

Boston Teacher Residency

Investing in Innovation Fund

Absolute Priority 1: Innovations that Support Effective Teachers and Principals

Boston Teacher Residency: Building a Pipeline of Effective Teachers for Turnaround Schools

“We’ve got to do a better job recruiting and preparing new teachers... that means creating alternate pathways to teaching for talented young people by expanding programs like the one used in Boston, where aspiring teachers work side-by-side with effective mentors in a yearlong residency.”

- President Barack Obama, November 4, 2009

Introduction: Preparing Effective Teachers to Increase Student Achievement

The single greatest factor impacting student achievement is the quality of the student’s teacher;¹ effective instruction stands as the difference between academic growth and stagnancy. Yet traditional approaches to teacher recruitment, preparation and development often have not translated to success for our nation’s students, particularly students in areas with entrenched poverty. The Boston Teacher Residency (BTR) program was created to confront this crisis for the Boston Public Schools (BPS), creating a ground-breaking approach through which to identify and attract excellent teacher candidates, prepare them to meet the diverse needs of all students, and provide them with the tools and incentives through which to grow and stay in the profession and the district – moving their students forward to proficiency and beyond.

BTR has proven itself a powerful and successful model for teacher development and

¹ National Comprehensive Center for Teaching Quality, 2005

support. Since its inception in 2003, BTR has recruited, prepared and sustained more than 250 highly effective teachers in high-needs areas to serve more than 16,000 students in 75 schools in the BPS, the vast majority with large populations of English Language Learners (ELLs), students with disabilities, and families living below the poverty line. Three-year retention rates for BTR's teachers, half of whom are teachers of color and more than 40% of whom teach English as a Second Language (ESL) or special education, stand at 85%², more than 30 percentage points higher than the typical rate in urban schools. BTR has also served as a pioneer in the world of teacher education by commissioning its own teacher effectiveness study using a value-added methodology, in partnership with Professor Thomas Kane and Harvard's Center for Education Policy Research (CEPR).

President Obama has pointed to BTR as a model for high-quality teacher recruitment and preparation; the USDE's Teacher Quality Partnership program was developed with BTR's assistance to expand and replicate residencies throughout the country. BTR's national arm, Urban Teacher Residency United (UTRU), is currently supporting 14 fledgling urban residency programs, creating pipelines of effective urban teachers in a number of big cities such as New York and Los Angeles, in charter management organizations, and in collaboration with schools of education looking to recreate their teacher education programs.

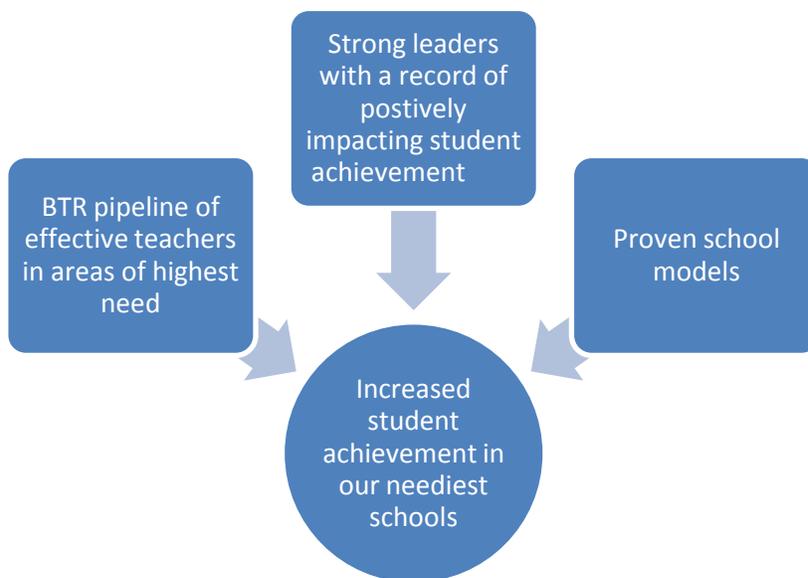
The Turnaround Challenge. BTR now proposes to build upon its expertise in teacher preparation and development to confront the largest crisis in public education today: turning around our most troubled schools. In 2009, states were granted new authority to require the closure, turnaround, or transformation of their lowest-performing schools. On January 18th, 2010, Massachusetts Governor Deval Patrick signed into law *An Act Relative to the Achievement Gap*, giving districts new powers to intervene in chronically underperforming schools. The

² Boston Teacher Residency/Boston Plan for Excellence Facts at a Glance, 2009

Massachusetts Department of Elementary and Secondary Education (DESE) worked with a broad set of stakeholders to identify the schools which were making the least improvement; 12 of the 35 identified Massachusetts schools are in Boston.

The staffing and support of these schools in turnaround and transformation status has quickly become an issue of urgent importance in the BPS. BTR has a track record of innovation in response to BPS needs, and now proposes to build upon this record by using its capacity to staff and support the district’s turnaround schools.

Leveraging BTR’s pipeline of effective teachers to help turn around our most troubled schools. This proposal sets forth a simple theory of action for its work in turnaround schools: working closely with visionary school leaders in schools that draw on proven models, high-quality teachers will close the achievement gaps for their students, initiating and sustaining the dramatic and fundamental change needed to transform these historically underperforming schools. Teachers alone will not cause this change. To turn these schools around will require effective teachers and leaders employing the right structures and strategies.



The proposed work builds on four central areas of research and experience:

- BTR’s record of achievement in identifying, recruiting, preparing, and sustaining effective teachers in the areas of greatest need for the BPS;
- The wealth of research showing that the greatest impact on student achievement is the quality of a student’s teacher, and that teacher effectiveness increases with years of experience;
- The research on successful turnaround school models, incorporating excellent leaders, effective and collaborative teachers, instructional coherence, social and emotional support systems, a powerful culture of achievement and high expectations, and a relentless focus on data to increase student achievement levels in all areas; and
- The success of the Academy of Urban School Leadership (AUSL) turnaround model in Chicago, which provides a compelling argument for the effectiveness of an in-district residency turnaround strategy.

This work will join BTR’s expertise in the development of highly effective teachers with the knowledge and skills of proven high-performing school leaders and the implementation of excellent school models to develop and test a promising school turnaround framework. The proposal’s strong evaluation component has been designed to capture the learnings from this work – about the development of effective teachers and their role as part of a turnaround effort – so that they can be easily disseminated and adopted.

Background: A Human Capital Strategy

BTR was established in 2003 with a mission *to recruit, prepare and sustain excellent teachers in and for the Boston Public Schools*. BTR tackles a crucial urban school district problem in an innovative way: it makes K-12 public school classrooms, rather than the academy, the locus of

teacher preparation. BTR recruits a talented and committed applicant pool and runs a highly selective and rigorous selection process, admitting only about 13% of applicants. These aspiring teachers, called Teacher Residents, spend a full school year working with a mentor teacher in a BPS classroom four days per week, sharing responsibility for the academic growth of every student in their classrooms. Residents take BTR's courses, specially designed to prepare teachers for the BPS, and earn a master's degree in education conferred by the University of Massachusetts/Boston. They earn an Initial Teacher License in their primary academic content area and credit toward dual licensure in special education, which they finish in their second year. Residents receive a modest living stipend and health insurance and incur no cost for the degree or licensure; in return, they commit to teach for at least three years in the BPS. BTR continues to support its graduates for these three years and beyond, helping them develop from novice teacher to teacher-leader with the goal of building a critical mass of like-minded, effective educators equipped to bolster school and district improvement efforts.

When then-BPS Superintendent Tom Payzant started BTR in 2003, 53% of the district's new teachers were leaving within three years. The financial implications for Boston – an estimated \$3 million in total teacher replacement costs³ – constituted a considerable budgetary crisis. The district also faced severe shortages in the high-need areas of math, science, special education, and teachers of English Language Learners (ELLs). The ramifications for students were enormous: more than two-thirds had not demonstrated academic proficiency and were performing at a level well beneath their peers in other districts. The significant per-year increase in effectiveness of new teachers is borne out by research⁴, as is the correlation between effective

³ Curtis & Birkeland, 2006.

⁴ Nye, 2004.

teaching and student achievement⁵; BPS was losing teachers just as they were becoming effective practitioners, and student growth was slowing as a result [Boston ref]. Furthermore, Boston faced the additional challenge of diversifying its teaching force - while 86% of BPS students were children of color, three out of every five (61%) teachers were white.

Seven years later, BTR's high retention rates have enabled an extraordinary shift in BPS budgetary priorities; dollars once spent on teacher replacement now are reallocated toward resources for teacher recruitment and development in high-need areas, the streamlining of what had been an unwieldy and off-putting hiring process, and the implementation of a district-wide formative assessment system. Most importantly, students are making gains, their achievement levels beginning to steady and rise in response to the growing cumulative knowledge and skill base of their teachers [as described in Section 5]. Thus BTR has successfully formed a human capital pipeline for the district, providing a return on its investment both financial and academic.

A. Need for the Project and Project Design

Need: Boston Public Schools

With 143 schools and 5,000 teachers, the BPS serves 55,800 students from 116 countries speaking more than 60 languages. Almost half of all students speak a language other than English at home. One in five students receives special education services, including 5,000 students who have been identified as having severe disabilities, and one in five students has been identified as an English Language Learner (ELL). Three quarters of the students are eligible for free/reduced price lunch services⁶.

