for school purposes; and

(8) have such other powers available to a business corporation formed under chapter 156B that are not inconsistent with this chapter.

(l) Charter schools shall not charge a public school for the use or replication of a part of their curriculum subject to the prescriptions of a contract between the charter schools and any third party providers.

(m) Charter schools shall be open to all students, on a space available basis, and shall not discriminate on the basis of race, color, national origin, creed, sex, ethnicity, sexual orientation, mental or physical disability, age, ancestry, athletic performance, special need, or proficiency in the English language or a foreign language or academic achievement. Charter schools may limit enrollment to specific grade levels and may structure curriculum around particular areas of focus such as mathematics, science or the arts. There shall be no application fee for admission to a charter school. There shall be no tuition charge for students attending charter schools.

(n) Preference for enrollment in a commonwealth charter school shall be given to students who reside in the city or town in which the charter school is located. Priority for enrollment in a Horace Mann charter school shall be given first to students actually enrolled in the school on the date that the application is filed with the board and to their siblings; second to other students actually enrolled in the public schools of the district where the Horace Mann charter school is to be located; and third to other resident students.

If the total number of students who are eligible to attend and apply to a charter school and who reside in the city or town in which the charter school is located or are siblings of students already attending said charter school, is greater than the number of spaces available, an admissions lottery, including all eligible students applying, shall be held to fill all of the spaces in that school from among the students. If there are more spaces available than eligible applicants from the city or town in which the charter school is located and who are siblings of current students and more eligible applicants than spaces left available, a lottery shall be held to determine which of the applicants shall be admitted; provided, however, that a lottery conducted for Horace Mann charter schools shall reflect the enrollment priorities of this section. Notwithstanding this subsection, upon application by the board of trustees of a charter school or by the persons or entities seeking to establish a charter school, the board may amend or grant a charter designating such school a regional charter school; provided, however, that such regional charter school shall be exempt from the local preference provision of this paragraph; provided further, that such regional charter school shall continue to grant a preference of siblings of currently enrolled students; and provided further, that if the number of applicants remaining is greater than the number of spaces available, such regional charter school shall conduct a single lottery to determine which applicants shall be admitted.

In any instance where a charter school approved after January 1, 2011 enrolls more than 20 per cent of its total enrollment from school districts not included in its original charter

pursuant to subsection (h) for 2 consecutive years, the charter school shall submit an application to the board for an amendment to its charter that reflects its actual enrollment patterns; provided further that upon renewal of a charter school approved prior to January 1, 2011, the board shall establish a timeline of not less than 5 years for the charter to comply with this requirement.

Nothing in this section shall be construed to require a charter school to unenroll any student currently in attendance at the time this act takes effect.

When a student stops attending a charter school for any reason, the charter school shall fill the vacancy with the next available student on the waitlist for the grade in which the vacancy occurs and shall continue through the waitlist until a student fills the vacant seat. If there is no waitlist, a charter school shall publicize an open seat to the students of the sending district or districts and make attempts to fill said vacant seat. Charter schools shall attempt to fill vacant seats up to February 15, provided, however, that charter schools may but are not required to fill vacant after February 15. If a vacancy occurs after February 15, such vacancy shall remain with the grade cohort and shall be filled in the following September if it has not previously been filled. A vacancy occurring after February 15 shall not be filled by adding a student to a lower grade level. Charter schools shall attempt to fill vacant seats up to February 15, excluding seats in the last half of the grades offered by the charter school, and grades 10, 11 and 12. Within 30 days of a vacancy being filled, the charter school shall send the name of the student filling such vacancy to the department for the purposes of the department updating its waitlist.

The names of students who entered the lottery but did not gain admission shall be maintained on a waitlist, which shall be forwarded to the department not later than June 1 in the year in which the lottery is held. In addition to the names of students, the school shall supply to the department each student's home address, telephone number, grade level and other information the department deems necessary. The department shall maintain a consolidated waitlist for each

municipality in order to determine the number of individual students in each municipality seeking admission to charter schools.

(o) Each charter school shall annually, not later than April 1, notify each public school district in writing of the number and grade levels of students who will be attending the charter school from that district the following September as well as the number of new students who will be transferring from that district to the charter school in the following September. Tuition for charter school students shall only be paid for the number of students for whom notification has been reported by April 1. Tuition for charter school students shall be paid only for students actually enrolled in the school.

(p) A student may withdraw from a charter school at any time and enroll in another public school where the student resides.

A student may be expelled from a charter school based on criteria determined by the board of trustees, and approved by the board, with the advice of the principal and teachers; provided, however, that charter school policies shall be consistent with sections 37H and 37H½.

(q) A charter school may be located in part of an existing public school building, in space provided on a private work site, in a public building or any other suitable location; provided, however, that no school building assistance funds authorized under chapter 70B shall be awarded to a commonwealth charter school for the purpose of constructing, reconstructing or improving a commonwealth charter school.

(r) The school committee of each district where a Horace Mann charter school is located shall develop a plan to disseminate innovative practices of the charter school to other public schools within the district subject to the provisions of any contract between the Horace Mann charter school and any third party provider.

The commissioner shall facilitate the dissemination of successful innovation programs of charter schools and provide technical assistance for other school districts to replicate such programs. Each charter school shall collaborate with its sending district on the sharing of innovative practices.

(s) A charter school shall operate in accordance with its charter and the provisions of law regulating other public schools; provided, however, that sections 41 and 42 shall not apply to employees of commonwealth charter schools. Charter schools shall comply with the chapters 71A and 71B; provided, however, that the fiscal responsibility of a special needs student currently enrolled in or determined to require a private day or residential school shall remain with the school district where the student resides. If a charter school expects that a special needs student currently enrolled in the charter school may be in need of the services of a private day or residential school, it shall convene an individual education plan team meeting for the student. Notice of the team meeting shall be provided to the special education department of the school district in which the child resides at least 5 days in advance. Personnel from the school district in which the child resides shall be allowed to participate in the team meeting concerning future placement of the child.

(t) Horace Mann charter schools shall be exempt from local collective bargaining agreements to the extent provided by the terms of its charter; provided, however, that employees of the Horace Mann charter school shall continue to be members of the local collective bargaining unit and shall accrue seniority and shall receive, at a minimum, the salary and benefits established in the contract of the local collective bargaining unit where the Horace Mann charter school is located. Employees of Horace Mann charter schools shall be exempt from all union and school committee work rules to the extent provided by the school's charter. Employees in Horace Mann charter schools shall be required to work the full work day and work year to the extent provided by the terms of the school's charter.

(u) Notwithstanding this section or any other general or special law to the contrary, for the purposes of chapter 268A: (i) a charter school shall be deemed to be a state agency; and (ii) the appointing official of a member of the board of trustees of a charter school shall be deemed to be the commissioner. Members of boards of trustees of charter schools operating under the this section shall file a disclosure annually with the state ethics commission, the department and the city or town clerk wherein such charter school is located. The disclosure is in addition to the requirements of said chapter 268A and a member of a board of trustees must also comply with the disclosure and other requirements of said chapter 268A. The form of the disclosure shall be prescribed by the ethics commission and shall be signed under penalty of perjury. Such form shall be limited to a statement in which members of the board of trustees shall disclose any financial interest that they or a member of their immediate families, as defined in section 1 of said chapter 268A, have in any charter school located in the commonwealth or in another state or with a person doing business with a charter school.

Each member of a board of trustees of a charter school shall file such disclosure for the preceding calendar year with the commission within 30 days of becoming a member of the board of trustees, by September 1 of each year thereafter that the person is a member of the board and by September 1 of the year after the person ceases to be a member of the board; provided, however, that no member of a board of trustees shall be required to file a disclosure for the year in which he ceases to be a member of the board if he served less than 30 days in that year.

(v) Students in charter schools shall be required to meet the same performance standards, testing and portfolio requirements set by the board for students in other public schools.

(w) The board of trustees, in consultation with the teachers, shall determine the school's curriculum and develop the school's annual budget. The board of trustees of each Horace Mann charter school shall annually submit to the superintendent and school committee of the district in

which the school is located a budget request for the following fiscal year. The school committee shall act on the budget request in conjunction with its actions on the district's overall budget. Each Horace Mann charter school shall receive in response to the budget request not less than it would have under the district's budgetary allocation rules. The board of trustees may appeal any disproportionate budgetary allocation to the commissioner, who shall determine an equitable funding level for the school and shall require the school committee to provide the funding.

Following the appropriation of the district's operating budget for the fiscal year, the amount approved by the local appropriating authority for the operation of each Horace Mann charter school shall be available for expenditure by the board of trustees of the school for any lawful purpose without further approval by the superintendent or the school committee. A Horace Mann charter school shall not expend or incur obligations in excess of its budget request; provided, however, that a Horace Mann charter school may spend federal and state grants and other funds received independent of the school district not accounted for in the charter school's budget request without prior approval from the superintendent or the school committee.

(x) Upon approval of a Horace Mann charter school by the board, the superintendent where the Horace Mann charter school is to be located shall reassign, to the extent provided by the terms of its charter, any faculty member who wishes to be reassigned to another school located within the district.

(y) Employees of charter schools shall be considered public employees for purposes of tort liability under chapter 258 and for collective bargaining purposes under chapter 150E. The board of trustees shall be considered the public employer for purposes of tort liability under said chapter 258 and for collective bargaining purposes under said chapter 150E; provided, however, that in the case of a Horace Mann charter school, the school committee of the school district in which the Horace Mann charter school is located shall remain the employer for collective

bargaining purposes under said chapter 150E. Teachers employed by a charter school shall be subject to the state teacher retirement system under chapter 32 and service in a charter school shall be creditable service within the meaning thereof.

A charter school shall recognize an employee organization designated by the authorization cards of 50 per cent of its employees in the appropriate bargaining unit as the exclusive representative of all the employees in such unit for the purpose of collective bargaining.

(z) Each local school district shall be required to grant a leave of absence to any teacher in the public schools system requesting such leave to teach in a commonwealth charter school. A teacher may request a leave of absence for up to 2 years.

At the end of the second year, the teacher may either return to his former teaching position or, if he chooses to continue teaching at the commonwealth charter school, resign from his school district position.

(aa) Notwithstanding section 59C, the internal form of governance of a charter school shall be determined by the school's charter.

(bb) A charter school shall comply with all applicable state and federal health and safety laws and regulations.

(cc) The students who reside in the school district in which the charter school is located shall be provided transportation to the charter school by the resident district's school committee on similar terms and conditions as transportation is provided to students attending local district schools if the transportation is requested by the charter school. In providing the transportation, the school committee shall accommodate the particular school day and school year of the charter school; provided, however, that in the event that a school committee limits transportation for district school students, the school district shall not be required to provide transportation to any

commonwealth charter school beyond the limitations. A charter school and the sending district shall meet to plan bus routes and charter school starting and ending times in order to assist the district with cost effective means of transportation. Schools operating under a charter granted after January 1, 1997, and all charter schools operating during fiscal year 1999 and thereafter, shall not receive funds for transportation above the amount actually required by such charter school for the provision of transportation services to eligible students. If the sending district provides an alternative method of transportation for students enrolled in the sending district's public schools, it shall not be assessed for transportation costs which exceed the per pupil cost of said alternative. Costs for transportation shall be included only if transportation is provided for students in the same program and grade level as those in the charter school. Students who do not reside in the district in which the charter school is located shall be eligible for transportation in accordance with section 12B of chapter 76. A regional charter school as designated by the board, and whose charter provides for transportation of all students from charter municipalities shall also be reimbursed by the commonwealth under section 16C of chapter 71 for transportation provided to pupils residing outside the municipality where the charter school is located, but no reimbursement for transportation between the charter school and home shall be made on account of any pupil who resides less than 1.5 miles from the charter school, measured by a commonly traveled route. If a charter school provides its own transportation, the school shall coordinate and collaborate with the sending district to provide cost effective means of transportation. All such transportation shall be determined in advance of the approval of the district's final budget for a fiscal year; provided, however, that a commonwealth charter school shall be required to determine such transportation in the first year of its operation as soon as practicable.

(dd) A charter granted by the board shall be for 5 years. The board shall develop procedures and guidelines for revocation and renewal of a school's charter; provided, however, that a charter for a Horace Mann charter school shall not be renewed by the board without a

majority vote of the school committee and local collective bargaining unit in the district where said charter school is located; provided, however, that a commonwealth charter shall not be renewed unless the board of trustees of the charter school has documented in a manner approved by the board that said commonwealth charter school has provided models for replication and best practices to the commissioner and to other public schools in the district where the charter school is located.

