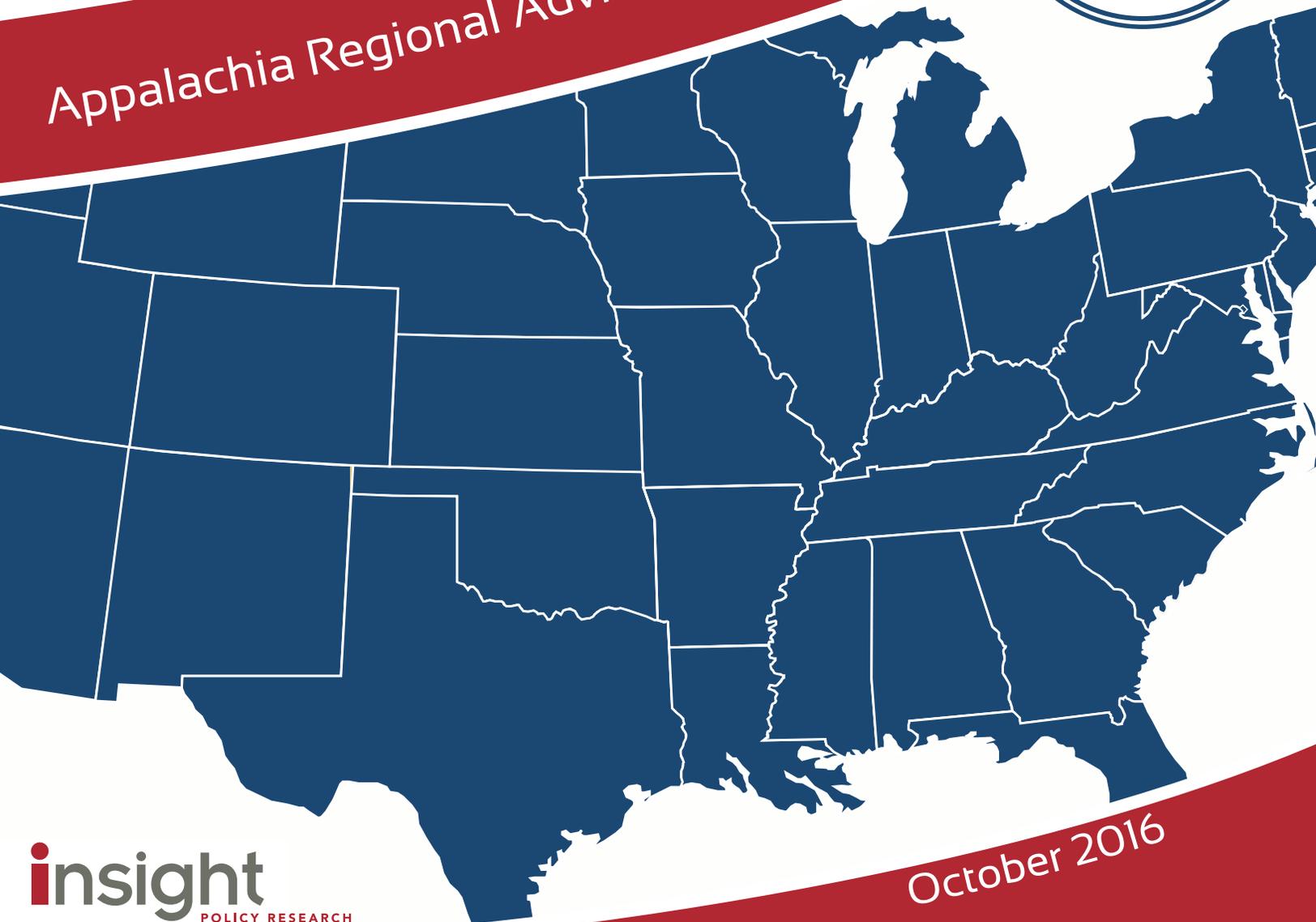


# Identifying and Addressing Regional Education Needs

U.S. Department of Education



Appalachia Regional Advisory Committee



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# **The Appalachian Region:**

## **A Report Identifying and Addressing the Region's Educational Needs**

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## Executive Summary

This report summarizes the activities and results of the Appalachian Regional Advisory Committee (RAC), 1 of 10 RACs established under the Educational Technical Assistance Act of 2002 (20 U.S.C. § 9601 et seq.). The RACs were formed to identify the region’s most critical educational needs and develop recommendations for technical assistance to meet those needs. The technical assistance provided to state education agencies (SEAs) aims to build capacity for supporting local education agencies (LEAs) or local education districts and schools, especially low-performing districts and schools; improving educational outcomes for all students; closing achievement gaps; and improving the quality of instruction. The report represents the work of the Appalachian RAC, which includes Kentucky, Tennessee, Virginia, and West Virginia.

Committee members convened three times and reached out to their respective constituencies between July 19, 2016, and August 31, 2016. Members of the Appalachian RAC represented a variety of stakeholders, including early childhood specialists, state and local school board members, education researchers and practitioners, school administrators, parents, and representatives from organizations serving educators and federal and state governments. The members collaborated, communicated, and shared resources using Communities360<sup>o</sup>, an interactive online platform hosted within the larger GRADS360<sup>o</sup> system housed within the secure U.S. Department of Education environment. Table A provides a list of committee members and their affiliations.

**Table A. Appalachian RAC members**

Member name	Affiliation	State
Bob Alvey	National School Board Association, County Board of Education	Tennessee
Tate Gould	AnLar, Research Policy Analysis and Technical Assistance	Virginia
Gary Higginbotham	School Principal, State Board of Education	West Virginia
Beverly Kingery	State Board of Education	West Virginia
Sonia Michael	Berea Regional Training Center, Early Childhood Specialist	Kentucky

Members reviewed a regional profile containing educational statistics and other relevant data to inform their individual assessments of the challenges facing their region. While the Appalachian region is diverse in its geographic and socioeconomic makeup, the majority of school districts are situated in rural territories. The region has a substantial percentage of students from low socioeconomic backgrounds and serves a higher proportion of students with disabilities than schools nationally. States vary in the proportion of racial ethnic minority students they serve; in Kentucky, West Virginia, and Tennessee, the majority of students enrolled are White. In Virginia, in contrast, non-Whites represent nearly 50 percent of the total student population.