Superintendent Carol Johnson has made the success of all students, particularly ELLs and

⁵ Rivkin and Hanushek, 2005

⁶ Boston Public Schools data, 2009-2010.

students with special needs, the district's main priority. Dr. Johnson's Acceleration Agenda aims to prepare all students for college and/or a career by 2014 and focuses on a whole-school, data-based approach to teaching and learning. The district has made significant forward progress in recent years, receiving the prestigious Broad Prize in 2006 and making steady gains in student progress in some areas.⁷

Yet, like so many large urban districts, the BPS' accomplishments for students in some areas have not translated into success for all. Substantial academic achievement gaps exist between English language learners and their counterparts who are native English speakers, between students diagnosed with disabilities and their counterparts not diagnosed with disabilities, and between African-American and Latino children and their White and Asian-American counterparts⁸. By the end of the 2008-09 school year, over one-third (55 of 143) of the district's schools had been designated as Commonwealth Priority schools: schools that had failed to make AYP in a subject area for four or more years⁹. The 2009-10 school year has brought more drastic action to some of these schools; with the passage the above-described legislation (Massachusetts' *An Act Relative to the Achievement Gap*) a subset of 12 of these schools have been designated by the Massachusetts Department of Elementary and Secondary Education as turnaround schools, eligible for one of the four turnaround models.

Even before the state-wide legislation described above, the BPS had moved aggressively to intervene in its lowest-performing schools. It sought to combine two objectives: a need to

⁷ NAEP Trial Urban District Assessment results, 2009

⁸ For example, White and Asian-American students score in the Advanced and Proficient ranges at rates roughly 30 percentage points greater than African-American and Latino children; Students diagnosed with disabilities score in the Advanced and Proficient ranges at rates between 25 and 30 percentage points lower than their counterparts not diagnosed with disabilities.

⁹ A Commonwealth Priority School is any school that has a No Child Left Behind (NCLB) accountability status of Corrective Action or Restructuring in English language arts and/or mathematics for students in the aggregate as a result of failing, for four or more years, to make AYP in the same subject(s).

consolidate space in a time of shrinking enrollments and shrinking budgets, and a strategic decision to expand some of its best schools. By merging some of BPS' best schools with some of its low-performing schools, the district essentially began the takeover of certain schools. In so doing, it accomplished both objectives: closing school buildings and giving some of its best schools and leaders the opportunity to improve some of its worst schools. After the legislation passed, BPS quickly began to work on the 12 of its schools identified turnaround, and six of those have been identified as "Fresh Start" schools – schools in which all teachers must reapply for their positions. This proposal seeks to work with both types of turnaround schools: those begun before the legislation passed ('unofficial' turnarounds) and the official turnarounds made possible by the new law.

Project Design: Turning Around Underperforming Schools

Rationale

A key component of BTR's strategy has been to place its graduates in schools in clusters. After their year-long preparation component in which Residents become part of a tight cohort and are prepared to be collaborative, team-oriented teachers, it made sense to continue this work as they fanned out across the district. In 2008, BTR engaged in a business planning process led by the Bridgespan Group, which involved a number of key members of the BPS leadership team. The resulting business plan centered on a strategy of placing graduates in teams and supporting their whole school communities. The National Center for Teaching Quality's recent report on human capital in the BPS made the recommendation to "increase the number of... professional incentives available for highly effective teachers to work at high-needs schools... [such] strategies include placing clusters of effective teachers, such as alumni of the Boston Teacher

Residency, in low-performing schools.”¹⁰ BTR now proposes to fulfill this strategic vision for the district’s most underserved students by partnering with three turnaround schools each year for the following four years.

While the research base on turnaround schools is still nascent, there is strong evidence pointing to the fact that the two most essential pieces of a successful turnaround are: a strong leader with a team of effective teachers prepared to work collaboratively, and the implementation of structures to support data collection and analysis with a constant focus on student learning and instructional response.¹¹ We argue that successful turnarounds need a combination of these two critical components: 1) a powerful human capital pipeline for teachers and leaders, and 2) a school model based on what we know works. BTR has developed the first component; strong school models share these other common attributes:

- They display a large degree of instructional and cultural coherence; all involved are on the same page about what we are trying to accomplish and how we are going about it.
- They use data in a regular and timely fashion to improve instruction for all children. These are schools which understand and build in the structures to continuously make adjustments along the way to ensure that all children are being served.
- They provide a broad set of social and emotional supports for children and their families. These are schools that understand that their children have lives outside of the school, and that they need support in a variety of efforts to be the best students they can be.
- They support and hold accountable all adults in the building. These are schools which establish strong and supportive professional cultures which demand the best of every person

¹⁰ NCTQ, 2010.

¹¹ Kowal et al., 2009; Hassel et al., 2006; Hess, Kendrick, Guenther, & Calkins, 2008

in the building, and give the support and space for people to develop¹².

It is a reality that the first year of a turnaround school will be, by necessity, a transitional one. The school needs some quick wins; everyone is watching to see if anything will change. Schools that neglect to provide a visible transition – that do not deliver some quick wins – have a hard time surviving that first year. But long-term success cannot be achieved in one year, and will not be an automatic outgrowth of these quick wins. Long-term success will come from the development of coherent, sustainable schools which provide for the development of all their children and adults.¹³

BTR’s teacher pipeline for turnarounds strategy recognizes that there are no silver bullets, and that so-called ‘light-touch’ approaches to turnaround efforts have proven unsuccessful.¹⁴ Rather, we believe that the only models which will deliver significant student achievement gains for children are comprehensive, coherent approaches which build on what we know works and do not attempt to solve our nation’s most complex problems with quick fixes.

Objectives

BTR has established the following objectives for this proposal.

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| 1. Prepare a total of 130 Teacher Residents for placement as teachers of record in BPS turnaround schools (25 in year 1, 30 in year 2, 35 in year 3, 40 in year 4) |
| 2. Place a total of 130 graduating Teacher Residents in positions at turnaround schools (25 in year 1, 30 in year 2, 35 in year 3, 40 in year 4) |

¹² Walberg, 2007; Hassel & Hassel, 2005

¹³ Duke et al, 2005

¹⁴ Mass Insight, 2007

3. BTR graduates placed in turnaround schools will remain teaching in those schools at an 82% rate after three years – they will have interim retention rates as follows: 93% one year retention rate, 87% two-year retention rate, 82% three-year retention rate
4. BTR graduates teaching in turnaround schools will make at least one year’s worth of academic growth with at least 80% of their students
5. 80% of BTR graduates will earn “proficient” rating or higher on classroom observational assessment of teacher effectiveness
6. Identify and partner formally with three new turnaround schools each year (12 total in life of the grant)

Project Strategy and Goals

A three-pronged approach: great teachers, powerful leaders, and proven school models. In what follows, we lay out an approach to improve the academic prospects for our city’s neediest children – and, we believe, for our nation’s neediest children - which combines three critical levers: 1) a pipeline of great teachers, 2) powerful school leaders, 3) proven school models. We will put these three levers to work in our city’s turnaround schools. We believe that the advent of turnaround schools presents an unprecedented opportunity for our city, and for those in our city who work to educate our children.

It has, unfortunately, too often been the case that dedicated educators who wanted to work with our neediest children had to serve in schools without the right colleagues, leaders or structures to make a difference. These educators often made great strides by themselves in classrooms with their doors closed, but the distance to be traversed to help all students reach

proficiency was too great for a series of individual efforts. We know it takes a concerted approach. BTR has built a strong track record of recruiting, preparing and supporting effective, results-oriented, collaborative teachers.

BTR will work with three turnaround schools in the first year, adding three additional schools each of the following years. The program will recruit and prepare for, place and support new teachers in turnaround schools, and partner with these turnaround schools to ensure the achievement of their school-wide goals. This work builds on BTR's seven-year track record and will require key additions to the work as follows.

1. BTR will develop a tight, standardized system to measure teacher effectiveness

which will guide the program's decisions about the types of support needed by Residents during their preparation year, which teachers can be placed in turnaround schools, which should stay in those schools, and what actions are needed develop these teachers as much as possible. The program's intent is to hone in on a set of questions about what factors contribute to the effectiveness of a successful "turnaround teacher." BTR will consider a set of variables across a new teacher's career span: prior experiences, ratings in the admissions process by the admissions committee, formative assessments during the preparation year by program supervisors, as well measures of teacher effectiveness once serving as a teacher of record. BTR aims to continue to improve its ability to recruit, prepare and support effective teachers – especially for our neediest settings.

As it currently stands – BTR teachers are trained to help each and every student make *at least* one year's worth of academic growth in a year. BTR uses BPS' district-wide formative assessment system as a basis for measuring students' academic growth. BTR will use these student growth measures to guide recommendations for placement in turnaround schools

teachers. Because BTR continues to support its graduates through their first three years of teaching, the program will continue to use these measures to guide its support for its graduates. BTR Induction coaches work with all graduates to make sure they are making at least a year's worth of growth with every student. These efforts will be embedded in each turnaround school's work. Each of these schools will have as its goal to close the achievement gap; BTR will support its graduates and their colleagues to achieve this goal.