When deciding on charter renewal, the board shall consider progress made in student academic achievement, whether the school has met its obligations and commitments under the charter, the extent to which the school has followed its recruitment and retention plan by using deliberate, specific strategies towards recruiting and retaining the categories of students enumerated in paragraph (3) of subsection (i) and the extent to which the school has enhanced its plan as necessary. The board may impose conditions on the charter school upon renewal if it fails to adhere to and enhance its recruitment and retention plan as required. When deciding on charter renewal, the board shall take into account the annual attrition of students. The board shall also consider innovations that have been successfully implemented by the charter school and the evidence that supports the effectiveness of these practices. Upon renewal of its charter, a school shall update and enhance its recruitment and retention plan as necessary to account for changes in enrollment.

(ee) The board may revoke a school's charter if the school has not fulfilled any conditions imposed by the board in connection with the grant of the charter or the school has violated any provision of its charter. The board may place conditions on a charter or may place a charter school on a probationary status to allow the implementation of a remedial plan after which, if said plan is unsuccessful, the charter may be summarily revoked.

(ff) Commonwealth charter schools shall be funded as follows: the commonwealth shall pay a tuition amount to the charter school, which shall be the sum of the tuition amounts calculated separately for each district sending students to the charter school. Tuition amounts for each sending district shall be calculated by the department using the formula set forth herein, to reflect, as much as practicable, the actual per pupil spending amount that would be expended in the district if the students attended the district schools. The tuition amount shall be calculated separately for each district sending students to a charter school, and for each charter school to which a district sends students. Each district's per pupil tuition amount for each charter school to which it sends students shall include a per pupil foundation budget component, adjusted to reflect the actual net school spending in the sending district.

In calculating the per pupil foundation budget component, the department shall calculate a foundation budget for the students from each sending district attending the charter school in the previous fiscal year, pursuant to the provisions of section 2 of chapter 70; provided, that the department shall not include in said calculation the assumed tuitioned-out special education enrollment, nor any amounts generated by said assumed enrollment, as defined by said section 2. The per pupil foundation budget component shall be the district's foundation budget for the charter school, as so calculated, divided by the number of students attending the charter school from the sending district in the previous fiscal year. The per pupil foundation budget component shall be calculated separately for each charter school to which a district sends students. The foundation budget for a charter school shall be the sum of the foundation budgets for the charter school for each district sending students to the charter school.

In adjusting the per pupil foundation budget component, the department shall calculate for each sending district an above foundation spending percentage, which shall be the percentage by which the district's actual net school spending exceeds the foundation budget for the district, as calculated pursuant to the provisions of chapter 70. The department shall further calculate the

percentage of actual net school spending reported by the sending district associated with tuition costs for tuitioned-out special education students, including education that occurs in educational collaboratives, and with spending on health care costs for retired employees, for any district for which such costs are included in net school spending, and shall reduce the district's above foundation spending percentage proportionately. The per pupil foundation budget component for each charter school to which the sending district sends students shall be increased by said adjusted above foundation spending percentage.

The total tuition amount owed by a sending district to a charter school shall be the per pupil tuition amount as defined above, multiplied by the total number of students attending the charter school from that district in the current fiscal year. The sending district's total charter school tuition amount for purposes of the following paragraphs shall be the sum of the district's tuition amounts for each charter school to which the district sends students, calculated using the provisions of this section. The receiving charter school's total charter school tuition amount shall be the sum of the tuition amounts calculated for the charter school for each district sending students to the charter school.

If a charter school student previously attended a private or parochial school or was home schooled, the commonwealth shall assume the first year cost for that student and shall not reduce the sending district's chapter 70 aid for that student's tuition in that fiscal year.

The state treasurer is hereby authorized and directed to deduct a district's total charter school tuition amount, as calculated herein, from the total state school aid, as defined in section 2 of said chapter 70, of the district in which the student resides prior to the distribution of said aid. In the case of a child residing in a municipality which belongs to a regional school district, the charter school tuition amount shall be deducted from said chapter 70 education aid of the school district appropriate to the grade level of the child. If, in a single district, the total of all such

deductions exceeds the total of said education aid, this excess amount shall be deducted from other aid appropriated to the city or town. If, in a single district, the total of all such deductions exceeds the total state aid appropriated, the commonwealth shall appropriate this excess amount; provided, however, that if said district has exempted itself from the provisions of said chapter 70 by accepting section 14 of said chapter 70, the commonwealth shall assess said district for said excess amount.

The state treasurer is hereby further authorized and directed to disburse to the charter school an amount equal to the charter school's total charter school tuition amount as defined above.

If more than 1 charter school is managed by a single network or board of trustees, funding shall not be transferred among individual schools within the network unless such schools are located in the same school district.

The department shall, subject to appropriation, provide funding to charter schools for a portion of the per pupil capital needs component included in the charter tuition amount and shall reimburse the sending school districts for said costs. In fiscal year 2011 and thereafter, such funding shall not be less than the per pupil amount provided in fiscal year 2010.

(gg) Any district whose total charter school tuition amount is greater than its total charter school tuition amount for the previous year shall be reimbursed by the commonwealth in accordance with this paragraph and subject to appropriation; provided, however, that no funds for said reimbursements shall be deducted from funds distributed pursuant to chapter 70. The reimbursement amount shall be equal to 100 per cent of the increase in the year in which the increase occurs and 25 per cent in the second, third, fourth, fifth and sixth years following.

(hh) If the unencumbered amount of cumulative surplus revenue from tuition held by a charter school at the end of a fiscal year, less (i) the amount of the fourth quarter tuition payment,

(ii) the amount held in reserve for the purchase or renovation of an academic facility pursuant to a capital plan, and (iii) any reserve funds held as security for bank loans, exceeds 20 per cent of its operating budget and its budgeted capital costs for the succeeding fiscal year as is reported in a capital plan to be submitted in the school's most recent annual report, the amount in excess of said 20 per cent shall be returned by the charter school to the sending district or districts and the state in proportion to their share of tuition paid during the fiscal year. At the end of each fiscal year, the commissioner shall certify the amounts described above and the amount, if any, by which it exceeds 20 per cent of the school's operating budget and its budgeted capital costs for the succeeding fiscal year, and shall report such amount to the school committee of the sending district or districts and the applicable board of selectmen or city council by December 1 of each year. A charter school shall annually make any payment required by this subsection no later than December 31.

(ii) No teacher shall be hired by a commonwealth charter school who is not certified pursuant to section 38G unless the teacher has successfully passed the state teacher test as required in said section 38G.

(jj) Each charter school shall submit an annual report, no later than August 1, to the board, the local school committee, each parent or guardian of its enrolled students and each parent or guardian contemplating enrollment in that charter school. The annual report shall be in such form as may be prescribed by the board and shall include, but not be limited to: (i) discussion of progress made toward the achievement of the goals set forth in the charter; and (ii) a financial statement setting forth by appropriate categories the revenue and expenditures for the year just ended and a balance sheet setting forth the charter school's assets, liabilities and fund balances or equities.

The department shall promulgate regulations creating a reporting requirement for a charter school's net asset balance at the end of the fiscal year; provided, however, that said regulations shall require, without limitation, the following: the revenue and expenditures for the year just ended with a specific accounting of the uses of public and private dollars; how the capital needs component of the charter school's tuition was spent; compensation and benefits for teachers, staff, administrators, executives, and board of trustees; the amount of any and all funds transferred to a management company; the sources of any surplus funds, specifically whether they are private or public; how any surplus funds were used in the previous fiscal year; and the planned use of any surplus funds in the upcoming fiscal year on in future fiscal years.

Each charter school shall keep an accurate account of all its activities and all its receipts and expenditures and shall annually cause an independent audit to be made of its accounts. Such audit shall be filed annually on or before January 1 with the department and the state auditor and shall be in a form prescribed by the state auditor. The state auditor may investigate the budget and finances of charter schools and their financial dealings, transactions and relationships, and shall have the power to examine the records of charter schools and to prescribe methods of accounting and the rendering of periodic reports.

(kk) The commissioner shall collect data on the racial, ethnic and socio-economic make-up of the student enrollment of each charter school in the commonwealth. The commissioner shall also collect data on the number of students enrolled in each charter school who have individual education plans pursuant to chapter 71B and those requiring English language learners programs under chapter 71A. The commissioner shall file said data annually with the clerks of the house and senate and the joint committee on education not later than December 1.

(ll) Individuals or groups may complain to a charter school's board of trustees concerning any claimed violations of the provisions of this section by the school. If, after presenting their

complaint to the trustees, the individuals or groups believe their complaint has not been adequately addressed, they may submit their complaint to the board which shall investigate such complaint and make a formal response.

(mm) The board shall promulgate regulations for implementation and enforcement of this section.

[Phase-in of increase to charter net school spending cap]

SECTION 9. For the school districts in which net school spending on charter school tuition does not exceed 18 per cent as set forth in subsection (i) of section 89 of chapter 71, the following shall apply: (1) in fiscal year 2011, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 12 per cent of the district's net school spending; (2) in fiscal year 2012, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 13 per cent of the district's net school spending; (3) in fiscal year 2013, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 14 per cent of the district's net school spending; (4) in fiscal year 2014, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 15 per cent of the district's net school spending; (5) in fiscal year 2015, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 16 per cent of the district's net school spending; (6) in fiscal year 2016, a public school district's total charter tuition payment to commonwealth charter schools shall be limited to 17 per cent of the district's net school spending; and (7) in fiscal year 2017, a public school district's total charter tuition payment to commonwealth charter schools shall be limited to 18 per cent of the district's net school spending.

[Other provisions relating to charter schools]

SECTION 11. Notwithstanding any general or special law to the contrary, the department of elementary and secondary education shall draft a model policy for school districts regarding the grade placement and eligibility for high school graduation of students leaving a commonwealth charter school and seeking to enroll in a district school. In drafting the model policy, the department shall confer with school districts and commonwealth charter schools. The model

policy shall be made available not later than December 31, 2010. Until a school district adopts a policy regarding the grade placement or eligibility for high school graduation of students leaving a commonwealth charter school, when determining the appropriate grade placement or eligibility for high school graduation of a student leaving a commonwealth charter school and enrolling in a district school, a district shall examine the course of study and level of academic attainment of the student.

SECTION 12. Notwithstanding any general or special law to the contrary, a charter school whose charter was granted before January 1, 2010 shall have a recruitment and retention plan required under subsection (f) of section 89 of chapter 71 of the General Laws in effect for the 2011-2012 school year or at the time of its next charter renewal, whichever occurs first.

SECTION 13. Notwithstanding subsection (gg) of section 89 of chapter 71 of the General Laws, any district that incurred an increase in commonwealth charter tuition costs between July 1, 2008 and June 30, 2010 shall be reimbursed in an amount equal to 100 per cent of the increase in the year in which the increase occurs, 60 per cent of that amount in the first year following and 40 per cent of that amount in the second year following.

SECTION 14. Notwithstanding any special or general law to the contrary, the department of elementary and secondary education shall study the possibility of allowing students living outside of the commonwealth who are eligible to attend public schools operating in the same geographic area as a charter school or a regional charter school to be eligible to attend the charter or regional charter school. The department shall examine the rules and regulations necessary to implement this change which shall include, but not be limited to, collection of out-of-state tuition from students living outside of the commonwealth and attending a commonwealth charter school, collection of tuition from foreign exchange students attending a commonwealth charter school and reimbursement of commonwealth charter schools for services rendered to foreign exchange

students and students living outside of the commonwealth. The department shall issue its report and its recommendations, if any, together with drafts of legislation necessary to carry those recommendations into effect to the joint committee on education not later than August 15, 2010.

Appendix F2: Charter School Regulations

AMENDMENTS TO CHARTER SCHOOL REGULATIONS
603 CMR 1.00

As voted by the Board of Elementary and Secondary Education on May 25, 2010

Background:
Chapter 12 of the Acts of 2010, *An Act Relative to the Achievement Gap*, was signed into law on January 18, 2010 and took effect immediately. Among other things, the new law amended the charter school statute, Mass. General Laws chapter 71, section 89. These amended Charter School Regulations, 603 CMR 1.00, are now consistent with and implement the amended statute.

1.01: Scope, Purpose and Authority

(1) Purpose. The purpose of 603 CMR 1.00 is to provide uniform rules and procedures governing the establishment and operation of charter schools.

(2) Authority. 603 CMR 1.00 is promulgated under the authority of M.G.L. c. 69, § 1B, c. 71, § 89.

1.02: Definitions

As used in 603 CMR 1.00, unless the context clearly requires otherwise, terms shall have the following meanings:

Administrator. Any individual duly authorized by a charter school's board of trustees to manage the programs and operations of the charter school in accordance with its charter as well as federal and state laws and regulations.

Application Cycle. The period beginning with the availability of application information and extending through the receipt of final charter school applications for review, ending no later than the following February when the Board of Elementary and Secondary Education makes final decisions on awarding new charters. The various stages of the application cycle occur in accordance with the schedule established by the Department of Elementary and Secondary Education.