Overall, educational attainment is generally lower in the region than nationally, with the proportion of students obtaining a bachelor’s degree or higher lower in all but one state. Fewer students are classified as proficient or above proficient on the 4th-grade reading National Assessment of Educational Progress (NAEP) than the national average in two states. For the most part, achievement gaps among White, Black, and Hispanic students mirror those found in other regions, with Black and Hispanic students performing lower than Whites on the NAEP in mathematics and reading. However, Hispanic students in the Appalachian region score higher than their peers nationally in contrast to White students, who perform below average in three of the four states. See appendix A for detailed tables on the educational

characteristics of the region. Primary challenges cited by RAC members in the Appalachian region include high rates of poverty; recruiting and retaining highly qualified teachers; and preparing students for science, technology, engineering, mathematics (STEM) careers and/or college.

Committee members also collaborated to develop a plan for soliciting information on the region's educational needs. Members engaged stakeholders and disseminated information using the following strategies: (1) administered an online survey and (2) collected feedback from parent and teacher meetings. Members focused their efforts on distributing the survey to the widest possible group of stakeholders.

As a result of the committee's outreach efforts, a total of 891 individuals responded to the survey. Of the respondents, 318 represented schools (principals, librarians, curriculum specialists, parents, or others), 239 represented local or regional stakeholders (superintendents, school board members, LEAs or central offices, or education service agencies), 203 were classroom teachers, 74 were community members (higher education, business, or other community members), 54 represented SEAs and state education organizations (state board of education, or other state or local government organizations), and 3 listed other roles.

Each committee member prepared a report containing a needs assessment and specific recommendations for future technical assistance based on his or her assessment of the region's unique educational environment, the survey results, and the results of other data collection efforts.

Committee members of the Appalachian RAC identified the following five needs. They are listed in ranked average order of priority as listed by RAC members:

- ▶ preparing students to be college and career ready;
- ▶ supporting the lowest performing schools and closing achievement gaps;
- ▶ developing and ensuring equitable distribution of highly effective teachers and leaders;
- ▶ improving access to early childhood education and engaging families; and
- ▶ improving assessment and accountability systems.

Committee members also developed the following recommendations for technical assistance to better address these educational needs:

- ▶ **Facilitate stakeholder committees.** Committee members recommended bringing together stakeholders with different perspectives to assess needs, define concepts, and identify benchmarks to support career and college readiness.
- ▶ **Facilitate communities of practice.** Committee members recommended creating or supporting communities of practice for districts around improving low performing schools and for SEAs around implementing the ESSA.
- ▶ **Identify and disseminate successful models.** To support low performing schools, improve early childhood education, and boost student achievement, educators need examples of what works in different contexts. Committee members recommended assisting SEAs in identifying and disseminating models of strengthening family-school partnerships and closing achievement gaps.

- ▶ **Provide technical assistance to help recruit effective teachers.** Committee members recommended technical assistance in establishing incentive systems for recruiting and retaining teachers, and compiling a database of effective teacher training in targeted areas.

See appendix B for each committee member’s individual needs assessment and recommendations for addressing those needs.

# Chapter 1. Introduction

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This report represents the regional needs assessment from the Appalachian Regional Advisory Committee (RAC). The Appalachian region includes Kentucky, Tennessee, Virginia, and West Virginia. The RAC members used statistical data from the Appalachian regional profile (appendix A); conducted data collection and outreach activities to obtain input from various constituencies; and met three times between July 16, 2016, and August 31, 2016, to assess regional needs and how to address those needs.

## A. Legislative Background

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The RACs are authorized by the Educational Technical Assistance Act of 2002 (20 U.S.C. § 9601 et seq.). Section 203 of Title II of the Education Sciences Reform Act of 2002 (P.L. 107–279) directs the Secretary of the U.S. Department of Education to not less than 20 comprehensive centers to provide technical assistance to state, local, and regional educational agencies and to schools. The technical assistance is to be directed toward implementing the Every Student Succeeds Act and to achieving goals through the use of scientifically valid teaching methods and assessment tools for use by teachers and administrators in the following areas:

- ▶ core academic subjects of mathematics, science, and reading or language arts;
- ▶ English language acquisition;
- ▶ education technology;
- ▶ communication among education experts, school officials, teachers, parents, and librarians;
- ▶ information that can be used to improve academic achievement; closing achievement gaps; and encouraging and sustaining improvement to schools, educators, parents, and policymakers within the region where the center is located; and
- ▶ teacher and school leader in-service and preservice training models that illustrate best practices in the use of technology in different content areas.

## B. Regional Background Information

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A variety of educational data sources informed the development of the Appalachian regional profile, which provides a descriptive snapshot of the educational landscape in the region. The RAC members used these data to inform their individual assessments of the region's most pressing needs. The regional profiles include sections on demographics; SEA capacity; educational resources; teacher preparation, qualifications, and certification; and student educational attainment. Summaries of the data presented in each section of the profiles appear below. See appendix A for the descriptive tables and charts that represent this regional profile, summarized below.

While the Appalachian region is diverse in its geographic and socioeconomic makeup, the majority of school districts in Appalachia are situated in small towns or rural areas. Virginia has the highest number of suburban and urban school districts (32 percent). Overall, the region has a substantial percentage of students from low socioeconomic backgrounds. Three of the four states have a higher proportion of Title I schools than the national average, and two of the four have a higher proportion of children living below the poverty level and a higher proportion of students receiving free and reduced-price lunches daily than the national average. In West Virginia and Kentucky in particular, 1 in every 10 children live in extreme poverty or below 50 percent of the poverty line (The Southern Education Foundation, 2010).

Across the Appalachian region, states vary in the total number of students and the proportion of racial ethnic minority students served. Tennessee and Virginia public schools serve the largest student populations and West Virginia serves the fewest. In Kentucky, West Virginia, and Tennessee, the majority of students enrolled are White, while in Virginia non-Whites represent nearly 50 percent of the total student population. Overall, the region has a smaller percentage of English learners and a smaller percentage of students who speak languages other than English only at home than the national average. The region on average, however, serves a higher proportion of students with disabilities than schools nationally. In all but one state, the percentage of 3- and 4-year-olds enrolled in a state-funded pre-K program is considerably lower than the national average. West Virginia, which has legislated expanding access to preschool education, is an exception, with 68 percent of 4-year-olds enrolled (compared to 29 percent nationwide) and 11 percent of 3-year-olds enrolled (compared to 5 percent nationwide). Despite efforts to expand access to pre-K programs in Tennessee, however, the proportion of 4-year-olds enrolled is one of the lowest in the region.