This proposal also includes two key teacher effectiveness evaluations: the continuation of the value-added study begun with Professor Tom Kane and Harvard's Center for Education Policy and Research (CEPR) and the creation of a classroom observation study using outside observers all trained and normed on a widespread measure of teacher effectiveness (e.g. Charlotte Danielson's Framework for Teaching). The interim and summative results from these studies will be used by the program to make adjustments in admissions, preparation and induction practices.

2. BTR will modify its preparation component to ready new teachers for the challenging work of a staffing a turnaround school. While in the past BTR teachers were prepared to teach anywhere in Boston and their preparation was not differentiated depending on the school in which they would teach, BTR will now work to begin the placement in the turnaround school earlier so as to ready the BTR graduates and their colleagues for the difficult work ahead.

Because of BTR's partnerships with the schools named in this grant, and the addition of three new schools each subsequent year, BTR Residents will go through an early hiring and placement process with turnaround school principals – enabling some to gain early placement at these schools. BTR will create and implement a series of working sessions with Residents'

future colleagues and leaders during the spring of their residency year, so that they gain a jump-start on the process of building a coherent team. BTR will also support graduates to work with their new colleagues in the summer before the school year starts with a focus on curriculum planning and alignment.

BTR will also work closely with the Academy of Urban School Leadership (AUSL), BTR's Chicago partner organization in the residency movement. AUSL has demonstrated promising success running turnaround schools for the Chicago Public Schools, and largely uses its own residency graduates to staff these schools. AUSL will provide technical assistance to BTR to ensure that it is preparing its Residents to be turnaround-ready.

3. BTR will overhaul of our induction work to support whole-school turnaround efforts. Where BTR's prior efforts had been focused on supporting individual BTR graduates wherever they taught, and sometimes their immediate team of teachers, BTR induction work will now partner directly with whole school improvement efforts. BTR will integrate its professional development offerings (to individuals, small groups and larger groups) with the development goals for the whole school.

BTR has learned over its first seven years that a one-on-one coaching model can be effective, but is ultimately a limited approach to the induction of new teachers. A good coach can provide useful and timely support to a new teacher. However, that teacher does not work in a vacuum – and if a teacher works in a dysfunctional environment, it will continue to be difficult for the teacher to grow and thrive in the school (despite all of the effective, hard work of the coach). Rather, BTR's induction work is most effective when it is part of a school-wide effort and when BTR coaches work with teams of teachers to support the whole school's goals. In this proposal, BTR induction staff members sit as part of the school's Instructional Leadership Team

and serve as an integral component of the whole-school turnaround efforts.

Drawing on much of the work on professional learning communities that support the learning of every student¹⁵, BTR's proposed work in these schools will center on a thorough inquiry process involving regular analysis of assessment data and accompanying rounds of instructional interventions. BTR will support school leaders and faculties who aim to make collaboration around the acceleration of student achievement the school norm. Every teacher team will participate in an ongoing process of identifying the current level of student achievement, establishing a goal to improve the current level, working together to achieve that goal, and providing periodic evidence of progress.

While each school will employ its own strategies and overall approach, a non-negotiable for BTR in partnering with schools is the use of regular formative assessments to guide instruction. BTR will ensure that each school has the assessment and data services it needs to make quick, targeted instructional decisions for individuals and groups of students. BTR plans to subcontract with the Achievement Network to provide these services.

BTR will make available to each partner school a modest professional development fund intended to reward excellent teachers who are seeking to extend their learning. Teachers at these schools will be eligible to apply to this fund for support for professional growth opportunities which address both the school's overall needs and the individual development goals of the teacher.

BTR will hire a Turnaround Coordinator to be responsible for this work. The Turnaround Coordinator will oversee the delivery of induction supports and will facilitate the collaborative, whole-school induction model across all content areas and grade levels in partnership with teachers and school leaders.

¹⁵ DuFour, 2004

B. Strength of Research, Significance of Effect, and Magnitude of Effect

Research-based Findings and Reasonable Hypotheses

BTR's teacher pipeline to turnaround strategy components are built upon the following base of research and experience:

- 1. BTR's seven years of success in the recruitment, preparation, development, and retention of highly effective teachers for the areas of highest need in the BPS, including the program's groundbreaking work in developing a value-added study of the effectiveness of its teachers**

BTR, based upon the medical residency model, has built its program to support the development of teachers across a four-year teaching and learning continuum. The foundational program components, are described here.

Teacher Effectiveness and Student Achievement: One year's growth in one year's time

BTR holds as a goal that every one of its teachers will make at least one year's worth of academic progress in one year with each and every student. BTR invests in ongoing data collection, analysis and evaluation to monitor program operations and to demonstrate the efficacy of the program – as defined by student achievement in Residents' and graduates' classrooms [the state's newly implemented MCAS individual growth measure is a powerful tool in determining our students' growth]. Field and Induction staff regularly assess mentor and Induction Coach performance; mentors are held responsible for the performance of Residents within their classrooms, site directors for the work of the mentors within their school, and induction coaches for the performance of their graduates. For Residents, graduation from the program is contingent on a set of performance-based assessments, which ensures accountability

in the residency placement as well as coursework.

Assessment data is collected and managed through the Efforts to Outcomes performance management database, which allows BTR to analyze key outputs for all Residents, mentors, and graduates, including annual recruitment, placement and retention statistics as well as principal, Resident and graduate survey responses. This ongoing assessment and evaluation at all program levels allows BTR to continually respond to demonstrated gaps with refinements to the recruitment, admission and retention processes. Research has shown that data obtained from frequent assessment of student performance constitutes a large role in school improvement initiatives.¹⁶

BTR has pioneered a value-added model for assessing the student achievement gains of teachers. In 2007, BTR partnered with Professor Thomas Kane at the Harvard Graduate School of Education and its Center for Education Policy and Research (CEPR) to begin a study of graduates' effectiveness – measured largely through the academic gains of their students (please see Letter of Support from CEPR Executive Director Jon Fullerton in Appendix H). As a result, BTR has expanded the capacity of the district to assess the effectiveness of all of its teachers. While BTR's study focuses largely on BTR graduates, the development of the model and the access to all BPS teachers' data means that the district can now get answers to a set of questions about program effectiveness across its schools and programs.

Recruitment. BTR recruiters seek outstanding candidates for positions in the district's high need areas – math, science, ESL, and special education - and the BTR Admissions Committee, comprised of stakeholders from various local entities as well as BPS and BTR staff, evaluates candidates and selects those with the skills, experience, and cultural competence to make them effective teachers and leaders for Boston's students. BTR's selection methods are

¹⁶ Hellard, 2005

based on the research showing that deep content knowledge, particularly in math and science, positively impacts student achievement¹⁷ and that teachers who are dual-licensed in a content area and in special education teach more effectively to the intellectual strengths of all students;¹⁸ BTR's own experience has proven that finding teachers with a deep connection to Boston impacts retention rates – and, subsequently, student achievement. High selectivity and the acceptance of candidates with strong academic credentials have also been shown to produce more effective teachers.¹⁹

Preparation. BTR's curriculum joins master's-level coursework tailored to BPS' reform agenda with a full-year, in-school mentoring experience in a BPS classroom. BTR creates all of its own courses – all designed to focus sharply on getting Residents ready to be effective urban teachers – and hires its own instructors – with an emphasis on people who can skillfully bridge theory and practice, a demonstrated factor in teachers' effect on student achievement.²⁰ BTR Curriculum and Field staff collaborate to ensure that Residents' learning in courses is in alignment with their experiences in classrooms; Residents work with a trained, supported mentor in their content area (including ESL) as well as in special education, and mentor and site director training occurs within the framework of the Residents' inquiry-driven curriculum. BTR's mentoring model is supported by the large body of research showing that having a highly effective mentor significantly increases teachers' retention rates and effectiveness²¹; research also shows that extensive preparation involving integrated field and coursework components lessens teacher attrition rates.²²

Induction. BTR graduates commit to teach in the BPS for at least three years; in return,

¹⁷ Rice, 2003; Hill et al., 2005; Sanders, 2005

¹⁸ Brownell, Ross, et al., 2005

¹⁹ Clotfelter et al., 2007

²⁰ Darling-Hammond & Youngs, 2008; Boyd et al., 2009

²¹ Ingersoll & Kralik, 2004; Mahler, 2005

²² Darling-Hammond, 2000; Berry et al., 2010

BTR supports them for these three years and beyond - substantially more than other nontraditional teacher preparation programs²³. BTR and BPS work together to cluster graduates at BPS schools in need of structured improvements, creating an existing cohort from which student achievement and school transformation efforts can extend. Using Lucy West's model of effective coaching practices, BTR Induction Coaches provide one-on-one coaching to graduates, and work with graduates and their colleagues in grade-level teams and across academic departments to strengthen the teaching and learning environments within each school. Such participation both in a cohort of peers and in cross-school networks has been demonstrated to contribute significantly to teachers' learning and retention.²⁴

BTR's varied induction supports at partner schools include Critical Friends Groups (CFGs), content-based adult learning communities based on the National School Reform Faculty model of providing professional development that translates into improved student learning, as well as Instructional Rounds, a set of protocols and processes for observing, analyzing, discussing, and understanding instruction that can be used to improve student learning at scale.²⁵ BTR provides its graduates with additional support and structures as they continue to use data to build instruction, build and sustain productive teams, and gain the skills necessary to move into leadership roles; coaching to build these communities of practice, as well as the opportunity for leadership development within schools, has a positive impact on teacher retention and effectiveness.²⁶

Using these approaches, BTR has prepared and supported more than 250 teachers for the BPS; 85% are still teaching in BPS (compared to the district's 53% retention rate overall),

²³ Berry et al., 2008

²⁴ Beck & Kosnik, 2001; Grossman et al., 2001; Seifert & Mandzuk, 2006; Rust & Orland, 2001

²⁵ City, Elmore, Fiarman & Teitel, 2009

²⁶ Marzano, 2003

increasing in effectiveness as they continue to develop with BTR support. Principals rate 85% of BTR graduates as similarly or better prepared than their counterparts, and 96% of principals say that they would recommend a BTR graduate to a colleague. 97% of BTR graduates say that the program has prepared them well for the realities of urban teaching.