Board. The Board of Elementary and Secondary Education or a person duly authorized by the Board.

Board of Trustees. Public agents authorized by the state to supervise and control the charter school. The boards of trustees shall be considered public employers for purposes of tort liability under M.G.L. c. 258. Boards of trustees of Commonwealth charter schools shall be considered public employers for

collective bargaining purposes under M.G.L. c. 150E. In the case of Horace Mann charter schools, the school committee shall be considered the public employer for purposes of collective bargaining under M.G.L. c. 150E. A board of trustees may be authorized to hold more than one charter.

Charter. A license issued by the Board under the provisions of M.G.L. c. 71, § 89, and 603 CMR 1.00, allowing the grantee to operate a charter school for a period of five years.

Charter Applicant. A charter applicant shall include but is not limited to: (i) a non-profit business or corporate entity; (ii) 2 or more certified teachers; or (iii) 10 or more parents/guardians; provided, however, that for profit business or corporate entities shall be prohibited from applying for a charter. The application may be filed in conjunction with a college, university, museum, or other similar non-profit entity, or any combination thereof.

Charter School. A public school operated under a charter granted by the Board. This term encompasses Commonwealth and Horace Mann charter schools unless otherwise specified. A charter school is managed by a board of trustees and operates independent of any school committee. A Commonwealth charter school is considered a local education agency for all purposes. A Horace Mann charter school is a school or part of a school that operates under a charter approved and granted pursuant to CMR 603 1.04. A Horace Mann charter school is considered a local education agency except for purposes of state aid, certain grant programs, collective bargaining, and any other purposes where such designation would conflict with law or regulation.

Commissioner. The Commissioner of Elementary and Secondary Education or his designee.

Department. The Department of Elementary and Secondary Education.

Memorandum of Understanding. An agreement or agreements among a Horace Mann charter school, the school committee of the district in which the charter school is located, and the collective bargaining unit for the district that, at a minimum, defines any modifications of the relevant collective bargaining agreement(s), services, and facilities provided by the district to the charter school, and funding of the charter school by the district.

Proven Provider. A proven provider is:

(a) two or more persons who had primary or significant responsibility serving, for at least five years, in a leadership role in a school or similar program that has a record of academic success and organizational viability;
(b) a non-profit education management organization or non-profit charter management organization, in operation for at least five years, that has a record of academic success and organizational viability;

(c) the board of trustees of an existing charter school that has a record of academic success and organizational viability; or
(d) an education management organization, charter management organization, or school support organization that has a record of academic success and organizational viability in operating or starting public schools with which an applicant proposes to contract.

Qualifications for proven providers shall be as described in 603 CMR 1.05(2).

Regional Charter School. A charter school with a charter designating it as "regional" is required to give preference in enrollment to students residing in a specified region containing more than one district.

Sending District. A Massachusetts city, town, or regional school district in which a charter school student resides and where the student would otherwise attend a public school. If a charter school has a residential component, the sending district is the city, town, or regional school district in which the parent or legal guardian of the charter school student resides or, if no parent or legal guardian can be identified, the school district in which the student last attended school.

1.03: General Provisions

(1) Administrative Bulletins. The Board and the Department may, from time to time, issue administrative bulletins to interpret, implement, and provide guidance on 603 CMR 1.00.

(2) Waivers. Upon written request from a charter applicant or charter school board of trustees, the Board may waive the applicability of one or more provisions of 603 CMR 1.00, provided that all such requests:
(a) are in writing, signed by the waiver applicant;
(b) specify the provisions of 603 CMR 1.00 to be waived, the duration of the waiver, and the circumstances to which the waiver applies;
(c) include a certification that the waiver applicant has made a good faith effort to comply with said provisions; and
(d) are accompanied by supporting documentation considered sufficient by the Board to support the special circumstances or the need for relief.

Waivers of 603 CMR 1.00 shall be considered only under circumstances the Board deems exceptional and shall be granted only to the extent allowed by law.

The Commissioner shall provide notice and opportunity to comment to the superintendent of each district served by the charter school, if the granting of the waiver would have an impact on the district.

(3) Prohibitions. Private and parochial schools are not eligible for charter school status. Charter schools may not charge students an application fee or tuition.

Charter schools may not charge their students any fee related to the provision of required educational programs. Charter schools may not charge any public school for the use of their curriculum, subject to the restrictions contained in any contract between charter schools and third party providers. For-profit businesses or corporate entities may not apply for a charter.

1.04: Charter Application and Procedures for Granting Charters

(1) Charter Application Process. There shall be a two-stage application process leading to the granting of a charter for Commonwealth and Horace Mann applicants. Applicants shall submit to the Department prospectuses and final applications in accordance with the schedule, application form, and guidelines established by the Department for each type of charter school. Following the submission and review of prospectuses, the Commissioner will invite selected applicants to submit final applications.

(a) Horace Mann applications shall be accepted in three categories:

(i) A Horace Mann application to create a new school, submitted with the approval of the local collective bargaining unit and the school committee in the district in which it is located.

(ii) A Horace Mann application submitted as a conversion of an existing public school, filed with the approval of the school committee. Horace Mann conversion applications may be submitted at any time but shall participate in the two-stage application process, with similar periods of time for review of prospectuses, final applications, and charter granting, and may not open until completion of the opening procedures process.

(iii) A Horace Mann application to create a new school, submitted with the approval of the school committee. An agreement with the local collective bargaining unit is not required prior to board approval.

(b) Horace Mann charter schools may be exempt from provisions of local collective bargaining agreements, provided that employees of the school will continue:

(i) to be members of the local collective bargaining unit;

(ii) to accrue seniority; and

(iii) to receive at minimum, the salary and benefits established by the local collective bargaining agreement. Employees will be exempt from all union and school committee work rules to the extent provided by their charter and the memorandum of understanding

with the local district, collective bargaining unit, or as voted by teachers as defined in M.G.L. c. 71, § 89.

(2) Applications for Horace Mann charter schools shall describe in the charter application:
   (a) the type of Horace Mann charter the applicant seeks;
   (b) the proposed opening date of the school;
   (c) the elements of the local collective bargaining agreement that apply to employees of the school, other than those already mandated by law;
   (d) the memorandum or memoranda of understanding under which the school proposes to operate, including at a minimum:

      (i) the services and facilities provided by the district;
      (ii) any waivers to applicable collective bargaining agreements; and
      (iii) the basis for calculating tuition payments from the district to the school.

   (e) the school's first annual budget allocation from the district, consistent with the allocation for other public schools in the district and the basis on which future tuition allocations will be made.

(3) Review Process: The Department shall review each prospectus and each final application submitted by the required deadlines. Prospectuses and final applications will be reviewed and evaluated according to criteria outlined in 603 CMR 1.05 and in the charter school application itself. In addition, the Department will conduct interviews with all final applicants in order to better assess their qualifications and capacity to start and operate a charter school.

(4) Each applicant submitting a prospectus and a final application for a Commonwealth charter school shall also send a copy of the application to the superintendent of the school districts from which the applicant is expected to enroll students. The Board and the Department, for final applications, shall hold a public hearing in the school district in which a proposed charter school is to be located and solicit and review comments on the application from the school committees of the school district(s) from which the applicant is expected to enroll students and any contiguous districts. At least one member of the Board shall attend each public hearing soliciting comment on the merits of pending applications and shall report to the Board on the hearing.

(5) The Board will grant new charters in February or, for Horace Mann conversion schools in 603 CMR 1.04(1)(a)(ii), at such other times as designated. The Board and Department may be assisted in this process by review panels comprised of individuals appointed by the Commissioner. Members of these panels may review applications but the reviewers' role shall be solely advisory.

(6) Granting of Charters.

(a) The Board shall grant charters to charter boards of trustees under M.G.L. c. 71, § 89, and under such conditions and at such time as the Board specifies under 603 CMR 1.05 (2).
(b) A charter granted by the Board shall be effective for five years, beginning July 1st of the first fiscal year the school enrolls students, unless revoked pursuant to M.G.L. c. 71, § 89, and 603 CMR 1.12. If no students are attending a charter school within 19 months from the date the charter was granted, the charter will be null and void, unless an extension is granted by the Commissioner.
(c) Should the Board elect to award fewer than the number of charters specified under M.G.L. c. 71, § 89, in any given cycle, the Board may grant those charters not awarded in any subsequent application cycles in addition to the number of charters scheduled to be awarded and notwithstanding any limitations on the number of new charters authorized in such year.
(d) The Board may award any charter revoked or returned to the Board in subsequent application cycles in addition to the number of charters scheduled to be awarded and notwithstanding any limitations on the number of new charters authorized in such year.
(e) The Board will use the most recent United States Census estimate to determine the population of a city or town proposed as the location for a charter school.
(f) Private and parochial schools shall not be eligible for charter school status. If members of a charter applicant group are on the governing board or management of a private or parochial school that plans to close or closes

around the time of receiving a charter, it creates a rebuttable presumption that the private or parochial school is seeking charter status for the purpose of securing public funding. To rebut this presumption, the applicant group must establish facts sufficient for the Department to determine that funding is not the primary reason they are seeking a charter as the private or parochial school is closing. In making a determination, the Department will compare the governance, management, and other characteristics of the private or parochial school and the governance, management, and other characteristics of the charter school, including but not limited to curriculum, student body, staff, leadership, location, and the financial plan for the school.

1.05: Criteria for Assessment and Approval of Charter Applications, Awarding of Charters

(1) Criteria for Assessment and Approval of Charter Applications. The Department will review charter applications to ensure that the applicant has, at a minimum, demonstrated the ability:

(a) to further the purposes for establishment of charter schools specified in M.G.L. c. 71, § 89;
(b) to conform with M.G.L. c. 71, § 89, and all other applicable laws and regulations, including any guidelines the Board may issue, and including those related to English learners and students with disabilities;
(c) to assure that the charter school will meet its enrollment projections through demonstration of support for the proposed charter school in the communities from which students would be likely to enroll;
(d) to assure that the charter school will implement its recruitment and retention plan;
(e) to assure that the charter school will involve parents/guardians as partners in the education of their children;
(f) to describe how elements of the proposed program, either separately or as a whole, or other aspects of the school, will enhance options for students in the district(s) served;
(g) to demonstrate that the applicant will collaborate with the school districts from which it draws students, if a Commonwealth charter, and with other schools in its district, if a Horace Mann charter, to disseminate innovative practices;;
(h) to develop a management structure and plan which enables the charter school to achieve the goals and mission set forth in its charter, including the selection, role, and responsibilities of the board of trustees;
(i) to assure that students will meet the same performance standards and assessment requirements set by the Board for students in other public schools;
(j) to develop an accountability plan that meets criteria established by the Department, at the end of the first year of the school's charter, establishing specific five-year performance objectives to help measure the school's

progress and success in raising student achievement, establishing a viable organization, and fulfilling the terms of its charter;
(k) to administer its educational programs, school operations, and finances effectively;
(l) to establish a process to provide to students, parents/guardians, the Board, other interested parties, and the public all information required by law and regulation, as well as to provide other information the Board may request;
(m) to develop an enrollment policy consistent with 603 CMR 1.06;
(n) to develop a recruitment and retention plan consistent with M.G.L. c. 71, § 89;
(o) to ensure the thoroughness and accuracy of the charter school application;
(p) to demonstrate that the applicant will provide school facilities that are in compliance with municipal building codes and other applicable laws, affordable, and adequate to meet the school's program requirements;
(q) to demonstrate the capacity of a charter school's board of trustees to effectively manage more than one school, if applicable;
(r) to describe, if applicable, the applicant's intention to build a network of schools in more than one municipality.

(2) Qualifications to Achieve Proven Provider Status
In districts performing in the lowest 10 percent statewide, under M.G.L. c. 71, § 89, and in which the 9 percent net school spending cap is, or would be exceeded, applications will be considered only from proven providers. Proven provider status shall be granted by the Commissioner.

Applicants for proven provider status shall meet the requirements in 603 CMR 1.02. The applicant must submit evidence satisfactory to the Commissioner to demonstrate a significant management or leadership role at a school or similar program that is an academic success, a viable organization, and relevant to the proposed charter.

(a) The applicant shall submit a detailed description of role(s) and responsibilities at the successful school(s) or program(s).
(b) The applicant shall submit data demonstrating success in student academic performance and evidence of academic program success, including but not limited to:
    (i) Proficiency levels on the Massachusetts comprehensive assessment system or equivalent assessments for all students and for one or more targeted subgroups as defined in M.G.L. c. 71, s.89(i)(3), which are similar to statewide averages in English Language Arts and math for all students in Massachusetts in comparable grades, over no less than a three-year period for cohorts of students;
    (ii) Student performance on other standardized tests over no less than a three-year period for cohorts of students, if available, which demonstrates student achievement levels that are similar to

statewide averages in English Language Arts and math for all students in Massachusetts in comparable grades;

(iii) attendance, retention, and attrition data;

(iv) graduation and dropout data.