Overall, educational attainment and achievement is lower in the region than nationally. While the rate of students attaining a high school diploma exceeds the national average, the proportion of adults who go on to receive a college degree is 5 to 10 points lower than the national average in all but one state. Fewer students are classified as proficient or above proficient on the 4th-grade reading NAEP than the national average in two states and the percentage meeting ACT® college readiness benchmarks is lower than the national average in mathematics and science in three of the four states.

Educational achievement gaps mirror those found in other regions, with Black and Hispanic students performing lower than White students on NAEP 4th-grade mathematics and reading (see tables 1 and 2). However, across the region, Hispanic students perform higher than the national average for their peers (ranging from 6 to 9 points in reading). Similarly, while the rate of high school graduation is lower for Black and Hispanic students than White students across the region, these rates are as high as or higher than the national average. In contrast, scores on the NAEP 4th-grade mathematics and reading assessments suggest White students in particular are lagging behind in West Virginia, scoring 15 points lower, on average, in reading and 12 points lower in mathematics than the national average for Whites.

**Table 1. Average 4th grade NAEP Reading Assessment Scale score by region and race/ethnicity**

State	Average Reading Scale Score					
	All Students	White	Black	Hispanic	White-Black Difference	White-Hispanic Difference
United States	221	232	206	208	26	24
Kentucky	228	231	212	216	19	15
Tennessee	219	225	199	214	26	11
Virginia	229	238	208	217	30	21
West Virginia	216	217	210	‡	7	‡

‡ Reporting standards not met

Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, NAEP, 2015 Reading Assessment

**Table 2. Average 4th grade NAEP Mathematics Assessment Scale score by region and race/ethnicity**

State	Average Mathematics Scale Score					
	All Students	White	Black	Hispanic	White-Black Difference	White-Hispanic Difference
United States	240	248	224	230	24	18
Kentucky	242	244	226	234	18	10
Tennessee	241	246	226	235	20	11
Virginia	247	253	231	235	22	18
West Virginia	235	236	218	‡	18	‡

‡ Reporting standards not met

Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, NAEP, 2015 Mathematics Assessment

With the exception of Kentucky, all states in the region have a lower teacher-to-student ratio than the national average. Most states face teacher shortages, particularly in STEM, and have implemented several strategies to address this challenge. With the exception of Kentucky, a high proportion of new teachers train out of state and complete traditional teacher preparation programs. Few complete training in alternative learning such as an institute of higher learning or other alternative programs. A recent study conducted by the Tennessee Department of Education found that in an average district in Tennessee, only 24 percent of the teaching force is considered highly effective, or the teacher’s students showed growth beyond what they were expected to show over the course of the school year (2016).

### C. Challenges Affecting Regional Needs

RAC members’ data collection efforts identified several challenges affecting the Appalachian region’s education needs. Economic and environmental factors, such as poverty and the rural nature of the region, as well as the changing nature of jobs and the economy, have affected the distribution of high-quality teachers, equity in educational achievement, and career and college readiness. Three commonly mentioned challenges are summarized below:

- ▶ **Poverty and economic instability.** Many areas in the Appalachian region face extreme poverty often ascribed to geographic isolation, external control of resources, land tenure policies, and cultural constraints. In Kentucky, Tennessee, and West Virginia, annual household incomes are well below the national average, with approximately 18 percent of the population living below the poverty threshold. Kentucky and West Virginia are among the poorest states in the nation (Mekouar 2015). The states’ low income and productivity levels result from several factors, including lower levels of educational attainment, funding prioritization, and a lack of urban growth (Ezzell, Dayton, and Ogle 2012). Substance abuse has also created barriers to economic progress and educational attainment across the region, particularly in West Virginia, which has the highest rate of overdose deaths in the nation, more than twice the national average (Raby and Mattise 2015).

- ▶ **Shortage of highly qualified teachers in rural and high need areas.** Many of the region’s rural schools are geographically isolated, and the majority of its urban schools are labelled as “high need,” leading to problems in attracting and retaining a highly qualified teaching workforce (Cowen, Butler, Fowles, Streams, and Toma 2011; Appalachian Regional Commission 2011). There is significant variation in teacher and other resource allocation based on geography and family incomes in the area. In many rural and low-income areas, high rates of teacher vacancy and turnover are the norm, exacerbating an inequitable distribution of effective educators. Many stakeholders in the region are concerned about widening achievement gaps between students of different races/ethnicities and economic backgrounds and finding ways to support the lowest performing schools.
- ▶ **Preparing students for new careers.** In several Appalachian states, coal mining has traditionally been a vital part of the region’s economy and an important element of the nation’s energy source. However, overreliance on the coal industry is increasingly becoming a detriment to the region’s economy as the nation moves toward more renewable and cost-saving energy sources. In 2015, several coal-mining operations in Kentucky, Virginia, and West Virginia closed (Strother 2015). The increase in the extraction of natural gas, however, has brought about a need for semiskilled jobs, especially those that require STEM skills. This need is likely to intensify (Gonzalez, Siler-Evans, Hunter, and Baird 2016). Preparing students for these new jobs by providing more technical training skills and increasing achievement in mathematics and science has become a more pressing concern. The high number of teacher vacancies and temporary teachers who are not certified in their area of assignment (such as math and science) and lack of funding to implement and maintain technology and equipment pose challenges.

## D. Data Collection and Outreach Strategies

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A main priority of each RAC was to solicit input from numerous constituencies, including teachers, principals, SEA and LEA administrators, governors, institutions of higher education/community colleges, postsecondary technical programs, school boards, parents, education professional organizations, teachers unions, local government, youth organizations, community-based organizations, chambers of commerce, and business leaders. RAC members received briefs, PowerPoint presentations, and other RAC-related materials that describe the purpose of the Comprehensive Centers program and how technical assistance builds the capacity of SEAs and LEAs. RAC members disseminated these materials to their educational organizations and their professional networks.

RAC members conducted needs sensing and data collection between July 19, 2016, and August 31, 2016. Methods included disseminating an online survey link through email, posting the survey link on social media or on public websites; and collecting feedback at school meetings. The online survey asked respondents to identify their state and affiliation and allowed them to identify needs and make recommendations through open-ended responses in comment boxes.