BTR ensures that over half of its residents are people of color, over half of the middle and high school residents are in the areas of math and science, and all work toward dual licensure in special education; the development of a new ESL track for SY 2010-2011 will increase the number of ESL-trained graduates as well. Coupled with BTR-designed coursework integrating theory and practice in alignment with the yearlong mentorship and extending through to first- and second-stage induction supports, the intense focus on effective teaching practice in every facet of the program contributes to the ultimate goal of increasing student academic achievement in each BTR classroom, and the understanding of residents' and graduates' effects on student growth in their schools.

2. The wealth of research showing that the greatest impact on student achievement is the quality of a student's teacher, and that teachers' effectiveness increases with their years of experience

As the question of teacher effectiveness has of late risen to the forefront of education research and policy work, a large number of studies has shown that teacher quality is the single most important component in student achievement. The research base crosses both traditional and alternative teacher certification routes, involves both varying school populations and measures of teacher effectiveness and student progress, and yet shows overwhelmingly the importance of teacher quality in student learning.²⁷ Sanders and Rivers (1996) estimate that having a highly-effective teacher, compared to having an ineffective teacher, for three years in a row could

²⁷ Rockoff, 2004; Rivkin et al., 2005; Kane et al., 2006; Aaronson et al., 2007

account for up to a 50 percentage point improvement in student achievement. Kane, Rockoff, and Staiger (2007) estimate that the difference in effectiveness between the top and bottom quartile of teachers results in a one-third standard deviation difference in student gains over the course of a school year. Hanushek (1992) finds that a student with a very high-quality teacher will achieve a learning gain of 1.5 grade-level equivalents, while a student with a low quality teacher achieves a gain of only 0.5 grade-level equivalents. Recent reports of estimated effects of a one standard deviation change in teacher quality on student achievement range from 0.11 to 0.22 standard deviations.²⁸

We also know that teachers' effectiveness increases with the number of years spent in the classroom. Harris (2008) found that eight of nine value-added studies display evidence of teachers improving with experience; Rockoff (2004) found that teaching experience significantly raises student achievement, particularly in reading. While there is variability in the effect size associated with experience and the number of years in which that effect is significant, a 2007 study by Kane et al. estimates that students of third-year teachers score six percent and three percent of a standard deviation higher in math and reading, respectively, than students of first-year teachers.²⁹ In general, we find that first-year teachers produce student achievement gains that are significantly lower than otherwise similar teachers with 10 to 15 years of experience, though most of these gains from experience occur within the first four years of teaching.³⁰

One of BTR's biggest contributions to date has been its ability to recruit, prepare and support teachers who will stay in Boston – currently at rates 30 points higher than Boston's historical average. Coupled with research that shows that teachers get better with experience, BTR's retention rates are translating into increase academic achievement for students taught by

²⁸ Rockoff, 2004; Aaronson, Barrow, and Sander, 2007; Kane and Staiger, 2008

²⁹ Kane, Rockoff & Staiger, 2007

³⁰ Rockoff, 2004; Rivkin, Hanushek, & Kain, 2005; Boyd, Wyckoff et al., 2008

BTR teachers.

3. The research on successful school models, which incorporate excellent leaders, effective and collaborative teachers, and a relentless focus on data to increase student achievement levels in all areas

As the most essential piece of the turnaround framework is the school leader,³¹ we have chosen to work only with those leaders in Boston who both have a record of success in moving students forward in the district, and who both share our vision and commit to the specifics of its implementation as put forth in our turnaround MOU and this application. After a lengthy and rigorous process of principal and school selection, we have chosen to work with Mike Sabin at the Dever/McCormack School, Mary Driscoll at the Thomas A. Edison Junior High School, and Virginia Chalmers at Young Achievers Math and Science Pilot K-8 School, all of whom have significant and notable experience within the BPS and who identify with BTR's core mission and program values. Three additional turnaround school partners will be chosen each year using the same criteria as well as the knowledge gained from our initial turnaround work and evaluation results. Further information on each chosen leader's record of prior accomplishment is detailed in Section C.

As described in Section A, we know that the most successful school models integrate the skills of the excellent leaders described above with a team of effective teachers and a collaborative, whole-school approach to teaching and learning. Using the significant research base examining the elements of high-need schools which have achieved extraordinary results in student achievement as compared to schools with similar student populations,³² we are exploring partnership with The Achievement Network (ANet), which has a record of significant success in

³¹ Marzano et al., 2005

³² Carter, 2000; Kannapel & Clements, 2005

raising achievement levels in its schools, to provide standards-aligned interim assessments and corresponding data-driven practices (see ANet’s letter of support in Appendix D). As described below, we will be partnering with AUSL for extensive technical assistance both during our resident turnaround transition and throughout the school year, to learn from their extensive record of accomplishment in turning around Chicago Public schools; we also are engaged in talks with UP Schools, a turnaround organization in Boston whose founders have a record of success in transforming underperforming schools (see letter of support from UP Schools’ founder in Appendix D). The substantial knowledge base of our proposed partners will provide both BTR staff and our school partners with a broad selection of supports in the areas of essential importance in turnaround school situations – from professional development and school culture development to the instructional improvements based on timely data.

4. The success of the Academy of Urban School Leadership (AUSL) turnaround model in Chicago, which provides a compelling argument for the effectiveness of an in-district residency turnaround strategy

In 2001, the Academy of Urban School Leadership (AUSL) was started in Chicago. AUSL initially focused its efforts on this model of teacher training, developing training academies within the Chicago Public Schools (CPS) and partnering with National Louis University and the University of Illinois-Chicago to provide master’s coursework during the residency year. However, it quickly became apparent that preparing teachers was not enough, as many of the program’s graduates were entering underperforming schools with a history of low student achievement and without the structures in place to support their continued professional growth. AUSL decided to combine its intensive work in the preparation, mentoring, and induction support of high-quality teachers with the work of turning around those schools designated as

consistently low-performing.

In the years since, AUSL has successfully transformed three Chicago Public schools, bringing them out of turnaround status and raising achievement levels to beyond the fifty percent mark for the first time in ten years. The program is currently engaged in the turnaround process with twelve schools, and is simultaneously running six of its teacher training academies in CPS. All of the schools led by AUSL have made steady gains as measured by state assessments, and teacher retention rates stand at 80%.³³ AUSL now has proven itself as a model for research-based, replicable, sustainable and effective school turnaround.

- **AUSL students outperform peers despite a more disadvantaged baseline.** Prior to turnaround, average performance at AUSL schools was -8% below same neighborhood comparison schools. By the second year of turnaround, average ISAT (Illinois Standard Assessment) performance is 10% higher than comparison schools.
- **AUSL accelerates student growth in math and reading.** AUSL student growth versus same-student growth in the pre-period is significantly higher than same time interval growth of comparison students. In math, AUSL schools' scores grew 5% more from pre to post turnaround compared to comparison schools. For reading, scores grew 3% more by year three of turnaround.³⁴

BTR's proposed turnaround work both borrows from and builds upon AUSL's design. Both programs are deeply connected to their district through a longstanding partnership and demonstrated commitment to preparing and supporting teachers to take on the most challenging roles. The majority of school turnaround approaches have involved external entities – charter management organizations, for instance, or other nonprofits coming from outside a district to

³³ <http://www.ausl-chicago.org/about-results.html>

³⁴ AUSL, personal communication, 2010

focus solely on turnarounds, imposing a framework on the schools without the necessary knowledge of and trust from the students, families, teachers, school leaders, and community members. AUSL was the first – and so far only - to maximize the in-district residency training model as a method of bringing the best-trained teachers to the worst-performing schools.

BTR’s proposed turnaround strategy incorporates significant technical assistance from AUSL’s program and operations staff in the first two years. While the models vary slightly, the ability to learn from AUSL’s accomplishments as we begin our work in school transformation will have a significant impact, informing both BTR’s work specifically and the replicability of the residency turnaround model more broadly. BTR’s commitment to evaluation of its turnaround initiative will allow for a more comprehensive study of the effectiveness of a residency-based approach to school transformation; the variances in the models will show the ability for other residency programs to replicate the model with considerable flexibility in operational structure. AUSL’s results have shown that the combination of residency-based training with an in-district turnaround model can be an extraordinarily powerful agent for school transformation.