(c) The applicant shall submit evidence of organizational viability, which shall include but not be limited to effective governance, effective financial management, and compliance with applicable laws and regulations.

(d) The applicant shall provide evidence to demonstrate that the successful school serves a student population similar to the population to be served by the proposed charter, and that the program to be offered at the proposed charter is similar to, or represents a reasonable modification of, the successful school.

(e) Applicants shall provide any other information as required by the Commissioner.

For applicants with a current or previous relationship to a Massachusetts charter school, the Commissioner may consider all information related to such school's performance, including his evaluation in connection with each renewal of its charter.

(3) Conditions for Awarding Charters to New Applicants or Applicants for Renewal. Charters shall be awarded subject to the conditions listed in this paragraph and any additional conditions that the Board may specify. The Board may temporarily waive such conditions and award a charter, provided that the applicant submits adequate written assurance that all such conditions will be met prior to the opening of the school. If a new school fails to comply with any specified condition prior to the opening of the school, the Commissioner may recommend to the Board that the school be placed on probation or that the charter be revoked.

(a) the charter applicant shall submit to the Department the names, home addresses, and employment, and educational histories for the proposed members of the board of trustees and a plan for the administration and management of the school, including the organizational structure and bylaws;

(b) in such cases where the charter school board of trustees intends to procure substantially all educational services under contract with another person, the board of trustees shall provide for the Board's approval the terms of said contract;

(c) the charter applicant shall submit to the Department a copy of the school's criteria and procedures for expulsion of students;

(d) the charter applicant shall provide the Department with written documentation that a criminal background check has been performed on all employees of the school;

(e) the charter applicant shall provide the Department with a copy of the school's enrollment policy;

(f) the charter applicant shall provide the Department with a copy of the school's recruitment and retention plan;
(g) the charter applicant shall provide the Department with written documentation that the facilities to be used by the charter school are approved for use as a school by the building inspector in the municipality in which the building is located;
(h) the charter applicant shall provide the Department with written documentation that the facilities occupied by the charter school have been inspected by the Fire Department of the municipality in which the facilities are located;
(i) if explosives or flammable compounds or liquids are used in connection with courses taught at the school, the charter applicant shall provide the Department with written documentation that approval under M.G.L. c. 148 has been secured from the licensing authority of the municipality in which the building is located; and
(j) the charter applicant shall provide the Department with written documentation that the school is in compliance with all other applicable federal and state health and safety laws and regulations, including evidence of compliance with any required insurance coverage.

(4) Information for Distribution of Public Funds. Upon receiving its charter, a charter school shall provide the Department with a federal tax identification number issued solely to the charter school, and banking information regarding a bank account solely in the name of the charter school, as required by the State Treasurer for the transfer of public funds.

(5) The Commissioner shall annually publish a ranking of all districts that are subject to charter school tuition charges, for the purpose of determining the lowest 10 percent as specified in M.G.L. c.71, § 89(i)(2) and (i)(3). Such ranking shall be calculated by combining each district's English language arts proficiency index and mathematics proficiency index for the two school years immediately preceding the current year. Additional charter school seats resulting from a district's designation in the lowest 10 percent may be awarded by the board to a new charter applicant, to existing charter schools, or to any combination thereof. The board may provisionally award seats to new charter applicants and to existing charter schools that will become available in future years pursuant to the schedule set forth in section 9 of chapter 12 of the acts of 2010, provided, that if a district is no longer in the lowest 10 percent, any remaining provisional seats may not be used.

(6) In considering an application for the creation or expansion of a regional charter school, the board shall independently assess the availability of seats for each sending district within the proposed region, and may limit the number of students who may be enrolled from each such district.

1.06: Charter School Enrollment and Student Recruitment

(1) Eligibility for enrollment shall be consistent with the school's grade levels. Charter schools shall not discriminate on the basis of race, color, national origin, creed, sex, ethnicity, sexual orientation, mental or physical disability, age, ancestry, athletic performance, special need, proficiency in the English language or a foreign language, or prior academic achievement. Charter schools shall receive approval from the Department of a recruitment and retention plan that meets the requirements of M.G.L. c. 71, § 89.

(2) Charter schools may not administer tests to potential applicants or predicate enrollment on results from any test of ability or achievement. Requirements for enrollment in a charter school, including but not limited to attendance at informational meetings and interviews, shall not be designed, intended, or used to discriminate. Charter schools may not require potential students and their families to attend interviews or informational meetings as a condition of enrollment.

(3) Schools shall give reasonable public notice, of at least one month, of all application deadlines.

(4) In conformance with M.G.L. c. 71, § 89, enrollment in Commonwealth charter schools shall be conducted as follows:

(i) in such cases where there are fewer spaces than eligible applicants who reside in the city or town in which a Commonwealth charter school is located, or who are siblings of students already attending said charter school, the charter school shall hold an enrollment lottery for all such applicants;

(ii) if there are more spaces available than eligible applicants from the city or town in which said Commonwealth charter school is located and who are siblings of current students, and there are more eligible applicants from outside of that city or town than spaces available, the charter school shall hold an enrollment lottery;
the Department shall notify each Commonwealth charter school no later than February 15th of any limitation on the number of students from a district that may be enrolled in charter schools for the upcoming school year; and

(iii) Charter schools shall place names of students not selected in an enrollment lottery on a waiting list in the order the names were drawn. In conformance with M.G.L. c. 71, § 89, charter schools shall, when a student stops attending for any reason, attempt to fill vacant seats up to February 15, excluding seats in the last half of the grades offered and in grades 10, 11, and 12. A vacancy not filled after February 15 moves into the subsequent grade, to be filled the following September if such grade is not in the last half of the grades offered and is not grades 10, 11, or 12. Seats for students who have accepted an offer of admission in the charter school but have never attended are exempt from this provision. If a school

has an odd number of grades, the number of grades in the last half shall be rounded up to the nearest whole number.

(iv) In cases where the enrollment of a student, who is not a sibling of another previously enrolled student, from the waiting list would exceed the district charter tuition cap, the student should be skipped over but kept on the waiting list. In cases where the enrollment of a student who is a sibling of a student already attending a charter school would exceed the district charter school tuition cap, the sibling may be enrolled with the Commonwealth of Massachusetts providing tuition for said sibling, subject to appropriation.

(v) In conformance with M.G.L. c. 71 § 89 (n), charter schools shall submit to the Department, no later than June 1 and as of March 15, the names, home addresses, telephone numbers, and grade levels of students who entered the lottery but did not gain admission. The same information must be submitted within 30 days of any student being admitted from the waitlist to the school to fill a vacancy in the school.

(vi) A charter school may initiate a request once a year for a mailing to the students enrolled in each district for which the school is chartered to serve, and a district may initiate a request once a year for a mailing to the students enrolled in any charter school serving that district. When such a request is made, the district or school, as the case may be, shall provide the names and addresses of students within 30 days, in electronic format, to an approved third party mailing service. Any vendor listed on the statewide procurement or master services agreement for mailing services shall be deemed approved for the purposes of this section. The district or school must provide parents/guardians with the opportunity to request that such information be withheld. The cost of copying and mailing shall be borne by the school or district requesting the mailing. There shall be no charge for the provision of the required names and addresses. Charter schools shall provide any such mailing in the prevalent languages of the district. A language shall be deemed a prevalent language if one percent or more of the district's total enrollment are limited English proficient students for whom that is the primary language. .

(vii) In conformance with M.G.L. c. 71, § 89, enrollment in a Horace Mann charter school shall be conducted as follows:

(i) priority shall be given first to any students actually enrolled in said school on the date that the final application is filed with the Board and to their siblings. In such cases where there are fewer spaces in a Horace Mann charter school than eligible applicants who were enrolled in said school, the charter school shall hold an enrollment lottery;

(ii) if there are more spaces available than eligible applicants from the school, and there are more applicants than spaces available who

reside in the district in which the charter school is located and who are currently enrolled in the public schools of the district in which the Horace Mann charter school is located, the charter school shall hold an enrollment lottery for all such applicants; and

(iii) if there are more spaces available than eligible applicants from the school or district, and there are more applicants than spaces available who reside in the district in which the Horace Mann charter school is located, the charter school shall hold an enrollment lottery for all such applicants.

(5) If the principal enrollment process fails to produce an adequate number of enrolled students, a school may repeat the process more than once, if necessary, providing such process is fair and open, with reasonable public notice given at least one week prior to the application deadline. As spaces become available during the school year, a school may repeat the enrollment process to fill these openings and to meet the requirements of M.G.L. c. 70, § 89(n). No student entering an enrollment process may be admitted ahead of other eligible students who were previously placed on a waiting list during a prior enrollment process, except in cases described in to 603 CMR 1.06 (4) (iv). The total number of students attending a charter school in a given school year cannot exceed the total number of students reported to the Department in the previous spring in accordance with 603 C.M.R. 1.09(4).

(6) All lotteries shall be conducted in public, with a disinterested party drawing names, and with reasonable public notice given at least one week prior to the lottery.

(7) A school may integrate its enrollment process with that of the school district, provided that the enrollment application is submitted in conjunction with the local school district and such district maintains an intra-district school choice enrollment program.

(8) A school shall specify age thresholds and ceilings for kindergarten and/or high school programs, respectively.

(9) The use of financial incentives to recruit students is prohibited.

1.07: Charter School Staff

Charter school teachers hired after August 10, 2000 must either:

(1) take and pass, within their first year of employment at a charter school, the Massachusetts Tests for Educator Licensure; or
(2) be already certified to teach in Massachusetts.

1.08: Charter School Funding

(1) Horace Mann charter schools shall be funded through the local school district under the terms of the Memorandum of Understanding. A Horace Mann charter school shall submit a budget request annually, in accordance with the budget schedule of the local school district and no later than April 1st, to the superintendent and school committee of the district in which the charter school is located. The school committee shall act on the charter school budget request in conjunction with its approval of the district's overall budget. A Horace Mann charter school's budget allocation shall be consistent with the allocation of other public schools in the district. In the case of budget reductions in the school district, a Horace Mann charter school's budget may not be reduced disproportionately to other schools in the district. The charter school board of trustees may appeal any disproportionate budget allocation to the Commissioner, who shall determine an equitable funding level for the school and shall require the school committee to provide such funding.

(2) Each operating Commonwealth charter school shall receive tuition payments from each school district whose students attend the charter school. Such tuition payments shall be equal to the appropriate charter school tuition rate, as determined in accordance with 603 CMR 1.08 (3), multiplied by the number of students attending the charter school from the sending district in the current year. For students who attend the charter school for less than the full year, the tuition payment shall be reduced based on the number of days of enrollment. Such tuition payments shall be paid in accordance with 603 CMR 1.08 (6).

(3) For each sending district, a separate foundation budget dollar amount and charter school tuition rate shall be calculated as follows for each charter school to which the district sends students.

(a) The foundation budget dollar amount shall be calculated, based on the foundation budget factors used for the distribution of Chapter 70 aid in the current year, provided that the out-of-district special education tuition component of the foundation budget shall be excluded from the calculation. The student data for this calculation shall be the foundation enrollment information reported by the charter school as of October 1 of the prior school year. The tuition rate shall equal the foundation budget dollar amount divided by the number of students. If no students attended a particular charter school from a particular sending district in the prior year, then the sending district's average foundation budget per pupil will be used as the tuition rate.

(b) Each tuition rate shall be increased by the ratio of the sending district's current year budgeted net school spending, as reported on schedule 19 of the Department's end of year pupil and financial returns, to the sending district's total current year foundation budget. Amounts reported on

schedule 19 for out-of-district special education tuition and retired teachers' health insurance shall be excluded from this calculation.

(c) Each tuition rate shall be increased by a per pupil capital needs component calculated in accordance with M.G.L. c.71, s.89(ff) and each year's general appropriations act.

(4) Any amounts appropriated under line item 7010-0030 for the purpose of per pupil facilities aid for Commonwealth charter schools shall be used to reimburse sending districts for the capital component of the tuition payments, as calculated in 603 CMR 1.08(3)(c), but shall not affect the payments due to Commonwealth charter schools.

(5) For each sending district, the sum of its tuition payment to each Commonwealth charter school, less any charter school capital facility reimbursement received pursuant to 603 CMR 1.08(4), shall be used as the district's "total charter school tuition payment" for the purposes of M.G.L. c.71, § 89(i) and shall be used as the district's "total charter school tuition amount" for the purposes of M.G.L. c.71 § 89(oo).