RAC members had access to an Appalachian region specific community of practice platform, Communities360<sup>o</sup>, to help facilitate interactions and align data collection activities. Committee members used Communities360<sup>o</sup> to share resources, organize activities, and share notes on their outreach efforts. The RAC facilitators used the website to post resources for committee members, share meeting slides and notes, communicate timelines, and distribute survey data. RAC members sent a link to the needs-sensing survey (located on the public home page of the website) to stakeholders via email to gather feedback. RAC members held three meetings to internally review the data collected and discuss the needs and the strategies to address those needs.

A total of 809 individuals took the online survey. An additional 82 individuals provided feedback through in-person parent and teacher meetings using a paper form with the same survey questions. Table 3 illustrates responses received through the survey and other data collection efforts in each of the states.

**Table 3. Members of the public submitting comments by state**

State	Number of individuals providing feedback	Percent
Kentucky	209	23
Tennessee	362	41
Virginia	109	12
West Virginia	211	24
<b>Total Appalachian region</b>	<b>891</b>	<b>100</b>

Note: Some percentages may not total 100 because of rounding.

Table 4 shows the number of responses received by the self-identified roles of the respondents.

**Table 4. Members of the public submitting comments by stakeholder group**

Role	Number of individuals providing feedback	Percent
<b>State level</b>	<b>54</b>	<b>6</b>
SEA staff	21	2
State board of education	13	1
Other state or local government	17	2
Other, state level	3	< 1
<b>Local district or regional level</b>	<b>239</b>	<b>27</b>
Superintendent or director of schools	46	5
School board member	160	18
LEA or central office	29	3
Education service agency	4	< 1
<b>School level</b>	<b>318</b>	<b>36</b>
Principal or other school administrator	44	5
Librarian	126	14
Curriculum specialist or instructional coach	18	2
Parent/grandparent/guardian	116	13
Other, school level	14	2
<b>Classroom level</b>	<b>203</b>	<b>23</b>
Teacher	203	23
<b>Community level</b>	<b>74</b>	<b>8</b>
Higher education	33	4
Community member	19	2
Business	13	1
Other, community level	9	1
<b>Other</b>	<b>3</b>	<b>&lt; 1</b>
<b>Total</b>	<b>891</b>	<b>100</b>

Note: Some percentages may not total 100 because of rounding.

## Chapter 2. Educational Needs and Recommendations for Addressing the Needs

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RAC members used information from the regional profile, input from constituencies, and committee members' individual expertise to identify the region's most pressing educational need areas and to make recommendations accordingly. Each committee member chose up to five priority needs and recommended at least one potential strategy to address each need in an individual needs assessment report (see appendix B). Each of the five Appalachia RAC members submitted an individual report. Overall, individual members of the Appalachian RAC prioritized the following five needs:

- ▶ **Preparing students to be college and career ready.** Most RAC members reported that preparing students for the career opportunities that exist today was a high priority need in the Appalachian area, including preparing non-college bound students for vocational careers. Specifically, members identified a need to develop definitions and standards of college and career readiness; facilitate the acquisition of technology skills; support partnerships between schools, colleges, and technology centers; and improve mechanisms for disseminating financial aid information to college-bound students.
- ▶ **Supporting the lowest performing schools and closing achievement gaps.** The majority of RAC members prioritized the need to identify persistent achievement gaps between schools; facilitate learning and development of best practices; and support schools in hiring, training, and retaining the most effective teachers in high need areas to close achievement gaps.
- ▶ **Developing and ensuring equitable distribution of highly effective teachers and leaders.** RAC members pointed to a need to ensure equitable education as key to supporting low performing schools and closing achievement gaps, in particular the equitable distribution of effective teachers and administrators. RAC members highlighted a need to improve recruitment, training, professional development, and retention of teachers and identify and disseminate best practices to address these issues.
- ▶ **Improving access to early childhood education and engaging families.** One RAC member identified supporting access to early education and identifying means of engaging families in their child's education as important components of future school success and closing achievement gaps.
- ▶ **Improving assessment and accountability systems.** One RAC member cited a need for a stable, standard assessment system that is easily understood by teachers and parents. Specifically, there is a need to disseminate information on various approaches and benchmarks to improve tools, understanding, and alignment.

The committee members made recommendations in three broad categories to help address the identified needs:

- ▶ facilitate stakeholder committees;
- ▶ facilitate communities of practice;
- ▶ identify and disseminate successful models; and
- ▶ provide technical assistance to help recruit effective teachers.

Table 5 provides a high-level summary of the recommendations expressed related to the priority need areas.

**Table 5. Summary of needs and recommendations by committee member**

Member name	Need area	Recommendations
<b><i>Preparing students to be college and career ready</i></b>		
Bob Alvey Tate Gould Gary Higginbotham Beverly Kingery	Facilitate stakeholder committees to assess needs, define concepts, and identify benchmarks to support career and college readiness  Create and facilitate a state stakeholder committee to serve three major functions:	<ul style="list-style-type: none"> <li>• identify the research-based components of a viable and effective college- and career-ready state, regional, and local environment</li> <li>• facilitate conversations with public education and higher education to identify perceptions of college and career readiness to align a seamless pre-K–12 to higher education student experience</li> <li>• identify benchmarks to support college and career readiness at each grade level</li> </ul>
Bob Alvey Tate Gould	Help states expand the technology skills of students by	<ul style="list-style-type: none"> <li>• drafting communication plans or facilitating communication between states and policymakers to inform legislators on the importance of restoring funding to programs across districts to maintain student access to technology</li> <li>• identifying resources and effective best practices around the use of technology in the classroom to keep students up to date and build strong technology literacy; this would be resources SEAs can use as they work with local school districts.</li> </ul>
Bob Alvey Tate Gould Gary Higginbotham Beverly Kingery	Enhance career and technical education opportunities by	<ul style="list-style-type: none"> <li>• Facilitating partnerships between K-12 schools and local colleges, universities, and technology centers. For example, aid states in developing partnerships between colleges and technology centers around AP credit, dual enrollment credit, and career pathways</li> <li>• identifying resources states can use to design GED completion and job assistance programs for high school dropouts.</li> </ul>
Bob Alvey Tate Gould Gary Higginbotham Beverly Kingery	Create transparent college funding resources/systems by	<ul style="list-style-type: none"> <li>• establishing an online database or portal identifying financial aid opportunities educators across the region can use to help with advising college bound students who need assistance in financing a college education</li> <li>• disseminating information on planning for college, making college affordable, and other practice guides developed through the content centers, RELs, and other federally funded sources</li> </ul>