C. Experience of Applicant

Past performance in implementing same size/scope projects

In the seven years since its inception, BTR has demonstrated its ability to implement a project of the size proposed here. BTR created one of pioneering teacher residency programs, which now serves as a national model. Growing from a first cohort of 16 Teacher Residents, BTR now prepares 75 Teacher Residents each year in the Boston Public Schools. BTR provides induction support to all its graduates in their first three years of teaching – and now has approximately 235

graduates teaching in the BPS. BTR's annual budget is \$4M, and it has raised over \$20M to date. BTR co-founded the Urban Teacher Residency United (UTRU) which is helping new residency programs start across the country. The U.S. Education Department has just distributed approximately \$150M in Teacher Quality Partnership grants intended to replicate the residency model.

BTR currently attracts and receives approximately 600 applications for 75 program slots – a 13% acceptance rate. BTR applicants who are admitted accept their offers of admission at a rate of 90%, a dramatically high yield. BTR cohorts fill high-needs teaching areas that the BPS was unable to fill before BTR's creation. Over half of all BTR Residents are people of color. Over half of all middle and high school Residents are in the area of math and science, and all Residents work toward dual licensure in special education. BTR has recently launched an ESL licensure track.

BTR graduates are being retained in their teaching positions at a rate of approximately 85%, more than 30 percentage points higher than the district's previous average of 53% over three years. 96% of principals who hire BTR graduates say they would hire another. More than a third of BTR graduates teach in specialized settings for students with disabilities or English language learners. More than one in ten BPS math and science teachers are BTR graduates.

BTR has displayed an ability to innovate in response to district needs. For example, when the need for well-prepared teachers of English Language Learners became clear, BTR swiftly built and implemented an English as a Second Language (ESL) licensure track and recruited Residents in its next cohort for that track. As another example, in response to a lack of teacher effectiveness measures in the district or in the state, BTR led the development of a student achievement value-added assessment system for the residency with Harvard's Center for

Education Policy and Research (CEPR) – a system which can be used to measure teacher effectiveness across the state. Such proactive and successful program shifts in display BTR’s commitment to innovation on behalf of the district and show the program’s ability to innovate and integrate new work into its existing structures with excellent results.

Significant improvements in student achievement, attainment, and retention

BTR has a strong record of recruiting, preparing and supporting high-quality teachers who fill high-needs areas, who are retained in those positions, and who improve student achievement.

1. Positive, early student achievement results on Massachusetts’ first release of Student Growth Percentile scores.

The Massachusetts Department of Elementary and Secondary Education has recently made available a Student Growth Percentile (SGP) for each student taking the MCAS.³⁵ In math, BTR graduates teaching secondary mathematics appear to perform as well if not slightly better than their counterparts. Overall, the average BTR graduate’s SGP is 48.96 and the average non-BTR graduate’s SGP is 48.3. There are no BTR graduates teaching honors or advanced classes.

When we omit honors and advanced classes, BTR graduates’ average is still 48.96, and non-BTR graduates’ average is 45.64, a difference of over three points. In addition, no BTR graduates are teaching at one of BPS’ “exam” schools (schools that students test into). When we factor out exam schools, and only include schools that do not have selective admissions, BTR graduates’ average SGP is still 48.96 and non-BTR graduates’ average SGP is 47.3, a difference of 1.5

³⁵ In brief, a student’s growth percentile is determined by comparing her/his performance in a given year on a given test with all students in the state who have similar score histories for the prior two years. For example, a sixth-grader taking the math MCAS who earned a 216 on the fourth-grade math test and a 220 on the fifth-grade math test, will have her/his sixth grade score compared with all other sixth-grade students in the state who also earned a 216 in the fourth grade and a 220 in the fifth. That student’s SGP is derived by looking at the score’s percentile placement against all comparison scores. So, an SGP of 72 indicates that the student scored better than 72% of all comparison students. A teacher’s overall score is then calculated by taking the median SGP of all students taught by that teacher.

points. In English, BTR graduates perform comparably with the entire BPS teaching population. The average SGP for a non-BTR graduate is 48.46, the average SGP for a BTR graduate is 48.3.

It should be noted that the vast majority of BTR graduates counted in these comparisons are in their first few years of teaching – and they are being compared to the BPS teaching population as a whole. There is, therefore, reason to believe, that these BTR graduates will continue to increase in effectiveness as they gain more experience.

2. BTR graduates have significantly higher retention rates which lead to increased student achievement gains.

A series of studies show that teachers increase in effectiveness over their first years of teaching. As described in the research section above, the range of studies estimate the effect size to be anywhere between 3% and 22% of a standard deviation.³⁶ In general, the studies estimate that these effects are most significant in the first five years of a teacher’s career.

BTR graduates are being retained at much higher rates than the traditional BPS averages. Since the program’s first graduating class in 2004, 84% of the graduates who took jobs in BPS are still teaching in the BPS. Further, 85% of graduates teaching in BPS have completed their three-year teaching commitment (note that some graduates are still in the midst of their first, second or third years) and 86% of the graduates who completed their three-year commitment have stayed and continue to teach in the BPS. As a comparison, the district estimates that it was previously retaining only 53% of its new teachers for a full three years³⁷.

This retention data, coupled with the strong evidence that teachers increase in effectiveness over their first three to five years of service, suggest that BTR graduates are raising student achievement at rates comparably higher than the comparison group of other new teachers

³⁶ Kane, Rockoff & Staiger, 2007; Rockoff, 2004; Rivkin, Hanushek, & Kain, 2005; Boyd, Wyckoff et al., 2008

³⁷ Boston Public Schools data, 2009-2010

who entered the BPS at the same time.³⁸

BTR currently prepares 75 teachers a year, and is planning to increase in size eventually to be preparing 120 teachers a year. At the current retention rates of 84% and 53% respectively, this projects out to a difference of 23 teachers per cohort who are staying longer than they would otherwise and increasing student achievement results – while their comparison group is being taught by a new teacher. When BTR gets to 120 teaches per year, this difference will increase to 37 teachers per year staying and delivering increased value to their students.³⁹

This argument clearly makes the case for the increased effectiveness of new teachers for their first years on the job. What we are unable to quantify at this time, though do have strong anecdotal evidence for from our graduates and the principals who hire them, is the value to school communities of teachers who stay in a school for years and help build a strong instructional program. As we turn our attention to turnaround schools, it will be critical for the long-term success of these schools to have a core of committed and talented teachers who stay.

Partners

BTR is partnering with principals with an excellent record of increasing student achievement.

Young Achievers Science and Math Pilot School - Virginia Chalmers, principal.

The Young Achievers Science and Mathematics Pilot School has shown steady improvement on the MCAS under the long-time leadership of principal Virginia Chalmers. Students at the school

³⁸ To play this out – take the hypothetical situation of a BTR graduate who stays in the district and a non-BTR grad who teaches for two years and then leaves, to be replaced by another new teacher. Even if the two teachers enter performing at the same level and increase in effectiveness at the same rate, the overall effect of the BTR graduate on student achievement will be higher due to the fact that in year 3, the BTR graduate’s students have a teacher with year 3 effectiveness, while the comparison group gets a new teacher with year 1 effectiveness.

³⁹For 75 teachers: [75 BTR teachers per year * 84% retention rate] – [75 comparison group teachers * 53% retention rate] = 63 – 40 = 23 additional teachers per cohort]. For 120 teachers: [120 BTR teachers per year * 84% retention rate] – [120 comparison group teachers * 53% retention rate] = 101 – 64 = 37 additional teachers per cohort].

routinely outscore their counterparts around the BPS. A comparison of 2006 and 2008 scores shows an increase of the percentage of students scoring Advanced and Proficient on the MCAS in all grades.

<u>MCAS Scores – All</u> <u>Grades</u>	<u>Percentage of students scoring Advanced or Proficient</u>	
	2006	2008
<u>English Language Arts</u>	45%	55%
<u>Mathematics</u>	35%	42%

Dever/McCormack K-8 school – Michael Sabin, principal.

Currently a principal in neighboring Somerville, MA, Mr. Sabin will be taking over the Dever/McCormack on July 1, 2010. Mr. Sabin was previously the principal of the Edwards Middle School, one of the BPS middle schools. When he took it over in 2002, it was one of the lowest-performing schools in the city. The school made steady progress through its first few years under Mr. Sabin. During Sabin’s last year as principal, the school made dramatic gains on its MCAS scores. Across all grades, the school achieved a 58% increase in the percentage of students scoring Proficient in English (compared to a 9% average statewide) and a 24% increase in the percentage of students scoring Proficient in Math (compared to a 3% statewide average).

Edison K-8 – Mary Driscoll, principal.

Ms. Driscoll is in her second year as principal of the Edison, after serving as the Director of Instruction at the Mildred Ave. Middle School, another Boston middle school. In her tenure at Mildred Ave., she drove the school’s instructional improvements. She is an instructor for Research for Better Teaching, a national educational non-profit, and teaches a course on

effective teaching (to BTR Residents, among others). At both the Edison and Mildred Ave., she introduced an exit portfolio requirement for 8th graders moving on to high school which focuses on academic work and self reflection. All Edison students completed the requirement last year.