(6) The State Treasurer shall make quarterly payments to Commonwealth charter schools. In making such payments, the Commonwealth shall reduce each sending district's M.G.L. c. 70 allocation by an amount sufficient to meet its charter school obligations for the quarter. If there are insufficient M.G.L. c. 70 funds to meet a district's obligation, the Commonwealth shall reduce other state aid allocated to the applicable cities and towns. If there are insufficient state aid funds of any kind to meet a district's obligation, the Board shall recommend to the Governor and legislature that a supplemental appropriation be made to pay any remaining obligation to the charter school(s).

(7) The Department shall notify both the Commonwealth charter school and the sending district(s) of the amount of these M.G.L. c. 70 reductions.

(8) The first quarterly payment to Commonwealth charter schools shall be based on each charter school's pre-enrollment report, filed with the Department pursuant to 603 CMR 1.09(4). The remaining three quarterly payments of each fiscal year shall be based on updated enrollment reports, submitted to the Department by each charter school. Failure to submit a required enrollment report or charter school claim form may result in the withholding of some or all of a charter school's quarterly payment. Although each quarterly payment is intended to equal approximately one quarter of the projected annual amount, payments in the later quarters of each fiscal year shall include adjustments to correct any over- or under-payments in earlier quarters.

(9) In its first year of operation, a Commonwealth charter school may be paid its first quarterly payment within 45 days after the start of the Commonwealth's fiscal year. The remaining three payments shall occur at the end of the

Commonwealth's second, third, and fourth fiscal quarters. After its first year of operation, a Commonwealth charter school shall receive all of its quarterly payments, including its first quarter payment, at the end of the Commonwealth's fiscal quarters. The timing of all payments to charter schools is subject to the timely enactment of the Commonwealth's annual budget.

(10) In order to facilitate the acquisition of cash-flow financing, the Commissioner may, at his discretion, provide a good faith estimate of the tuition payments expected to be made to a Commonwealth charter school during the current fiscal year, provided that such estimate shall not represent a commitment or obligation of the Commonwealth.

(11) Transportation.

(a) All students who reside in the school district in which a charter school is located shall be provided transportation by the district, provided that either (i) transportation is provided to district students in the same grade, or (ii) transportation is required by the student's individualized education program. If a district provides an alternative means of transportation for its students in a particular grade, such as public transportation passes, it may do so for charter school students in that grade. A district may not limit transportation to charter school students based on attendance zones or other geographic subdivisions of the district. The district shall accommodate the school day and school year specified in the school's charter, provided that the charter school shall make reasonable accommodations in setting its daily starting and ending times to foster cost-efficient transportation arrangements.

(b) A charter school shall annually notify the district in which it is located of its projected transportation needs no later than February 1 prior to the start of the school year, provided that newly chartered schools shall provide such notification as soon as practicable following receipt of its charter. Charter schools shall update their projected transportation needs by April 1 based on pre-enrollment data.

(c) If a district and a charter school are unable to reach agreement on the district's provision of transportation for all or some of the students attending said school, the charter school may provide its own transportation. The school shall make every reasonable effort to provide such transportation in the most cost effective manner possible, including but not limited to collaboration with the district. The school shall be reimbursed by the district for the actual costs incurred by the school or for the district's average per pupil cost for all in-district student transportation, whichever is less. Said reimbursements shall be subject to the Commissioner's approval and shall be paid through the Department's charter tuition payment process.

(12) Surplus determination. In fiscal year 2010 and each subsequent fiscal year, each charter school shall maintain a separate fund on its books of account for tuition revenue. The Commissioner, in consultation with the State Auditor, shall prescribe supplemental reports for the purpose of calculating the school's cumulative unspent tuition revenue, and such reports shall be submitted as part of the school's audited financial statements. Payments of excess cumulative tuition revenue due to sending districts and the commonwealth shall be made by the Commissioner through adjustments to quarterly tuition payments and quarterly local aid distributions.

(13) Capital plan and reserves. A charter school may establish, and periodically update, a capital plan identifying current and future capital projects. The Commissioner shall prescribe the information to be reported for each such project as part of the school's annual report. A charter school may establish a separate capital reserve account for each project identified in its capital plan, and may make payments into said accounts. Funds in a capital reserve account may only be used for the project or purpose for which the account was established, provided, that such funds may be transferred to another capital reserve account or to the school's operating fund with the prior approval of the Commissioner.

1.09: Ongoing Review of Charter Schools

(1) Annual Report. A charter school shall submit to the Board and the local school committee and make available to every parent or guardian of its enrolled students and to every parent or guardian who expresses interest in enrolling in that charter school, an annual report. The annual report shall be issued no later than August 1st of each year for the preceding school year. The annual report shall include the following information:

(a) a financial statement setting forth by appropriate categories the unaudited revenue and expenditures for the year just ended, and a balance sheet setting forth the charter school's assets, liabilities, and fund balances or equities;
(b) a capital plan identifying future planned capital projects and the amounts held in reserve for such projects;
(c) for all schools chartered before February 2011, a recruitment and retention plan for school year 2011-2012 shall be submitted that meets the requirements of M.G.L. c. 71, § 89.
(d) a report on the school's implementation of its recruitment and retention plan;
(e) an updated recruitment and retention plan for the upcoming school year;
(f) projections of income and expenses for the upcoming school year;
(g) discussion of progress made toward achievement of the goals of the charter and accountability plan;
(h) evidence that the charter school is developing or has provided models for replication and best practices in education; and

(i) such other information as the Board may require in guidelines.

(2) Site Visits. The Department may send evaluation teams to visit each charter school on an annual or as-needed basis to corroborate and augment the information provided in the annual report in accordance with guidelines issued by the Department. Site visit teams may also gather any other evidence relevant to the school's performance. The written reports from these site visits shall become part of the charter school's record, along with any written addendum that the school wishes to submit in response to a report.

(3) Financial Audits. In accordance with M.G.L. c. 71, § 89, each charter school shall have an independent audit conducted of its accounts, consistent with generally accepted auditing principles, and consistent with any guidelines the Department may issue. Audits shall be filed annually by November 1st with the Department and the State Auditor.

(4) Enrollment Reports. Each charter school shall conclude its principal enrollment process no later than March 15th of each year, and shall file a pre-enrollment report annually with the Department in accordance with deadlines established by the Department. The Department will report to districts the aggregate number of students who are anticipated to attend charter schools during the upcoming school year from their districts and the total enrollment for each charter school. No charter school shall receive tuition payments that exceed the total enrollment for that charter school as it was reported to the Department in pre-enrollment.

In their pre-enrollment reports, charter schools must notify the Department of:

(a) the school's total enrollment for the subsequent academic year;
(b) the projected number of students, by grade, to be enrolled in the charter school from each sending district for the subsequent academic year; and
(c) the number of students, by grade, from each sending district on the waiting list, who, as a result, may be enrolled in the charter school in the subsequent academic year.

Each charter school shall also submit a report by a date determined by the Department annually, of actual enrollment as of October 1st and no later than March 1st of enrollment as of February 15th. The report shall be filed on a form provided by the Board.

(5) Additional Reports. The charter school shall be responsible for filing any data reports or school returns as required under public school law and regulations, in accordance with guidelines published by the Department ensuring that charter schools are not asked for the same data more than once.

(6) As required by the Department, the charter school shall submit written documentation that the school remains in compliance with all building, health,

safety, and insurance requirements established as conditions for charter granting in 603 CMR 1.05 (2) and that all related inspections and approvals are current.

(7) Notification of New Circumstances. The charter school shall notify the Department in writing immediately of any change in circumstances that may have a significant impact on a charter school's ability to fulfill its goals or mission as stated in its charter. Within 30 days after receiving such notice, the Commissioner shall determine whether any remedial action is required, and shall recommend such action to the Board. Such actions may include suspension or revocation of the charter or placing the charter school on probation under 603 CMR 1.12.

(8) Additional Information. At the discretion of the Board, charter schools may be required to submit additional information other than that specifically required by 603 CMR 1.00.

(9) Signatory Authorization. Any information supplied to the Board, the Commissioner, or the Department by the charter school under 603 CMR 1.00 shall be signed by an individual given signatory authorization by the charter school board of trustees. All such information is submitted under penalty of perjury.

1.10: Complaint Procedure

(1) A parent, guardian, or other individuals or groups who believe that a charter school has violated or is violating any provision of M.G.L. c. 71, § 89, or 603 CMR 1.00 may file a complaint with the charter school's board of trustees.

(2) The board of trustees shall respond no later than 30 days from receipt of the complaint in writing to the complaining party.

(3) The board of trustees shall, pursuant to a complaint received under 603 CMR 1.10, or on its own initiative, conduct reviews to ensure compliance with M.G.L. c. 71, § 89, and 603 CMR 1.00. The charter school and the specific individuals involved shall cooperate to the fullest extent with such review.

(4) A complaining party who believes the complaint has not been adequately addressed by the charter school board of trustees may submit the complaint in writing to the Commissioner, who shall investigate such complaint and make a written response.

(5) In the event the charter school is found in non-compliance with M.G.L. c. 71, § 89, or 603 CMR 1.00, as a result of a complaint or upon investigation, the Commissioner or Board may take such action as it deems appropriate, including but not limited to suspension or revocation of the charter under 603 CMR 1.13, or referral of the matter to the District Attorney, the Office of the Attorney General, or any other agency for appropriate legal action.

(6) A parent, guardian or other individuals or groups who believe that a charter school has violated or is violating any state or federal law or regulation regarding special education may file a complaint directly with the Department.

1.11: Amendments to Charters

(1) If a charter school plans to make a major change in its operations, the school's board of trustees shall submit in writing to the Board a request to amend its charter. Major changes are defined as those that fundamentally affect a school's mission, organizational structure, or educational program. Such changes include, but are not limited to:

(a) Educational philosophy or mission;
(b) Governance or leadership structure;
(c) Contractual relationships with an education management organization providing or planning to provide substantially all the school's educational services;
(d) Curriculum models or whole-school designs that are inconsistent with those specified in the school's charter;
(e) Location of facilities, if such change involves relocating or expanding to another municipality;
(f) Districts specified in the school's charter;
(g) Maximum enrollment; or
(h) Grades served.

(2) If a charter school plans to make a minor change in its operations, the school's board of trustees shall submit in writing to the Commissioner a request to amend its charter. Minor changes are defined as changes that do not fundamentally alter a school's organizational structure or educational program. Such changes include, but are not limited to:

(a) Bylaws;
(b) Schedule (length of school year, school week, or school day);
(c) Enrollment process;
(d) Expulsion policy;
(e) Corrections and clarifications involving the mission statement or other sections of the charter;
(f) School name;
(g) Membership of the board of trustees (as specified under 603 CMR 1.05(2)(a)); or
(h) Memorandum of Understanding (for Horace Mann charter schools).

(3) The Commissioner and the Board may consider a charter school's compliance with applicable state, federal, and local law and the evidence the school has

provided regarding the three areas set forth in 603 CMR 1.12(3) in reaching a determination regarding a school's request to amend its charter.

(4) The Board or the Commissioner shall endeavor to approve or deny amendment requests within 60 days after receiving complete requests. An amendment request for a change to a Horace Mann charter school's operations requires the approval of the local teachers' union and the local school committee.

(5) If a Commonwealth charter school seeks an amendment to change its maximum enrollment (including grades served), the municipality of its location, or the districts specified in its region; the Department will provide a copy of the request to the superintendents of the affected districts and provide them notice of their right to submit written comment to the Commissioner within 15 days.

Boards of trustees seeking amendment requests to increase maximum enrollment in districts performing in the lowest 10 percent statewide, under M.G.L. c. 71, § 89, and in which the 9 percent net school spending cap is or would be exceeded, must meet the performance criteria described in 603 CMR 1.05(2).(6) Should the Commissioner deny an amendment request, the charter school's board of trustees may seek review of the Commissioner's decision by the Board.

1.12: Renewal of Charters

A charter school seeking renewal of its charter shall proceed as follows:

(1) The charter school shall submit its application for renewal of a charter under 603 CMR 1.00 no earlier than March 1st of the third school year and no later than August 1st after the end of fourth school year. The Board will review renewal applications pursuant to the criteria set forth in 603 CMR 1.05 and M.G.L. c.71, § 89. For renewal applications received on or before August 1st, the Board shall notify the charter applicant of the decision to renew or not to renew the charter and the reasons therefore no later than March 1st following receipt of the renewal application. In the event the renewal is denied, the charter school shall have all rights of review as provided in M.G.L. c. 30A and 801 CMR 1.00.

(2) The charter school may apply for renewal of its charter under renewal application guidelines established by the Board. Applications for the renewal of Horace Mann charters must be submitted with the certification of a majority vote of the school committee and local collective bargaining unit.