Member name	Need area	Recommendations
<b><i>Supporting the lowest performing schools and closing achievement gaps</i></b>		
Bob Alvey Tate Gould Gary Higginbotham Beverly Kingery	Identify and foster learning from successful models and best practices focused on closing achievement gaps. Specifically,	<ul style="list-style-type: none"> <li>assist states in developing local school district community of practices and opportunities for sharing what has worked. This would be a way for higher performing schools to share best practices with lower performing schools; provide technical assistance on sustaining the community of practice (webinar or face-to-face regional collaboration through state-funded conferences, how often, incentives to encourage higher performing schools to participate, etc.)</li> <li>identify and showcase best and promising practices from around the country on intervention models to close achievement gaps, and provide technical assistance information and training about those practices to SEAs</li> <li>facilitate communities of practice and networks of state department staff across the region focused on learning from and supporting one another through ESSA implementation</li> <li>help states understand ESSA's accountability components</li> <li>provide technical assistance and guidance in how SEAs can assist local districts and schools on "customizing" school improvement plans</li> </ul>
Bob Alvey Tate Gould Gary Higginbotham Beverly Kingery	Improve teacher quality and practices by	<ul style="list-style-type: none"> <li>documenting and disseminating best strategies for retaining the most highly effective teachers and leaders</li> <li>developing or sharing training on student and parent engagement</li> <li>documenting and disseminating best practices related to ways teachers can leverage limited resources or collaborate with others to overcome the lack of physical resources</li> </ul>
<b><i>Developing and ensuring equitable distribution of highly effective teachers and leaders</i></b>		
Bob Alvey Tate Gould Beverly Kingery	Assist SEAs in developing training for pre-service teachers on addressing socioemotional aspects of students living in poverty and working with low-performing students	
Bob Alvey Tate Gould Beverly Kingery	Assist SEAs and LEAs in greater use of data and best practices by	<ul style="list-style-type: none"> <li>identifying teacher incentive experts to help states work with budgets, incentives, and salaries</li> <li>identifying and disseminating best practices around recruiting and retaining teachers in rural and/or high-needs schools</li> <li>identifying and disseminating best practices on how to identify effective teachers and ensure a match between student needs and teacher skills</li> <li>identifying and disseminating examples and best practices on how other states have addressed equitable distribution (e.g., reports of obstacles, and how other states overcame them with specific, actionable steps)</li> <li>facilitating a community of practice to discuss and strategize how to address barriers to equitable distribution of effective teachers</li> <li>developing training for superintendents and principals on best practices on attracting, retaining, and placing teachers in positions of success. This would include learning how to mine teacher effectiveness data and student learning capabilities</li> </ul>

<b>Member name</b>	<b>Need area</b>	<b>Recommendations</b>
Gary Higginbotham	Provide continuous improvement training for practicing teachers on focused learning strategies	
Sonia Michael	Identify resources or advise SEAs on providing in-service training and professional development on personalized learning, experiential instruction, and other focused learning strategies	
Gary Higginbotham	Identify and disseminate high quality teaching resources by vetting sources in the targeted areas (individualized and experiential teaching techniques, use of assessment information in planning instruction) and providing a database of these sources to SEAs	
Sonia Michael		
<b><i>Improving access to early childhood education and engaging families</i></b>		
Sonia Michael	Improve access to early childhood education by identifying and compiling a list of effective practices to improve access from across the region. Share methods for implementing effective practices with SEAs	
Sonia Michael	Increase educator access to information that will assist with implementation of family engagement strategies <ul style="list-style-type: none"> <li>• identify recently published reports, publications, and research related to family-identified needs associated with family/school partnerships. Condense and share this information to assist educators in better understanding barriers to family involvement</li> <li>• compile research syntheses and compendium of effective family engagement strategies from recently published reports</li> </ul>	
<b><i>Improving assessment and accountability systems</i></b>		
Gary Higginbotham	Disseminate and provide information on various assessment approaches including the use of a series of benchmark tests throughout the year that are closely aligned with the end-of-the-year test as tool for states to use to improve assessment and accountability systems	

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## **Appendix A. Region Educational Profile**

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## Demographics

Understanding the demographic makeup of the states in each region helps to establish the context for the educational issues that are most pressing. This section presents tables from the *Digest of Education Statistics*, the U.S. Bureau of Labor Statistics, and *American Fact Finder* related to

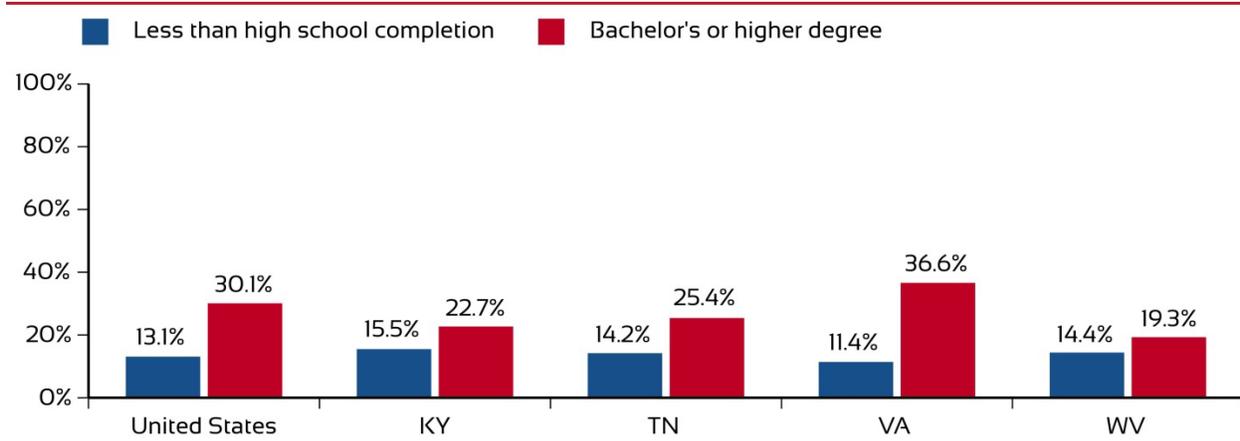
- ▶ the educational attainment of the adult population;
- ▶ the poverty rate, median household income, and unemployment rate;
- ▶ the overall number of students, teachers, and schools, both public and private;
- ▶ the racial/ethnic distribution of students served by public schools;
- ▶ participation in public school services (free or reduced-price lunch program, English language learners, students with disabilities, gifted and talented students, state-sponsored prekindergarten); and
- ▶ the percentage of the population who speak a language other than English at home.