Other Partners

The Achievement Network (ANet)

BTR is planning to sub-contract its school-based assessment work to the Achievement Network. ANet has produced significant student achievement gains in its Network schools. ANet's matched study results illustrate that its Network schools outperformed their matched peers, and BPS and the Commonwealth of MA as a whole, on the 2009 MCAS. Considering only district schools in both Boston Public Schools and Randolph, MA, ANet schools posted gains in the percent of students A+P of 4% in ELA and 9% in Math. BPS and the Commonwealth both achieved gains of just 1% for ELA. In math, BPS had a -1% result and the Commonwealth a 1% gain. The four new BPS schools that joined ANet in 2008-2009 saw significant increases in the percentage of students scoring A+P on the 2009 ELA and Math MCAS compared to 2008 performance. On average, the four new schools enjoyed gains of 14% in ELA and 11% in Math, far outpacing the district average of 1% gains in both subjects. ANet has also begun to show results in its work in Washington, DC (DCPS), Newark and New Orleans. In ANet's first year in DCPS, for example, schools working with ANet increased proficiency at nearly two times the rate of the DCPS district. Further, the six schools that participated in their full program made nearly four times the gains of DCPS schools in reading and over two times the gains in math.

UP Schools - Scott Given, Executive Director

BTR has begun conversations with UP Schools about a partnership beginning in 2011-12. UP Schools will be responsible for one turnaround school in BPS that year, with the possibility of

adding additional schools in the subsequent years. Mr. Given has asked BTR to consider preparing teachers for placement in the UP Schools turnarounds. Scott served as the school leader of Excel Academy Charter School (East Boston, MA) between 2005 and 2008. Under his leadership, Excel Academy was transformed from a struggling school into an extraordinary school in which nearly 100% of students became grade-level proficient in English Language Arts and mathematics. The school was named a National Charter School of the Year in 2007, and in 2008 it became the highest performing public middle school in Massachusetts.

D. Evaluation

The evaluation for this proposal seeks to answer three key research questions:

- 1. Do BTR graduates produce better student achievement gains than comparable colleagues?*
- 2. Are BTR graduates rated higher on established measures of effective classroom teaching than comparable colleagues?*
- 3. In what ways do clusters of BTR graduates, with BTR support, affect school turnaround efforts?*

These three major research questions will be evaluated as follows:

1. Do BTR graduates produce better student achievement gains than comparable colleagues?

BTR will contract with the Harvard Center for Education Policy Research, led by Professor Tom Kane, to conduct a value-added study to examine the effects on student achievement of BTR graduates. The study design will use past performance on Massachusetts Comprehensive Assessment System (or MCAS, the state's high-stakes test) scores to predict current performance for students, and then uses the comparisons between those predictions and actual performance to

assign a value-added score. The Harvard Center for Education Policy Research will have access to student achievement and retention data on all BPS teachers and will draw comparisons between BTR graduates and a number of comparison groups: other teachers with the same number of years of experience, other teachers in the same or similar schools, all teachers in the same content area and grade level. The study will also examine other student outcomes (student attendance, discipline records) in graduates’ classrooms with comparable colleagues and the retention rates of BTR graduates against comparable colleagues.

Question	Timing
<p><i>Do BTR teachers produce better student achievement gains than comparable colleagues do?</i></p> <p>Sub-questions:</p> <ul style="list-style-type: none"> • <i>Are BTR teachers in their first year more effective than non-BTR teachers in their 1st year? In years 2, 3, etc. of teaching?</i> • <i>How effective are BTR graduates compared to other teachers with similar years of experience teaching in turnaround schools?</i> • <i>How effective are BTR grads compared to teachers from other preparatory tracks?</i> 	<p>Baseline data set available in October, 2010 (pre-study performance).</p> <p>First data set available in October, 2011 (for MCAS tests taken in Spring, 2011 – first year of BTR graduate intervention in turnaround schools).</p> <p>Additional data sets to follow each October.</p>

Question	Timing
<p><i>Do students of BTR teachers have other positive outcomes?</i></p> <ul style="list-style-type: none"> - <i>Student attendance</i> - <i>Discipline records</i> 	<p>Baseline data set available in July, 2010 (pre-study performance).</p> <p>First data set available in July, 2011 (after first year of BTR graduate intervention in turnaround schools).</p> <p>Additional data sets to follow each July.</p>
<p><i>Do BTR teachers stay in BPS longer than comparable colleagues do?</i></p> <p>Sub-question:</p> <ul style="list-style-type: none"> • <i>Does BTR have a higher rate of retention of minority teachers or teachers in high-need subject areas compared to BPS?</i> 	<p>Baseline data set available in July, 2010 (pre-study performance).</p> <p>First data set available in July, 2011 (after first year of BTR graduate intervention in turnaround schools).</p> <p>Additional data sets to follow each July.</p>

2. Are BTR graduates rated higher on established measures of effective classroom teaching than comparable colleagues?

BTR will contract with an independent organization to conduct a set of normed classroom observations of BTR graduates against an established rubric of effective teaching. BTR is in the midst of a set of conversations to determine which rubric to use. It is most likely that BTR will decide on either Charlotte Danielson’s Framework for Teaching or the Classroom Assessment Scoring System (CLASS) developed by Robert Pianta at the University of Virginia. BTR is also in conversation with a number of evaluators to run this portion of the study, such as Dr. Heather

Hill at the Harvard Graduate School of Education who co-developed the Math Quality of Instruction tool. This portion of the study will involve hiring and training a set of skilled classroom observers to achieve inter-rater reliability on the chosen instrument. These raters will then complete a series of four observations over the course of each school year to a sample of BTR graduates.

3. In what ways do clusters of BTR graduates, with BTR support, affect school turnaround efforts?

BTR will contract with an independent evaluator to research the impact of BTR graduates on the turnaround process in three of the partner turnaround schools. The purpose of this study is to help assess the interplay between the skills and contributions of the BTR graduates and the efforts of the school leaders in the context of the overall agenda of helping the school meet its improvement goals. The key sub-questions of this component of the evaluation are divided into two sections, one which looks at the role BTR graduates play in the progress of the school, and one which looks at the factors influencing BTR graduates' ability to successfully contribute to the school's mission. The study is intended to contribute to our understanding of what teachers can do to help in turnaround efforts, and what supports they need to make those contributions.

The research sub-questions are:

Accomplishing stakeholder goals:

1. What are the school's stakeholders' goals, in terms of student achievement and school culture, and how do they plan to achieve those goals?
2. What role, if any, do BTR graduates play in affecting the school-wide student achievement goals of their schools?
3. What role, if any, do BTR graduates play in affecting the culture of their schools?

Experience teaching at a turnaround school

4. What factors facilitate or impede BTR graduates' ability to accomplish their goals – both inside and outside the classroom?
5. What supports are available to teachers for improving their practice and raising student achievement? What supports appear to be absent?
6. What supports are available to teachers improve their leadership skills within their school contexts? What supports appear to be absent?

To understand these questions, the evaluators will conduct:

- Three yearly semi-structured interviews of the key personnel: BTR graduates, school leaders, instructional coaches and other critical stakeholders.
- Conduct field evaluations by observing BTR graduates in faculty and leadership settings (grade-level and content area teams, instructional leadership teams, other faculty committees)
- Convene twice yearly focus groups with BTR graduates.

E. Strategy and Capacity to Further Develop and Bring to Scale

Number of students to be reached. In the first year, the proposed project reaches the students at three turnaround schools:

Young Achievers K-8	531 students
Dever/McCormack K-8	1100 students
Edison K-8	704 students
<i>Total</i>	<i>2335 students</i>

In the following years, the project will add three schools per year, at an estimated average of 1500 students per year. In total, BTR estimates that it will serve 8,935 students through the work proposed here (see below).

Overall, BTR currently has 235 graduates teaching in the BPS and will add approximately 65 new graduates per year. BTR graduates currently serve approximately 16,000 students – one-third of the BPS student population.

Capacity to bring project to scale. BTR is already involved in the scaling of residency programs. One of three pioneering residency programs across the country, BTR co-founded Urban Teacher Residency United (UTRU) to help cities nationwide start their own residency programs. Over the last two years, BTR and UTRU have helped start fourteen new residency programs. At the same time, the U.S. Education Department has granted approximately \$150M to start twenty-six new residency programs across the country.

BTR's partner and co-founder in UTRU, the Academy for Urban School Leadership (AUSL), has led the way in establishing a pipeline from its teacher residency to turnaround schools. This model is being looked to by cities and CMO's nationwide; there is significant interest in scaling up this model. The Massachusetts Department of Elementary and Secondary Education is looking to BTR to pilot the residency-turnaround pathway for potential replication across the state (please see attached letter from Karla Baehr, Deputy Commissioner for the MA DESE).