(3) The Department shall issue guidelines describing the evaluation process to be followed in reviewing applications for charter renewal, including protocols for renewal inspections. The decision by the Board to renew a charter shall be based upon the presentation of affirmative evidence regarding the success of the school's academic program; the viability of the school as an organization, including the extent to which the school has followed its recruitment and retention plan; and the

faithfulness of the school to the terms of its charter. The Department will gather evidence regarding these issues from the renewal application and from other information, including but not limited to, a school's annual reports, financial audits, test results, site visit reports, and the renewal inspection report. All charter schools will be evaluated on the same performance criteria as provided in the guidelines, provided, however, that the criteria will take into account each school's charter and accountability plan.

(4) Charters that are renewed shall be for five years from the expiration of the previous charter under such conditions as the Board may establish under 603 CMR 1.05 (2). Charters of schools that do not file renewal applications shall expire at the end of the fifth year of the charter school's operation, subject to 603 CMR 1.13.

1.13: Charter Revocation, Probation, Suspension, and Non-Renewal

(1) The Board may suspend or revoke (hereinafter, "revoke") a charter for cause, including but not limited to:

(a) a material misrepresentation in the application for approval of the charter or renewal of the charter;
(b) failure to comply substantially with the terms of the charter, with any of the applicable provisions of M.G.L. c.71, or with any other applicable law or regulation;
(c) financial insolvency;
(d) misappropriation, conversion, mismanagement, or illegal withholding of funds or refusal to pay any funds that belong to any person otherwise entitled thereto and that have been entrusted to the charter school or its administrators in their fiduciary capacities;
(e) fraud or gross mismanagement on the part of charter school administrators or board of trustees, including but not limited to, mismanagement of the educational program and failure to provide a healthy and safe environment for students;
(f) criminal convictions on the part of the charter school or its board of trustees; or
(g) failure to fulfill any conditions imposed by the Board in connection with the grant or renewal of a charter.

(2) Before the Board revokes a charter, it shall notify the charter school in writing that the Board intends to revoke the charter. A vote of intent to revoke or a vote to not renew a charter shall operate as a notice of the action and does not operate as an order to show cause. In the case of a Horace Mann charter, the Board shall also notify the district in which the school is located. Except in an emergency, the Board shall send the notice 60 days before the revocation takes effect.

(3) Upon receiving a notice of intent to revoke a charter, notice of non-renewal, or notice of an emergency revocation where the health, safety or education of the school's students is at immediate risk, the school shall have all rights of review as provided in M.G.L. c. 30A, § 13, and 801 CMR 1.00. All requests for hearings, where hearings are provided by said statutes, shall be in writing, addressed to the Board, and must be received within 15 days of receipt by the charter school of notice. At such hearing, the school shall bear the burden of proof and present its case first.

(4) The Board may place a charter school on probation, rather than revoke its charter, in order to allow for the implementation of a remedial plan approved by the Board. If after 60 days, or such longer period as the Board may specify, said plan is unsuccessful in remedying the problem or alleviating the causes of the probation, the Board may summarily revoke the charter.

(5) The Department may also impose certain conditions on a school's charter for violations of law or failure to comply with the terms of the school's charter.

(6) The Board may withhold payments to any charter school placed on probation or whose charter has been suspended, revoked, or not renewed or that has failed to comply with conditions imposed by law or under 603 CMR 1.13(5).

(7) Charter schools must comply with the closing procedures established by the Department. Charter schools must begin planning for closure and compliance with the closing procedures established by the Department once the Board issues a notice of intent to revoke the school's charter, a notice of non-renewal, or notice of emergency revocation.

(8) Upon the revocation, non-renewal, or voluntary return of a Commonwealth charter, title to all of the property of the charter school shall immediately vest in the Commonwealth, subject to the rights of any secured party holding a perfected security interest in the property of such charter school. Any funds remaining after the satisfaction of the charter school's obligations shall be deposited in the General Fund. 603 CMR 1.13(6) shall not apply to the extent the charter school or any other interested party demonstrates that charter school property was purchased solely by, or solely with funds paid to the school by, persons or entities other than the Commonwealth, in which case ownership of the property shall be transferred to such persons or entities, unless otherwise voted by the board of trustees.

(9) Upon the revocation, non-renewal, or voluntary return of a Horace Mann charter, title to all of the property of the charter school shall immediately vest in the school district in which the school is located, subject to the rights of any secured party holding a perfected security interest in the property of such charter school. This regulation shall not apply to the extent the charter school or any other interested party demonstrates that charter school property was purchased solely

by, or solely with funds paid to the school by, persons or entities other than the district or Commonwealth, in which case ownership of the property shall be transferred to such persons or entities, unless otherwise voted by the board of trustees.

1.14: Severability Clause

If any section or portion of a section of 603 CMR 1.00, or the applicability of 603 CMR 1.00 to any person, entity or circumstance is held invalid by a court, the remainder of 603 CMR 1.00 or the applicability of such provisions to other persons, entities or circumstances shall not be affected thereby.

Regulatory Authority:
603 CMR 1.00: M.G.L. c. 69, § 1B; c. 71, § 89.

Appendix F3: State Legislation Regarding Innovation Schools

AN ACT RELATIVE TO THE ACHIEVEMENT GAP

SENATE NO. 2247

PASSED BY THE MASSACHUSETTS LEGISLATURE (GREAT AND GENERAL COURT), JANUARY 14, 2010

EXCERPT RELATING TO INNOVATION SCHOOLS

SECTION 8. Said chapter 71 is hereby further amended by adding the following section:-

Section 92. (a) An Innovation School shall be a public school, operating within a public school district, that is established for the purpose of improving school performance and student achievement through increased autonomy and flexibility. An Innovation School may be established as a new public school or as a conversion of an existing public school. A student who is enrolled in a school at the time it is established as an Innovation School shall retain the ability to remain enrolled in the school if the student chooses to do so.

(b) An Innovation School may establish an advisory board of trustees. An Innovation School shall have increased autonomy and flexibility in 1 or more of the following areas: (i) curriculum; (ii) budget; (iii) school schedule and calendar; (iv) staffing policies and procedures, including waivers from or modifications to, contracts or collective bargaining agreements; (v) school district policies and procedures; and (vi) professional development. An Innovation School shall receive each school year from the school committee the same per pupil allocation as any other district school receives. An Innovation School may retain any unused funds and use the funds in subsequent school years. An Innovation School may establish a non-profit organization that may, among other things, assist the school with fundraising. A district shall not reduce its funding to an Innovation School as a result of the school's fundraising activities.

(c) An Innovation School established under this section shall be authorized by the local school committee and shall operate according to an innovation plan, which shall articulate the areas of autonomy and flexibility under subsection (b). To the extent practicable, the innovation plan shall be based on student outcome data, including, but not limited to: (i) student achievement on the Massachusetts Comprehensive Assessment System; (ii) other measures of student achievement, approved by the commissioner, as appropriate; (iii) student promotion, graduation rates and dropout rates; (iv) achievement data for different subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; and (v) student attendance, dismissal rates and exclusion rates.

An Innovation School shall operate in accordance with the law regulating other public schools, except as the law conflicts with this section or any innovation plans created thereunder.

(d) An Innovation School is a school in which: (i) faculty and leadership are primarily responsible for developing the innovation plan under which the school operates and leadership is responsible for meeting the terms of the innovation plan; or (ii) an external partner is primarily responsible for developing the innovation plan under which the school operates and the external partner is responsible for meeting the terms of the innovation plan.

(e) Nothing in this section shall be construed to prohibit: (i) the establishment of an Innovation School as an academy within an existing public school; (ii) the establishment of an Innovation School serving students from 2 or more school districts; provided, however, that all of the provisions of this section are met by each school district; (iii) the simultaneous establishment of 2 or more Innovation Schools as an Innovation Schools Zone within a school district; or (iv) the establishment of an Innovation School as a virtual public school that provides instruction to

students through distance learning, including online learning programs and courses, subject to regulations adopted by the board of elementary and secondary education.

(f) The following shall be eligible applicants for the purposes of establishing an Innovation School: (i) parents; (ii) teachers; (iii) parent-teacher organizations; (iv) principals; (v) superintendents; (vi) school committees; (vii) teacher unions; (viii) colleges and universities; (ix) non-profit community-based organizations; (x) non-profit business or corporate entities; (xi) non-profit charter school operators; (xii) non-profit education management organizations; (xii) educational collaboratives; (xiv) consortia of these groups; and (xv) non-profit entities authorized by the commissioner. Private and parochial schools shall not be eligible to operate an Innovation School.

(g) The local school committee, local teacher's union and superintendent of the district shall follow a process, consistent with this subsection and subsections (h) to (o), inclusive, for which an existing district school may be converted to an Innovation School or by which a new Innovation School may be established within the district. This process shall require that an eligible applicant proposing to establish an Innovation School prepare a prospectus regarding the proposed school. The prospectus shall include, but not be limited to, a description of: (i) whether the school will be a new school or a conversion of an existing school; (ii) if the school is a new school, the proposed location of the school; (iii) if the school is a conversion of an existing school, the school that is being proposed for conversion; (iv) the external partners, if any, that will be involved in the school; (v) the number of students the school is anticipated to serve and the number of staff expected to be employed at the school; (vi) the overall vision for the school, including improving school performance and student achievement; (vii) specific needs or challenges the school shall be designed to address; (viii) a preliminary assessment of the autonomy and flexibility under subsection (b) that the school will seek; (ix) why such flexibility is desirable to carry out the objectives of the school; (x) anticipated components of the school's

innovation plan; (xi) a preliminary description of the process that shall be used to involve appropriate stakeholders in the development of the innovation plan; and (xii) a proposed timetable for development and establishment of the proposed school.

(h) Upon completion of the prospectus under subsection (g), an eligible applicant shall submit the prospectus to the superintendent, who shall within 30 days convene a screening committee consisting of the superintendent or a designee, a school committee member or a designee selected by the school committee and a representative from the leadership of the local teacher's union.

The screening committee shall review the prospectus for the purpose of determining whether the prospectus: (i) presents a sound and coherent plan for improving school performance and student achievement; (ii) supports or enhances existing educational efforts in the district; and (iii) reasonably can be expanded into a comprehensive innovation plan. In the case of a new school, the committee will prepare an impact statement describing how the new school will affect the children and faculty in the district. Within 30 days of receiving a prospectus, the screening committee shall decide, on the basis of a two-thirds vote, to accept or reject the prospectus, or return the prospectus to the eligible applicant for revisions. If a prospectus is rejected or returned, the screening committee shall submit a detailed explanation for the decision to the applicant. A prospectus that is rejected or returned may be revised and resubmitted for subsequent consideration.

(i) Upon the acceptance of a prospectus by the screening committee under subsection (h), the applicant shall form an innovation plan committee of not more than 11 individuals within 30 days. The purpose of the innovation plan committee shall be to: (i) develop the innovation plan described in subsection (c); (ii) assure that appropriate stakeholders are represented in the development of the proposed Innovation School; and (iii) provide meaningful opportunities for

the stakeholders to contribute to the development of such school. The size and composition of the innovation plan committee shall be determined by the applicant; provided, however, that the committee shall include: (i) the applicant; (ii) the superintendent or a designee; (iii) a school committee member or a designee; (iv) a parent who has 1 or more children enrolled in the school, or in the case of a new school, from the district; (v) a principal employed by the district; and (vi) 2 teachers employed by the district. The applicant shall select the parent from among nominees submitted by parent-teacher organizations in the district. If the district does not contain a parent-teacher organization or if the organization does not submit nominees, the applicant shall select the parent from among volunteers in the area or community the proposed school is expected to serve. The applicant shall select the principal and 1 teacher from among volunteers in the district and 1 teacher from among nominees submitted by the local teacher's union.

(j) Upon the formation of the innovation plan committee in subsection (i), the committee shall develop the innovation plan for the proposed Innovation School. The purpose of the innovation plan shall be to comprehensively articulate the areas of autonomy and flexibility under subsection (b) that the proposed school will use. The innovation plan shall include, but not be limited to: (i) a curriculum plan, which shall include a detailed description of the curriculum and related programs for the proposed school and how the curriculum is expected to improve school performance and student achievement; (ii) a budget plan, which shall include a detailed description of how funds shall be used differently in the proposed school to support school performance and student achievement; (iii) a school schedule plan, which shall include a detailed description of the ways, if any, the program or calendar of the proposed school will be enhanced or expanded; (iv) a staffing plan, which shall include a detailed description of how the school principal, administrators, faculty and staff will be recruited, employed, evaluated and compensated in the proposed school and any proposed waivers or modifications of collective bargaining agreements; (v) a policy and procedures plan, which shall include a detailed

description of the unique operational policies and procedures to be used by the proposed school and how the procedures shall support school performance and student achievement; and (vi) a professional development plan, which shall include a detailed description of how the school may provide high-quality professional development to its administrators, teachers and staff.