### A. Educational Attainment

The highest level of education completed by the adult, working-age population (25- to 64- year-olds) is a proxy for human capital– the skills, knowledge, and experience possessed by an individual or population. Higher educational attainment (a bachelor’s degree or higher) is associated with better income and employment. Figure 1 displays the percentage of the adult population with less than a high school diploma in 2014 and the percentage with a bachelor’s degree or higher in 2014.

Additional information about the **educational attainment of young adults** and differences by race/ethnicity can be found in the latest *NCES Condition of Education*.

**Figure 1. Educational attainment by state, 2014**



Source: 2015 *Digest of Education Statistics*, table 108.40. Retrieved July 5, 2016, from [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_104.80.asp](https://nces.ed.gov/programs/digest/d15/tables/dt15_104.80.asp).

## B. Economic Indicators

Table 1 displays socioeconomic indicators such as the percentage of persons and percentage of children below the poverty level in 2014. The table also displays the median annual household income in 2014 and the unemployment rate in May 2016.

**Table 1. Selected socioeconomic indicators, by state**

State	Percent of Persons in Poverty, 2014 <sup>a</sup>	Percent of Children Ages 5 to 17 in Poverty, 2014 <sup>a</sup>	Annual Household Income (Median), 2014 <sup>b</sup>	Unemployment Rate, May 2016 <sup>c</sup>
United States	15.1	20.3	\$53,700	4.9
Kentucky	18.0	23.4	\$43,000	5.1
Tennessee	18.0	25.1	\$44,400	4.1
Virginia	11.5	14.9	\$64,900	3.8
West Virginia	17.4	20.8	\$41,100	6.2

Source: <sup>a</sup> 2015 Digest of Education Statistics, table 102.40. Retrieved July 5, 2016, from [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_102.40.asp?current=yes](https://nces.ed.gov/programs/digest/d15/tables/dt15_102.40.asp?current=yes).

<sup>b</sup> 2015 Digest of Education Statistics, table 102.30. Retrieved July 5, 2016, from [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_102.30.asp?current=yes](https://nces.ed.gov/programs/digest/d15/tables/dt15_102.30.asp?current=yes).

<sup>c</sup> Bureau of Labor Statistics Monthly Unemployment Report. Retrieved July 5, 2016, from <http://www.bls.gov/web/laus/laumstrk.htm>.

## C. Schools and Students

Tables 2 through 5 contain school and student demographics such as the total number of schools, teachers, and students; the racial/ethnic distribution of students in public schools; the percentage of schools by urbanicity; and the percentage of Title I schools.

**Number of schools, teachers, and students.** Table 2 displays the number of schools, teachers, and students in fall 2013 for public and private schools.

**Table 2. Count of schools, teachers, and students, by sector and state, fall 2013**

State	Public			Private		
	Schools <sup>a</sup>	Teachers <sup>b</sup>	Students <sup>c</sup>	Schools <sup>d</sup>	Teachers <sup>d</sup>	Students <sup>d</sup>
United States	94,758	3,113,764	50,044,522	33,620	441,500	5,395,740
Kentucky	1,398	41,820	677,389	470	5,490	74,750
Tennessee	1,769	65,847	993,556	560	8,720	93,990
Virginia	1,863	90,098	1,273,825	910	12,080	131,330
West Virginia	711	19,978	280,958	130	1,230	14,350

Source: <sup>a</sup> 2015 Digest of Education Statistics, table 216.43. Retrieved July 5, 2016, from [http://nces.ed.gov/programs/digest/d15/tables/dt15\\_216.43.asp?current=yes](http://nces.ed.gov/programs/digest/d15/tables/dt15_216.43.asp?current=yes).

<sup>b</sup> 2015 Digest of Education Statistics, table 208.30. Retrieved July 5, 2016, from [http://nces.ed.gov/programs/digest/d15/tables/dt15\\_208.30.asp?current=yes](http://nces.ed.gov/programs/digest/d15/tables/dt15_208.30.asp?current=yes).

<sup>c</sup> 2015 Digest of Education Statistics, table 203.40. Retrieved July 5, 2016, from [http://nces.ed.gov/programs/digest/d15/tables/dt15\\_203.40.asp?current=yes](http://nces.ed.gov/programs/digest/d15/tables/dt15_203.40.asp?current=yes).

<sup>d</sup> 2015 Digest of Education Statistics, table 205.80. Retrieved July 5, 2016, from [http://nces.ed.gov/programs/digest/d15/tables/dt15\\_205.80.asp?current=yes](http://nces.ed.gov/programs/digest/d15/tables/dt15_205.80.asp?current=yes).

**Percentage of public school students by race/ethnicity.** Table 3 displays the racial/ethnic background of public school students in fall 2013.

**Table 3. Percentage distribution of enrollment in public elementary and secondary schools, by race/ethnicity and state, fall 2013**

State	White	Black	Hispanic	Asian	Pacific Islander	American Indian/Alaska Native	Two or More Races
United States	50.3	15.6	24.8	4.8	0.4	1.0	3.0
Kentucky	79.3	10.8	5.3	1.5	0.1	0.1	3.0
Tennessee	65.6	22.9	7.8	1.8	0.1	0.2	1.6
Virginia	52.2	23.3	13.1	6.3	0.1	0.3	4.7
West Virginia	91.1	4.7	1.4	0.7	N/A	0.1	2.0

Source: 2015 Digest of Education Statistics, table 203.70. Retrieved July 12, 2016, from [http://nces.ed.gov/programs/digest/d15/tables/dt15\\_203.70.asp](http://nces.ed.gov/programs/digest/d15/tables/dt15_203.70.asp).