Feasibility of the project to be replicated successfully. As described above, the residency model is already being replicated in a variety of settings by a variety of implementers. The U.S. Education Department has recently provided nearly \$150M in support for these replication efforts. Early evidence from BTR and its partner residency programs in Chicago and

Denver show that the programs are successful in recruiting, preparing and supporting urban teachers who stay in teaching at rates significantly higher than their counterparts (over 85% after three years in all three places). If BTR is able to demonstrate success in this project, this success will pair with AUSL’s pioneering work in Chicago to make a strong case for replication. The constraining factor in so many education reform efforts is human capital. By linking the turnaround model with a steady flow of human capital, this proposal addresses this critical issue.

Estimated cost per student per year. Over the four years proposed here, this program will impact a total of:

<i>Year</i>	<i>New Students Affected</i>	<i>Details</i>
Year 1	2,335 students	Young Achievers K-8: 531 students; Dever/McCormack K-8: 1,100 students; Edison K-8: 704 students
Year 2	1,900 new students	1,500 from three new schools, at 500 students/school; 400 new students at previous year’s schools (Young Achievers – 100 new students; Dever/McCormack – 200 new students; Edison – 100 new students). This does not include 1,935 students counted in previous year.
Year 3	2,200 new students	1,500 from three new schools, at 500 students/school; 700 new students at previous years’ schools. This does not include 3,535 students counted in previous years.
Year 4	2,500 new students	1,500 from three new schools, at 500 students/school; 1,000 new students at previous years’ schools. This does not include 5,435 students counted in previous years.

Total	8,935 students	
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The total budget for this proposal is \$4,855,618. The per student rate comes out to \$543 per student.

At scale, the costs would be as follows:

100,000 students	\$54,300,000
500,000 students	\$271,500,000
1,000,000 students	\$543,000,000

Mechanisms to support replication. BTR will continue to give away its materials, learnings and people’s time and expertise through UTRU. BTR has an open-source policy; the organization is committed to free distribution of anything it creates, and all evaluation results. BTR personnel present widely at conferences and other public events. BTR recently published an article in the Journal of Teacher Education, and will continue to pursue other opportunities for publication; BTR has recently entered into conversations with Teachers College Press about the possibility of authoring a book. BTR will publish and disseminate all its evaluation studies in collaboration with Harvard’s Center for Education Policy Research and the other evaluation organizations selected for this project.

F. Sustainability

Resources and support from stakeholders. BTR is a joint initiative of the Boston Public Schools (BPS) and the Boston Plan for Excellence (BPE). BPE, which has a distinguished 25-year record as a local education foundation, serves as the fiscal and managing

agent for BTR, and has made a long-term commitment to contribute in-kind overhead costs to BTR. Over the course of its partnership with the BPS, BPE has helped secure over \$75M in funding for the BPS.

BTR was started with private funds, receiving a start-up grant to pay for its creation and first two years of operation. That initial grant served as venture capital, allowing the district to start the program without incurring the initial cost. Since the second year, BPS has assumed responsibility for an increasing percentage of BTR's costs. BTR and BPS have a formalized Memorandum of Understanding which details the BPS commitment to BTR, including a significant financial commitment - currently 20% of operating costs and slated to rise to 40% over the next five years.

While BPS' funding serves as a core of BTR's support, BTR also has attracted multi-year funding from a number of other sources, both public and private. The Ford Foundation has funded a portion of BTR's evaluation work and the Carnegie Foundation, in conjunction with BPE, has contributed significant funds to a school-based inquiry project. Numerous other private funders, both local and national, have provided ongoing capacity-building, operations, and programmatic support for BTR. BTR is currently supported by the Smith Family Foundation, the Harold Whitworth Pierce Charitable Trust, W. Clement Stone and Jessie V. Stone Foundation, the Barr Foundation, Strategic Grant Partners, the Motorola Foundation, and the Cabot Family Charitable Trust.

BTR also is in the first year of its second three-year cycle as an AmeriCorps program. AmeriCorps support enables BTR to offer an affordable program for its residents; residents receive an annual stipend, health care benefits, childcare reimbursement, and an AmeriCorps Education Award that can be used to cover the tuition for their master's degree.

Incorporation into ongoing work. Underperforming schools in urban districts, while in the spotlight as a matter of urgent nationwide policy interest only recently, are neither new nor – until we determine the best methods for their transformation, as we propose here to do – going away soon. A school district cannot have a turnaround strategy without an accompanying comprehensive human capital development strategy; the BPS is no exception. BTR will be continuing its work in preparing, developing, and sustaining teachers for the district, while using the knowledge gained from its proposed work in the turnaround schools to inform all of its processes – from recruitment and selection to preparation and development – all with the end goal of ensuring that we are preparing effective teachers with the depth of knowledge and skill to take on the most challenging assignments – and to be successful in doing so.

The Teacher Quality Partnership program, through which BTR was recently awarded a five-year grant, was created under the reauthorized Higher Education Act to expand and replicate the residency model; BTR was influential in writing the language for its development. UTRU, as aforementioned, is currently working with fourteen residency programs; through the UTRU network, BTR has partnered with AUSL and other programs, codified its program standards, and shared its learning with districts from Los Angeles to Chattanooga. The Massachusetts Department of Elementary and Secondary Education has asked BTR to play a significant role in its turnaround strategy, and has used the program as a teacher quality model to frame that work.

Residencies have proven their ability to develop highly effective teachers with the necessary skills and content knowledge to teach our most underserved students; novel approaches to school turnaround are both critically necessary and underrepresented – so the marriage of the two is both logical and, we think, potentially lasting. We feel confident that our intense work in supporting teachers with research-based professional development and school-

based inquiry while gathering data on every aspect of both the larger program and the turnaround-based work can only serve to make both BTR and the schools – and, by extension, the district – stronger. Our goal is to prepare effective teachers for Boston’s neediest students; those students are disproportionately found in our neediest schools. The two initiatives will go hand in hand for quite some time.

Boston Teacher Residency: Building the Pipeline of Effective Teachers for Turnaround Schools

Application to the Investing in Innovation Fund

Budget Narrative – Section A

Create and implement turnaround-specific teacher preparation structures

- **Technical Assistance - preparing turnaround-ready teachers.** BTR will contract with the Academy of Urban School Leadership (AUSL) to provide technical assistance around the issue of preparing turnaround-ready teachers. This will consist of onsite coaching from key AUSL staff, site visits to AUSL, and print materials. The budget includes a \$25,000 contract in Year 1, and \$10,000 contracts in Year 2 and Year 3.
- **Spring transition work.** BTR will run four Saturday sessions each Spring to bring together Residents who have been hired at turnaround schools with key administrators and teacher leaders at these schools. BTR staff will facilitate the sessions. The costs come from paying Residents a stipend of \$200/day and 9 staff members (3 per each of 3 schools) \$400/day – for four days (based on the increasing number of turnaround Residents: 25 in yr 1, 30 in yr 2, 35 in yr 3, and 40 in yr 4)
- **Turnaround coordinator.** The Turnaround Coordinator is a new BTR staff position intended to oversee the turnaround work on behalf of BTR. This position will be responsible for overseeing all placement in and special preparation of Residents for turnaround schools, and for coordinating all induction support and partnership work in these schools. The Turnaround Coordinator starts at \$85,000 per year and the salary increases at 4% per year. Benefits are calculated at 30% of salary.

Funds requested = \$675,834

Create and implement turnaround-specific teacher development and retention structures

- **Induction coaches.** Induction Coaches provide a variety of services to turnaround schools: one-on-one coaching of BTR graduates, support of teams of teachers (grade-level, content area departments), and large group professional development aligned with key school goals. Turnaround schools in their first two years of partnership with BTR get intense coaching from a .6 FTE Induction Coach, the coaching time is reduced to .2 FTE for years 3 and 4 of each partnership. Coaches' salaries are based on the current BPS average salary of \$80,615 with a 4% increase calculated in each year. [In year 1, the grant supports 3 schools in their first year of partnership – each at .6 FTE. In year 2, the grant supports 3 schools in their first year of partnership – each at .6 FTE. – and 3 schools in their second year of partnership – also at .6 FTE each. In year 3, the grant supports 3 schools in their first year of partnership – each at .6 FTE., 3 schools in their second year of partnership – also at .6 FTE each, and 3 schools in their third year of partnership – at .2 FTE each. In year 4, the grant supports 3 schools in their first year of partnership – each at .6 FTE., 3 schools in their second year of partnership – also at .6 FTE each, 3 schools in their third year of partnership – at .2 FTE each, and 3 schools in their fourth year of partnership – at .2 FTE each.
- **Development/maintenance of Intranet Platform.** BTR will build a comprehensive online platform to allow graduates and staff to interact in a virtual community – including

sharing of best practices and materials, and discussion forums. We budget \$10,000 for the original build and \$1,500 per year in maintenance costs.

- **Assessment services.** BTR will ensure that each turnaround school it works with has access to timely assessment data – based on assessments aligned with state and district standards – and coaching to use these data to make instructional improvements. In some cases, these services will be outsourced to an organization such as the Achievement Network (ANET). This line item is priced at the current cost of a year of ANET’s services - \$30,000 per year per school.
- **School PD fund.** BTR will make available to each partner turnaround school a modest professional development fund intended to reward excellent teachers who are seeking to extend their learning. Teachers at these schools will be eligible to apply to this fund for support for professional growth opportunities which address both the school’s overall needs and the individual development goals of the teacher. BTR will make available a \$15,000 fund to each school for each of the first two years of partnership.