In order to assess the proposed school across multiple measures of school performance and student success, the innovation plan shall include measurable annual goals including, but not limited to, the following: (i) student attendance; (ii) student safety and discipline; (iii) student promotion and graduation and dropout rates; (iv) student achievement on the Massachusetts Comprehensive Assessment System; (v) progress in areas of academic underperformance; and (vi) progress among subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; (7) reduction of achievement gaps among different groups of students.

A majority vote of the innovation plan committee shall be required for approval of the innovation plan.

(k) The provisions of the collective bargaining agreements applicable to the administrators, teachers and staff in the school shall be considered to be in operation at an Innovation School, except to the extent the provisions are waived or modified under the innovation plan and such waivers or modifications are approved under subsections (l) and (m).

(l) In the case of a school conversion, upon completion of the innovation plan in subsection (j), , the applicant shall submit the innovation plan to teachers in the school that is proposed for conversion for approval by secret ballot within 30 days. A two-thirds vote of the teachers shall be required to approve the plan. Upon approval of an innovation plan by the applicable union members the plan shall, within 7 days, be submitted to the schoolcommittee. If

a two-thirds vote is not achieved, the innovation plan committee may revise the innovation plan as necessary and submit the revised plan to the teachers for a subsequent vote.

In the case of a new school, upon the completion of the innovation plan in subsection (j), the applicant, a local union and the superintendent shall negotiate waivers or modifications to the applicable collective bargaining agreement necessary for the school to implement the innovation plan. Upon the conclusion of the negotiations, the innovation plan shall be submitted immediately to the school committee. If the negotiations have not resulted in an agreement within 40 days, either party may petition the division of labor relations for the selection of an arbitrator. The division shall select an arbitrator within 3 days of the petition from a list submitted by the parties. The arbitrator shall conduct a hearing within 14 days of the arbitrator's selection. The arbitrator shall consider the parties' positions and the needs of the students in the district. The arbitrator's decision shall be consistent with the contents of the innovation plan developed by the applicant. The arbitrator shall, within 14 days of the close of the hearing, submit a decision which shall be final and binding on the parties.

(m) Upon receipt of an innovation plan regarding an Innovation School, a school committee shall hold at least 1 public hearing on the innovation plan. After the public hearing, but not later than 60 days after the receipt of the innovation plan, the school committee shall, on the basis of the quality of the plan and in consideration of comments submitted by the public, undertake a final vote to authorize the Innovation School for a period of not more than 5 years, subject to subsection (n). Approval of the majority of the school committee as fully constituted shall be required to authorize an Innovation School. If the approval is not obtained, an innovation plan committee may revise the innovation plan and: (i) in the case of a new school, submit the revised plan to the school committee for a subsequent vote; or (ii) in the case of a conversion, submit the revised plan to the teachers in the school that is proposed for conversion for a vote, pursuant to subsection (l); provided, however, that the plan meets the requirements for approval

under subsection (l), submit the revised plan to the school committee for a subsequent vote. A school committee shall vote on a revised plan submitted pursuant to this subsection within 60 days of the receipt of such plan and contract.

(n) All Innovation Schools authorized under subsection (m) shall be evaluated by the superintendent at least annually. The superintendent shall transmit the evaluation to the school committee and the commissioner of elementary and secondary education. The purpose of the evaluation shall be to determine whether the school has met the annual goals in its innovation plan and assess the implementation of the innovation plan at the school. If the school committee determines, on the advice of the superintendent, that the school has not met 1 or more goals in the innovation plan and that the failure to meet the goals may be corrected through reasonable modification of the plan, the school committee may amend the innovation plan as necessary. After the superintendent assesses the implementation of the innovation plan at the school, the school committee may, on the advice of the superintendent, amend the plan if the school committee determines that the amendment is necessary in view of subsequent changes in the district that affect 1 or more components of the plan, including, but not limited to, changes to contracts, collective bargaining agreements or school district policies; provided, however, that an amendment involving a subsequent change to a teacher contract shall first be approved by teachers at the school under the procedures in subsection (l).

If the school committee determines, on the advice of the superintendent, that the school has substantially failed to meet multiple goals in the innovation plan, the school committee may: (i) limit 1 or more components of the innovation plan; (ii) suspend 1 or more components of the innovation plan; or (iii) terminate the authorization of the school; provided, however, that the limitation or suspension shall not take place before the completion of the second full year of the operation of the school and the termination shall not take place before the completion of the third full year of the operation of the school.

(o) At the end of the period of authorization of an Innovation School approved under subsection (m), the leadership of the school may petition the school committee to extend the authorization of the school for an additional period of not more than 5 years. Before submitting the petition, the leadership of the school shall convene a selection of school stakeholders, including, but not limited to, administrators, teachers, other school staff, parents and external partners, as applicable, to discuss whether the innovation plan at the school requires revision and to solicit recommendations as to the potential revisions. After considering the recommendations of the stakeholder group, the leadership of the school and the applicable superintendent shall jointly update the innovation plan as necessary; provided, however, that a proposal regarding a new waiver or exemption from the local teacher's union contract shall be approved by teachers at the school, under subsection (l). Approval of the majority of the school committee as fully constituted shall be required to extend the period of authorization of an Innovation School. If the approval is not obtained, the leadership of the school and superintendent may jointly revise the innovation plan and submit the revised plan to the school committee for a subsequent vote. If the school committee does not extend the authorization of the school, the leadership of the school may seek the authorization from the board of elementary and secondary education. The board shall vote on the requested extension within 60 days of its receipt for approval of such extension.

(p) The commissioner of elementary and secondary education shall, to the extent practicable, be responsible for the following: (i) the provision of planning and implementation grants to eligible applicants to establish Innovation Schools; (ii) provision of technical assistance and support to eligible applicants; (iii) the collection and publication of data and research related to the Innovation Schools initiative; (iv) the collection and publication of data and research related to successful programs serving limited English-proficient students attending Innovation Schools; and (v) the collection and dissemination of best practices in Innovation Schools that may be adopted by other public schools. The board of elementary and secondary education shall

promulgate regulations necessary to carry out this section. Annually, the commissioner shall report to the joint committee on education, the house and senate committees on ways and means, the speaker of the house of representatives and the senate president on the implementation and fiscal impact of this section.

Innovation Schools: Using Innovation to Promote Academic Achievement

In January 2010, Governor Patrick signed historic education reform legislation that gives all students and families greater access to high-quality schools. The Innovation Schools initiative, a key component of this legislation, provides educators and other stakeholders in all districts across the state with the powerful opportunity to create new "Innovation Schools," in-district and charter-like schools that will operate with greater autonomy and flexibility with regard to curriculum, staffing, budget, schedule/calendar, professional development, and district policies. These public schools will be able to implement innovative strategies to improve student achievement while keeping school funding within districts.

Why Innovation Schools?

Effective schools are characterized by high-quality teaching and learning, high expectations for all students, meaningful relationships between teachers and their students, and a strong sense that educators truly own the performance of their students, curriculum and instruction, and the operation of the school.

Innovation Schools represent the new chapter of education reform in Massachusetts, as they provide an unprecedented opportunity for educators and other partners to utilize their own expertise to establish the conditions that will best meet the needs of their students. For example, Innovation Schools can increase opportunities for teacher leadership and deepen teacher professionalism by promoting ownership from within a school.

How will Innovation Schools operate?

An Innovation School will operate according to an "**innovation plan**" which describes the areas of autonomy and flexibility and specific strategies that will be implemented in the school. An innovation plan must include, but is not limited to, the following elements:

- A **curriculum plan** that includes detailed information about how the proposed curriculum will improve student achievement and school performance;
- A **budget plan** that includes detailed information about how funds will be used differently in the proposed school;
- A **school calendar and schedule plan**;
- A **staffing plan** that includes detailed information about how the principal, teachers, and other staff members will be recruited, employed, evaluated, and compensated in the proposed school and if applicable, a detailed description of any **proposed waivers from or modifications to collective bargaining agreements**;
- A plan that includes information about the **unique instructional focus and operational policies and procedures** that will be implemented in the school, and how they will support student achievement and school performance; and
- A **professional development plan** that describes how the proposed school will provide ongoing and high-quality professional development opportunities to administrators, teachers, and other staff members.

The innovation plan must also include **measurable, annual goals** that assess factors such as student achievement and school performance. In exchange for authority to operate the school with increased autonomy, Innovation School operators will be held responsible, under a contract with the local school committee, for advancing student learning and meeting these annual benchmarks.

All Innovation Schools will receive the **same per pupil allocation** as any other school in the district, and its operators can also secure grant or other types of supplemental funding to implement the innovation plan.

The Innovation Plan Committee, which is responsible for developing the innovation plan, could consider the following strategies:

- Adopting innovative instructional, curricular, and assessment practices;
- Extending the school day or year;
- Providing additional enrichment activities for students;
- Allocating more funds for professional development;
- Establishing schools with special themes (e.g., the arts, STEM, etc.);
- Modifying hiring practices to better meet the needs of the school;
- Increasing time for collaboration among staff members; and
- Securing freedom from district rules and/or contract provisions.

Who can propose an Innovation School?

A wide range of applicants can convert an existing school or create a new school, and they will have access to the same tools that are typically available at our highest performing charter schools. Proposals to convert existing schools or establish new schools can be made by the following groups, or consortia of these groups:

- Parents;
- Teachers;
- Parent-teacher organizations;
- Principals;
- Superintendents;
- School committees;
- Teacher unions;
- Colleges and universities;
- Non-profit community-based organizations, business or corporate entities, charter school operators, or education management organizations;
- Educational collaboratives; and
- Additional groups authorized by the Commissioner of Education.

* *Private and parochial schools are not eligible to operate Innovation Schools.*

Application Process

Proposals to establish either new schools or convert existing schools will be generated, reviewed, and approved entirely at the local level as follows.

1. The applicant develops and submits an initial prospectus to the district superintendent who will convene a screening committee that includes the superintendent or a designee, a school committee member or a designee, and a representative of leadership from the local teachers' union; two-thirds approval is required to move forward.
2. An Innovation Plan Committee (consisting of, at minimum, the applicant, the superintendent, a school committee member, a parent with a child in the district, a district principal, and two district teachers) then develops and internally approves the innovation plan.
3. Upon completion of the innovation plan, specific steps are required.
   - A conversion school requires a two-thirds majority vote of the current teachers in the school.
   - A new school requires negotiations among the applicant, local teacher's union, and superintendent if the innovation plan includes proposed waivers from or modifications to the collective bargaining agreement.
4. The innovation plan is then submitted to the school committee, which must hold at least one public hearing; a majority vote of the full school committee is required for approval.
5. Upon approval, the Innovation School is authorized for a period of up to five years, will be evaluated annually by the superintendent, and can be reauthorized by the school committee at the end of each term.

For more information about the Innovation Schools initiative and the application process, please contact Saeyun Lee (saeyun.lee@state.ma.us) or Nick Martinelli (nicholas.martinelli@state.ma.us) at the Executive Office of Education, or Sarah McLaughlin (sarah.l.mclaughlin@state.ma.us) or Cliff Chuang (cliff.w.chuang@state.ma.us) at the Department of Elementary and Secondary Education. Guidance documents are also available at the following website: http://www.mass.gov/?pageID=eoehomepage&L=1&L0=Home&sid=Eeoe.

Appendix F5: State Funding for Educational Innovation

OTHER LAWS REFERENCED IN SECTION F:

STATE FUNDING FOR EDUCATIONAL INNOVATION AND IMPROVEMENT

Section 137 of Chapter 27 of the Acts of 2009 – Authorizing the Massachusetts School Building Authority to oversee ARRA Qualified School Construction Bonds

SECTION 137. Notwithstanding any general or special law to the contrary, the commonwealth hereby designates the Massachusetts School Building Authority, established in section 1A of chapter 70B of the General Laws, to allocate to governmental issuers of bonds within the commonwealth, pursuant to section 54F(d)(1) of the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, including to said authority, the limitation amount allocated to the commonwealth by the United States Department of the Treasury, but not including the amount allocated to large local educational agencies pursuant to section 54F(d)(2) of said act except to the extent that any such large local educational agency reallocates amounts to the commonwealth pursuant to said section 54F(d)(2), in which case such reallocated amounts shall also be allocated by said authority. Notwithstanding section 89 of chapter 71 of the General Laws, or any other general or special law to the contrary, the Massachusetts School Building Authority may, in its discretion, distribute to charter schools proceeds from bonds authorized under section 54F(d)(1) of the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, or make a portion of the allocation available to other issuers on behalf of charter schools.