**Percentage of school districts by urban-centric locale.** Table 4 displays the percentage of school districts classified by the Census locale codes. The large, midsize, and small city codes were summed to create the total number of city districts. The large, midsize, and small suburban codes were summed to create the total number of suburban districts. The fringe, distant, and remote town codes were summed to create the total number of town districts. The fringe, distant, and remote rural codes were summed to create the total number of rural districts. The percentages of districts within each of the four major locale codes are presented.

**Table 4. Percentage distribution of public school districts, by urban-centric locale and state, 2013–14**

State	City	Suburban	Town	Rural
United States	5.7	22.9	18.4	53.0
Kentucky	3.4	14.4	31.6	50.6
Tennessee	11.4	12.1	29.3	47.1
Virginia	13.4	18.7	17.9	50.0
West Virginia	7.3	14.5	23.6	54.5

Source: National Center for Education Statistics Rural Education in America, table A.1.a.-1. Retrieved July 12, 2016, from <https://nces.ed.gov/surveys/ruraled/tables/a.1.a.-1.asp>.

**Percentage of Title I schools.** Table 5 presents the total number of schools and the percentage of schools that were eligible for Title I in 2010–11. A Title I eligible school is one in which the percentage of children from low-income families is at least as high as the percentage of children from low-income families served by the local education agency (LEA) as a whole, or because 35 percent or more of the children in the school are from low-income families.

**Table 5. Number of school, and percentage by Title I status, 2010–11**

State	Number of Operating Schools	Percent Title I
United States	98,817	67.4
Kentucky	1,554	70.1
Tennessee	1,784	83.0
Virginia	2,175	34.1
West Virginia	757	48.3

Source: *Number and Types of Public Elementary and Secondary Schools from the Common Core of Data: School Year 2010–11*. Retrieved July 12, 2016, from [https://nces.ed.gov/pubs2012/pesschools10/tables/table\\_02.asp](https://nces.ed.gov/pubs2012/pesschools10/tables/table_02.asp).

## D. Participation in Public School Services

Tables 6 and 7 provide information about participation in public school services.

**Public school services.** Table 6 provides the percentage of students in public schools who were eligible for free or reduced-price lunch, participated in English Language learner programs, were served under the Individuals with Disabilities Act Part B, or participated in programs for gifted and talented students.

**Table 6. Percentage of public school students participating in school services**

State	Free or Reduced-Price Lunch, 2013–14 <sup>a</sup>	English Language Learners, 2013–14 <sup>b</sup>	Students with Disabilities, 2013–14 <sup>c</sup>	Gifted and Talented, 2006 <sup>d</sup>
United States	52.0	9.3	12.9	6.7
Kentucky	54.8	2.9	14.4	14.6
Tennessee	58.8	3.5	13.1	1.7
Virginia	39.7	7.5	12.7	12.6
West Virginia	47.9	0.7	15.8	2.2

Source: a. *2015 Digest of Education Statistics*, table 204.10. Retrieved July 6, 2016, from [http://nces.ed.gov/programs/digest/d15/tables/dt15\\_204.10.asp?current=yes](http://nces.ed.gov/programs/digest/d15/tables/dt15_204.10.asp?current=yes).

b. *2015 Digest of Education Statistics*, table 204.20. Retrieved July 6, 2016, from [http://nces.ed.gov/programs/digest/d15/tables/dt15\\_204.20.asp?current=yes](http://nces.ed.gov/programs/digest/d15/tables/dt15_204.20.asp?current=yes).

c. *2015 Digest of Education Statistics*, table 204.70. Retrieved July 6, 2016, from [http://nces.ed.gov/programs/digest/d15/tables/dt15\\_204.70.asp?current=yes](http://nces.ed.gov/programs/digest/d15/tables/dt15_204.70.asp?current=yes).

d. *2014 Digest of Education Statistics*, table 204.90. Retrieved July 6, 2016, from [http://nces.ed.gov/programs/digest/d14/tables/dt14\\_204.90.asp?current=yes](http://nces.ed.gov/programs/digest/d14/tables/dt14_204.90.asp?current=yes).

**Prekindergarten participation and per-student spending.** The National Institute for Early Education Research publishes a yearly *State of Preschool* report with **profiles of each state**. The state profiles provide detailed information on access to preschool, quality standards, and resources. Table 7 displays the percentage of 3-year-old and the percentage of 4-year-old population enrolled in prekindergarten and state spending per child enrolled in prekindergarten.

**Table 7. State-funded prekindergarten programs, 2015**

State	State Spending per Enrolled Child	Percent of 4-Year-Old Population Enrolled in State-Funded Program	Percent of 3-Year-Old Population Enrolled in State-Funded Program
United States	\$4,489	29	5
Kentucky	\$3,835	26	8
Tennessee	\$5,219	19	1
Virginia	\$3,742	18	N/A
West Virginia	\$6,427	68	11

Source: National Institute for Early Education Research. Retrieved July 2, 2016, from <http://nieer.org/research/state-preschool-2015-state-profiles>.

## E. Other

Table 8 contains linguistic indicators such as the percentage of the population who speak English only at home, the percentage who speak Spanish at home, the percentage who speak another Indo-European language at home, and the percentage who speak an Asian or Pacific Islander language at home.

**Table 8. Percentage of population 5 years and older by language spoken at home and by state**

State	Language Spoken at Home, Percent of Population 5 and Older				
	English Only	Spanish	Other Indo-European Language	Asian and Pacific Islander Languages	Other Languages
United States	79.1	13.0	3.7	3.3	0.9
Kentucky	95.0	2.5	1.3	0.8	0.4
Tennessee	93.2	3.9	1.2	1.0	0.6
Virginia	84.8	6.7	3.5	3.5	1.4
West Virginia	97.6	1.0	0.7	0.5	0.2

Source: U.S. Census Bureau, *American Fact-Finder*.

## State Education Agency Capacity

State Education Agencies (SEAs) are the primary customers of the Comprehensive Centers. Understanding the capacity in the SEA, the number of districts served, and the governance structure of each state provides context. Data in this section come from the *2015 Digest of Education Statistics*, the Education Commission of the States report, *50-State Comparison: K–12 Governance Structures*, and Achieve’s report, *Leadership Turnover: 2015 Year of Significant Change in State Education Leadership*.