Funds requested = \$2,257,846

Evaluate effectiveness of BTR graduates to impact high student achievement

- **Student Achievement database.** We budget a one-time cost for the build of a database designed to capture all formative assessment data for students of our Residents and graduates.
- **Student Achievement “value-added” study.** We budget \$25,000 per year for our contract with Harvard Center for Education Policy Research
- **BTR Director of Teacher Effectiveness.** This new staff position will oversee BTR’s efforts to measure the effectiveness of its teachers, to research the connections between various variables and the program’s outcomes, and to ensure that the program is learning from this feedback. The initial salary for this position is \$105,000, and increases by 4% per year. Benefits are calculated at 30%.
- **BTR Research Associate.** This new staff position is the caretaker for all data collected and analyzed. He or she will work closely with the Director of Teacher Effectiveness. The initial salary for this position is \$50,000, and increases by 4% per year. Benefits are calculated at 30%.
- **Teacher Classroom Observation Study**
 - **Study Director.** This position oversees implementation and data collection efforts for the classroom observation study.
 - **Rater training.** The study will require the training of 10 raters at a rate of \$2100/training.
 - **Rater stipends during training.** BTR will pay 10 raters \$400/day for 3 days of rater training.
 - **Observations and scoring.** The study will follow 90 grads for 4 observations per year at .5 days per observation at \$400/day. The study will follow 10 elementary, 10 middle school, and 10 high school graduates who are in their first year of teaching, and 5 graduates at each level in years 2-5, for a total of 90 graduates per year.
- **Qualitative Turnaround School study.** This study is calculated at \$50,000 per year and will examine the turnaround process in selected schools.

Funds requested = \$1,552,662

Travel to Conference in DC

- Flight, hotel and meal costs for four people to attend the annual I3 conference in DC.

Funds requested = \$9,600

Total funds requested = \$4,855,618

Budget Narrative – Section B (Match)

While match funds have not been committed as of the submission of this proposal, BTR proposes to provide the 20% match required in the following manner:

Personnel:

Cash funds provided by a private foundation (potentially the Smith Family Foundation) in the amount of \$200,000 in Year 1, \$150,000 in Year 2, and \$200,000 in Year 3 to fund personnel in support of this project.

Other:

In-kind donation provided by a private foundation (potentially Boston Plan for Excellence) for rent, utilities, financial services, and general administration/office services in the amount of \$121,250 in each of Years 1-4.

Total Match:

The total 20% match required by the I3 grant is \$971,124. The total match that BTR proposes to secure is \$1,035,000.

Boston Teacher Residency: Building the Pipeline of Effective Teachers for Turnaround Schools

Application to the Investing in Innovation Fund

Budget

	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Totals</i>
Create and implement turnaround-specific teacher preparation structures					
Technical Assistance from AUSL	\$25,000	\$10,000	\$10,000	\$0	
Spring transition work	\$34,400	\$38,400	\$42,400	\$46,400	
Turnaround coordinator					
Salary	\$85,000	\$88,400	\$91,936	\$95,613	
Benefits	\$25,500	\$26,520	\$27,581	\$28,684	
Sub Total	\$169,900	\$163,320	\$171,917	\$170,697	\$675,834
Create and implement turnaround-specific teacher development and retention structures					
Induction coaches	\$150,911	\$313,895	\$380,860	\$452,679	
Development/maintenance of intranet platform	\$10,000	\$1,500	\$1,500	\$1,500	
Assessment services	\$90,000	\$180,000	\$180,000	\$180,000	
School PD fund.	\$45,000	\$90,000	\$90,000	\$90,000	
Sub Total	\$295,911	\$585,395	\$652,360	\$724,179	\$2,257,846
Evaluate effectiveness of BTR graduates to impact high student achievement					
Student Achievement database	\$13,000	\$0	\$0	\$0	
Student Achievement “value-added” study	\$25,000	\$25,000	\$25,000	\$25,000	
BTR Director of Teacher Effectiveness					
Salary	\$105,000	\$109,200	\$113,568	\$118,111	
Benefits	\$31,500	\$32,760	\$34,070	\$35,433	
BTR Research Associate					
Salary	\$50,000	\$52,000	\$54,080	\$56,243	
Benefits	\$15,000	\$15,600	\$16,224	\$16,873	
Teacher Classroom Observation Study					
Study Director	\$15,000	\$15,000	\$15,000	\$15,000	
Rater training	\$21,000	\$21,000	\$21,000	\$21,000	
Rater stipends during training	\$12,000	\$12,000	\$12,000	\$12,000	
Observations and scoring	\$48,000	\$48,000	\$48,000	\$48,000	
Qualitative Turnaround School study	\$50,000	\$50,000	\$50,000	\$50,000	
Sub Total	\$385,500	\$380,560	\$388,942	\$397,660	\$1,552,662

Travel to Conference in DC.					
Flight/ground transportation	\$1,200	\$1,200	\$1,200	\$1,200	
Hotel	\$800	\$800	\$800	\$800	
Meals	\$400	\$400	\$400	\$400	
Sub Total	\$2,400	\$2,400	\$2,400	\$2,400	\$9,600
					Total
Total	\$853,711	\$1,131,675	\$1,215,619	\$1,294,937	\$ 4,495,942
8% Indirect Costs	\$68,297	\$90,534	\$97,250	\$ 103,595	\$ 359,675
Total + Indirect Costs	\$922,008	\$1,222,209	\$1,312,869	\$1,398,532	\$ 4,855,618

Budget - Form SF-524 Calculations

		Year 1	Year 2	Year 3	Year 4	Totals
1. Personnel	Salary - Turnaround Coordinator	\$85,000	\$88,400	\$91,936	\$95,613	
	Induction Coaches	\$150,911	\$313,895	\$380,860	\$452,679	
	Salary - Director of Teacher Effectiveness	\$105,000	\$109,200	\$113,568	\$118,111	
	Salary - Research Associate	\$50,000	\$52,000	\$54,080	\$56,243	
Total Personnel		\$390,911	\$563,495	\$640,444	\$722,646	\$2,317,497
2. Fringe Benefits	Benefits - Turnaround Coordinator	\$25,500	\$26,520	\$27,581	\$28,684	
	Benefits - Director of Teacher Effectiveness	\$31,500	\$32,760	\$34,070	\$35,433	
	Benefits - Research Associate	\$15,000	\$15,600	\$16,224	\$16,873	
Total Fringe		\$72,000	\$74,880	\$77,875	\$80,990	\$305,745
3. Travel	Flight/ground transportation	\$1,200	\$1,200	\$1,200	\$1,200	
	Hotel	\$800	\$800	\$800	\$800	
	Meals	\$400	\$400	\$400	\$400	
Total Travel		\$2,400	\$2,400	\$2,400	\$2,400	\$9,600
6. Contractual	Technical assistance - preparing turnaround-ready teachers	\$25,000	\$10,000	\$10,000	\$0	
	Spring of cohort year transition work	\$34,400	\$38,400	\$42,400	\$46,400	
	Technology and assessments services	\$90,000	\$180,000	\$180,000	\$180,000	
	Development/maintenance of intranet platform	\$10,000	\$1,500	\$1,500	\$1,500	
	Student achievement database	\$13,000				

	Student achievement study	\$25,000	\$25,000	\$25,000	\$25,000	
	Study Director	\$15,000	\$15,000	\$15,000	\$15,000	
	Train raters	\$21,000	\$21,000	\$21,000	\$21,000	
	Rater stipends during training	\$12,000	\$12,000	\$12,000	\$12,000	
	Complete observations	\$48,000	\$48,000	\$48,000	\$48,000	
	Qualitative study	\$50,000	\$50,000	\$50,000	\$50,000	

Total Contractual		\$343,400	\$400,900	\$404,900	\$398,900	\$1,548,100
8. Other	School PD fund	\$45,000	\$90,000	\$90,000	\$90,000	
Total Other		\$45,000	\$90,000	\$90,000	\$90,000	\$315,000
	Total	\$853,711	\$1,131,675	\$1,215,619	\$1,294,937	\$4,495,942
	8% Indirect	\$68,297	\$90,534	\$97,250	\$103,595	\$359,675
	Total + Indirect	\$922,008	\$1,222,209	\$1,312,869	\$1,398,532	\$4,855,618

Match Budget - Form SF-524 Calculations

		Year 1	Year 2	Year 3	Year 4	Totals
1. Personnel						
Smith Family Foundation (cash)		\$200000	\$150000	\$200000	\$0	
Total Personnel		\$200,000	\$150,000	\$200,000	\$0	\$550,000
8. Other						
Boston Plan for Excellence (in-kind)		\$121,250	\$121,250	\$121,250	\$121,250	
Total Other		\$121,250	\$121,250	\$121,250	\$121,250	\$485,000
Total Match		\$321,250	\$271,250	\$321,250	\$121,250	\$1,035,000
Required Match = 20%		\$ 184,402	\$244,442	\$262,574	\$ 279,706	\$ 971,124
Total Match Overage		\$ (136,848)	\$ (26,808)	\$ (58,676)	\$158,456	\$63,876