Chapter 27 of the Acts of 2009 – Expanded Learning Time (7061-9412)

7061-9412 For grants to cities, towns, and regional school districts for the purpose of planning for and implementing expanded learning time in the form of longer school days or school years at selected schools; provided, that implementation grants shall only be provided under this item to schools and districts which submitted qualifying applications which were approved by the department in fiscal year 2009 and which include a minimum of an additional 300 hours on a mandatory basis for all children attending that school; provided further, that in approving expanded learning time implementation grant applications, preference shall be given to districts with high poverty rates or a high percentage of students scoring in levels I or II on the Massachusetts comprehensive assessment system, those districts with proposals that have the greatest potential for district-wide impact, those districts that plan to utilize partnerships with community-based organizations and institutions of higher education, and those districts with proposals that include a comprehensive restructuring of the entire school day and/or year to maximize the use of the additional learning time; provided further, that the department shall approve implementation proposals that include an appropriate mix of additional time spent on core academics, additional time spent on enrichment opportunities such as

small group tutoring, homework help, music, arts, sports, physical activity, health and wellness programs, project-based experiential learning and additional time for teacher preparation and/or professional development; provided further, that the department shall only approve implementation proposals that assume not more than $1,300 per pupil per year in future state appropriations of expanded learning time implementation funds; provided further, that in extraordinary cases the department may exceed the $1,300 per pupil per year limit; provided further, that the department shall review all qualified proposals and award approved grants not later than August 14, 2009; provided further, that in carrying out the provisions of this item, funds may be expended by the department to evaluate the impact and effectiveness of the program; provided further, that the department shall issue an annual report, not later than February 2, 2010, on the implementation of plans in all participating districts; provided further, that said report shall include, but not be limited to the names of schools and school districts participating, the number of students attending these schools and the nature and type of changes made in participating schools as a result of this program; provided further, that the report shall also include an anticipated budget for this program for the next fiscal year and a breakdown of the distribution of the $1,300 per student by school; provided further, that said report shall be provided to the secretary of administration and finance, the senate president, the speaker of the house, the chairs of the house and senate committees on ways and means and the house and senate chairs of the joint committee on education; provided further, that for this item, appropriated funds may be expended through August 31, 2010, to allow for planning and implementation during the summer months; provided further, that any grant funds distributed from this item to a city, town, or regional school district shall be deposited with the treasurer of such city, town, or regional school district and held in a separate account and shall be expended by the school committee of such city, town or regional school district without further appropriation, notwithstanding any general or special law to the contrary; and provided further, that no funds shall be expended for personnel costs at the department of elementary and secondary education $15,672,375

Chapter 27 of the Acts of 2009 – After School and Out-of-School Time Grant

7061-9611 For grants or subsidies for after-school and out-of-school programs; provided, that preference shall be given to after-school proposals developed collaboratively by public and non-public schools and private community based programs; provided further, that the department shall fund only those applications which contain accountability systems and measurable outcomes, under guidelines to be determined by the department in consultation with the department of early education and care; provided further, that applicants shall detail funds received from all public sources for existing after-school and out-of-school programs and the types of programs and type of students served by said funds; provided further, that funds may be directed to increase comprehensive after-school and out-of-school time programming to school age children and youth during the school year and the summer, including but not limited to 21st century community learning centers programs; provided further, that funds from this item

may be used for a variety of activities, including but not limited to: (1) academic tutoring and homework centers where content is linked to and based on the curriculum guidelines promulgated by said department, (2) programs which improve the health of students, including physical activities, athletics, nutrition and health education, and exercise, (3) art, theater, and music programs developed in collaboration with the Massachusetts cultural council, local cultural councils, or cultural organizations in the Commonwealth funded by the Massachusetts cultural council, (4) enrichment activities not otherwise provided during the school day, (5) advanced study for the gifted and talented, and (6) community service programs; provided further, that funds shall be expended for services that actively include children with disabilities in after-school programs that also serve non-disabled children and services that include children where English is a second language, including but not limited to: increased per-child reimbursement rates, additional staff, technical assistance, training, and transportation; provided further, that the department of elementary and secondary education shall consult the executive office of health and human services and the department of early education and care to maximize the provision of wrap-around services and to coordinate programs and services for children and youth during after-school and out-of-school time programs; provided further, that the department shall select grant recipients not later than September 30, 2009, and shall report on the preliminary results of said grants not later than February 15, 2010, to the secretary of administration and finance, the house and senate chairs of the joint committee on education, and the chairs of the house and senate committees on ways and means; provided further, that for the purpose of this item, appropriated funds may be expended through August 31, 2010, to allow for implementation of said programs during the summer months; and provided further, funds shall be expended to convene regional networks, to work with the department of elementary and secondary education and the department of early education and care to support the implementation of school-community partnerships and to submit a report by October 15, 2009, to the general court and the administration making recommendations on how to enhance school-community partnerships and positive outcomes for children and youth through funding as provided in this item $2,000,000

Chapter 27 of the Acts of 2009 – MCAS Remediation

7061-9404 For grants to cities, towns and regional school districts to provide targeted remediation programs for students in the classes of 2003 to 2014, inclusive, scoring in level 1 or 2 on the Massachusetts comprehensive assessment system (MCAS) exam established by the board of elementary and secondary education pursuant to the provisions of sections 1D and 1I of said chapter 69 of the General Laws; provided, that the department and districts shall ensure that services are available to students with disabilities; provided further, that in awarding remediation funds, preference may be given to schools and districts at risk of or determined to be under-performing in accordance with said sections 1J and 1K of said chapter 69; provided further, that the purpose of this program shall be to improve students' performance on the MCAS exam through replication of services and educational strategies with proven results as determined by the department of elementary and secondary education; provided further, that such programs shall supplement currently funded local, state, and federal programs at the school or district; provided further, that funds shall be expended for a competitive

grant program to fund academic support and college transition services to be implemented in fiscal year 2010, and operated by public institutions of higher learning or by public-private partnerships in the commonwealth, for students in the graduating classes of 2003 to 2010, inclusive, who have completed high school but have not yet obtained a competency determination as defined in section 1D of chapter 69 as measured by the MCAS assessment instrument authorized by said section 1I of said chapter 69, but who are working to pass the English and math MCAS tests, obtain a competency determination, and earn a high school diploma; provided further, that for the purpose of the programs, appropriated funds may be expended through August 31, 2010, to allow for summer remediation programs; provided further, that funds shall be expended for a competitive grant program to fund Pathways programs targeting eleventh and twelfth graders, instituted by local school districts, public institutions of higher education and qualified public and private educational services organizations and One Stop Career Centers including, but not limited to, school-to-work connecting activities, creating worksite learning experiences for students as an extension of the classroom, outreach programs for students who will need post-twelfth grade remediation to attain the skills necessary to pass MCAS, and counseling programs to educate parents and high school students on post-twelfth grade remediation options; provided further, that funds shall be expended for a competitive grant program, guidelines for which shall be developed by the department of elementary and secondary education, for intensive remediation programs in communities with students in the graduating classes of 2003 to 2014, inclusive, who have not obtained a competency determination or have scored in levels 1 or 2 on either the English or math MCAS exams; provided further, that the department of elementary and secondary education may give preference for such assistance to those districts with a high percentage of high school students scoring in level 1 on the MCAS exam in English and math; provided further, that eligible applicants shall include individual high schools, and those institutions which shall have partnered with a high school or group of high schools; provided further, that no district shall receive a grant from this appropriation until said district submits to the department of elementary and secondary education a comprehensive district plan pursuant to the provisions of section 1I of chapter 69, to improve performance of all student populations including, but not limited to, students with disabilities; provided further, that any evaluation will examine the likelihood and efficiency of replication of these programs and practices in school districts with a large percentage of English language learners; provided further, that these funds may be expended for professional development related to these programs; provided further, that the department shall issue a report not later than February 2, 2010, and annually thereafter as a condition of continued funding under this account, in collaboration with the department of higher education, describing MCAS support programs for the graduating classes of 2003 to 2014, inclusive, funded by items 7061-9404 and 7027-0019, school to work accounts, institutions of public higher education, and other sources, including federal sources; provided further, that such report shall include, but not be limited to, the number of students eligible to participate in such programs, the number of students participating in such programs, the number of students who have passed the MCAS assessment and obtained a competency determination through these programs but not met local graduation requirements, and the number of students who have passed the MCAS assessment and obtained a competency determination through these programs and

met local graduation requirements; provided further, that said report shall be provided to the chairs of the house and senate ways and means committees and the house and senate chairs of the joint committee on education; provided further, that any grant funds distributed from this item to a city, town or regional school district shall be deposited with the treasurer of such city, town, or regional school district and held in a separate account and shall be expended by the school committee of such city, town, or regional school district without further appropriation, notwithstanding any general or special law to the contrary; provided further, that funds may be expended to continue mentoring initiatives that combat the chronic dropout of at-risk youths that were funded in item 7030-1003 of section 2 of chapter 182 of the acts of 2008; and provided further, that no costs shall be expended for personnel costs $9,294,804

Chapter 27 of the Acts of 2009 – Connecting Activities

7027-0019 For school-to-career connecting activities; provided, that notwithstanding any general or special law to the contrary, the board of elementary and secondary education, in cooperation with the department of workforce development and the state workforce investment board, may establish and support a public-private partnership to link high school students with economic and learning opportunities on the job as part of the school-to-work transition program; provided further, that such program may include the award of matching grants to workforce investment boards or other local public-private partnerships involving local community job commitments and work site learning opportunities for students; provided further, that the grants shall require at least a 200 per cent match in wages for the students from private sector participants; provided further, that the program shall include, but not be limited to, a provision that business leaders commit resources to pay salaries, to provide mentoring and instruction on the job and to work closely with teachers; provided further, that public funds shall assume the costs of connecting schools and businesses to ensure that students serve productively on the job; and provided further, that no funds shall be expended for personnel costs $2,000,000

Chapter 27 of the Acts of 2009 - Worcester Polytechnic Institute School of Excellence

7061-9612 For the school of excellence program at the Worcester Polytechnic Institute; provided, that every effort shall be made to recruit and serve equal numbers of male and female students; provided further, that sending districts of students attending the Institute shall not be required to expend any funds for the cost of these students while in attendance at the Institute; provided further, that the Massachusetts Academy of Mathematics and Science shall provide professional development activities at the school located at Worcester Polytechnic Institute, including salary and benefits for master teachers and visiting scholars; provided further, that the academy shall file a report with the joint committee on education and the house and senate committees on ways and means no later than February 1, 2010, detailing the professional development activities; and provided further, that the department of elementary and secondary education shall provide a subsidy to the Worcester Polytechnic Institute to operate a school of excellence in mathematics and science $1,300,000

Chapter 27 of the Acts of 2009 – Youth Build

7061-9626 For grants and contracts with youth-build programs for the purposes of providing comprehensive youth-build services $1,500,000

Chapter 27 of the Acts of 2009 – Full-day Kindergarten

7030-1002 For kindergarten development grants to provide ongoing grant awards to continue quality enhancement of existing full-day kindergarten classrooms; provided, that the department shall administer a grant program to encourage the voluntary expansion of high quality, full-day kindergarten education throughout the commonwealth; provided further, that grants funded through this appropriation shall not annualize to more than $18,000 per classroom in subsequent fiscal years; provided further, that preference shall be given to grant applicants with high percentages of students scoring in levels 1 or 2 on the Massachusetts comprehensive assessment system exam, as determined by the department based on available data; provided further, that any grant funds distributed from this item shall be deposited with the treasurer of such city, town or regional school district and held in a separate account and shall be expended by the school committee of such city, town or regional school district without further appropriation, notwithstanding any general or special law to the contrary; provided further, that such program shall supplement and shall not supplant currently funded local, state and federal programs at the school or district; provided further, that not later than January 15, 2010, the department shall report to the house and senate committees on ways and means on the total number of grants requested and awarded; provided further, that the report shall detail common factors associated with both successful and unsuccessful applications and shall include the total number of full-day and half-day kindergarten classrooms projected to be in operation in public schools in fiscal year 2011; provided further, that all kindergarten programs previously funded through community partnership councils at the department of early education and care shall receive grants from this item in amounts equal to the amounts they received in fiscal year 2009, reduced in proportion to the overall reduction of this item from fiscal year 2009 to fiscal year 2010; and provided further, that no funds shall be expended for personnel costs..... 25,955,624

Chapter 27 of the Acts of 2009 – Early Literacy Programs

7010-0033 For literacy and early literacy programs including, but not limited to, the Bay State Reading Institute program, the John Silber early literacy program, and the Reading Recovery program; provided, that said programs shall provide ongoing evaluation of the outcomes thereof and shall document said outcomes annually to the department and to the house and senate committees on ways and means; provided further, that the Bay State Reading Institute may be administered under contract to Middlesex Community College in programmatic collaboration with Framingham State College and Fitchburg State College..... $4,175,489