Table 9 displays the number of agencies in each state. Table 10 displays the governance model (e.g., who is elected, who is appointed). Table 11 shows changes in education leadership over the past 2 years (2015 and 2016).

**Table 9. Number of education agencies in 2013–14, by type and state**

State	Total	District/LEA	RESA	State	Independent Charter Schools and Other
United States	18,194	13,491	1,522	255	2,923
Kentucky	194	174	18	2	0
Tennessee	140	140	0	0	0
Virginia	227	134	71	21	0
West Virginia	57	55	0	2	0

Source: *2015 Digest of Education Statistics*, table 214.30. Retrieved July 6, 2016, from [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_214.30.asp?current=yes](https://nces.ed.gov/programs/digest/d15/tables/dt15_214.30.asp?current=yes).

Note: RESA = Regional Education Service Agency

**Table 10. State governance**

State	Governance Model	Legislature	Local School Boards
Kentucky	Governor appoints board, board appoints chief	The legislature has a house education committee and a senate education committee.	176 local boards; members elected.
Tennessee	Appointed board, appointed chief	The legislature has a house education committee, a senate education committee and a joint select oversight committee on education.	136 local boards; members elected.
Virginia	Appointed board, appointed chief	The legislature has a house education committee and a senate education and health committee.	134 local boards; members appointed and elected.
West Virginia	Governor appoints board, board appoints chief	The legislature has a house education committee and a senate education committee.	55 local boards; members elected.

Source: Education Commission of the States. (2013). *50-State Comparison: K–12 Governance Structures*. Retrieved July 12, 2016, from <http://www.ecs.org/k-12-governance-structures/>.

**Table 11. State education leadership changes in 2015 or 2016**

State	New Governor	New State Board Members	New Chief State School Officer	New State Higher Education Officer
Kentucky	Matt Bevin-R, Nov 2015	2/11 voting members	Stephen Pruitt, Oct 2015	N/A
Tennessee	N/A	N/A	Candice McQueen, Jan 2015	Russ Deaton, Jan 2015
Virginia	N/A	1/9 voting members	N/A	N/A
West Virginia	* will change in 2016	N/A	N/A	N/A

Source: Achieve. (2015). *Leadership Turnover: 2015 Year of Significant Change in State Education Leadership*. Retrieved July 12, 2016, from <http://www.achieve.org/files/LeadershipTurnover2015.pdf>.

## Educational Resources

Indicators of educational resources include school finance information such as revenues and expenditures, access to fiber and broadband connectivity, and pupil-to-teacher ratios. Data for the tables presented in this section come from the *2015 Digest of Education Statistics, American Fact-Finder*, and *Education Superhighway's 2015 State of the States* report on broadband connectivity in public schools.

Table 12 provides the total revenue for each state by source of funds.

**Table 12. Revenues for public elementary and secondary schools, by source, 2012–13**

State	Total Revenue (in Thousands)	Percent Revenue From Federal	Percent Revenue From State	Percent Revenue From Local
United States	\$603,686,987	9.3	45.2	45.5
Kentucky	\$7,120,960	12.3	54.5	33.2
Tennessee	\$9,084,504	13.0	45.7	41.3
Virginia	\$15,106,627	7.3	38.9	53.7
West Virginia	\$3,543,326	10.7	59.0	30.3

Source: *2015 Digest of Education Statistics*, table 235.20. Retrieved July 6, 2016, from [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_235.20.asp?current=yes](https://nces.ed.gov/programs/digest/d15/tables/dt15_235.20.asp?current=yes).

Table 13 provides the per-pupil expenditures and the percentage of expenditures on instruction, support services (student support, instructional staff, general administration, operations and maintenance, student transportation, and other support services), and other (food services, capital outlay, interest on debt).

Additional data on total current expenditures for elementary and secondary education by function, subfunction, and state is available through NCES. See [http://nces.ed.gov/pubs2015/2015301/tables/table\\_03.asp](http://nces.ed.gov/pubs2015/2015301/tables/table_03.asp).

**Table 13. Per-pupil expenditures, 2012–13, by function**

State	Per-Pupil Expenditures	Percent Instruction	Percent Support	Percent Other
United States	\$12,020	54.4	31.3	14.3
Kentucky	\$10,614	50.1	31.6	18.2
Tennessee	\$9,336	56.7	30.3	13.1
Virginia	\$11,959	55.8	32.2	12.0
West Virginia	\$11,536	56.7	35.1	8.2

Source: *2015 Digest of Education Statistics*, table 236.75. Retrieved July 6, 2016, from [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_236.75.asp?current=yes](https://nces.ed.gov/programs/digest/d15/tables/dt15_236.75.asp?current=yes).

Table 14 provides another look at education expenditures. The last column provides an index of state and local education expenditures (excluding capital outlay) to total expenditures (excluding capital outlay, utilities, and intergovernmental expenditures).

**Table 14. State expenditures on education, fall 2013**

State	Total Enrollment <sup>a</sup>	Total Direct State and Local Expenditures <sup>b,c</sup>	State and Local Education Expenditures <sup>b,d</sup>	Percent Education to Total Expenditures
United States	50,044,052	\$2,366,783,591	\$796,049,064	33.6
Kentucky	677,389	\$28,512,120	9,624,741	33.8
Tennessee	993,556	\$39,024,983	12,842,397	32.9
Virginia	1,273,825	\$58,152,765	21,750,723	37.4
West Virginia	280,958	\$13,103,962	4,920,916	37.6

Source: <sup>a</sup> 2015 Digest of Education Statistics, table 203.20. Retrieved July 5, 2016, from [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_203.20.asp?current=yes](https://nces.ed.gov/programs/digest/d15/tables/dt15_203.20.asp?current=yes).

<sup>b</sup> American Fact-Finder, United States Census Bureau. Retrieved from: <https://www.census.gov/govs/local/>.

<sup>c</sup> Total direct expenditures do not include capital outlay, utilities, and intergovernmental expenditures.

<sup>d</sup> Total education expenditures do not include capital outlay.

Table 15 displays school district broadband connectivity for each state. The Federal Communications Commission (FCC) set a minimum Internet access goal of 100 Kbps per student. The table provides the percentage of school districts in each state meeting that goal. Districts with access to fiber connections are more likely to meet the minimum connectivity goal. The second column of table 15 presents the percentage of school districts in the state with access to fiber connections. The FCC funds upgrades to fiber networks. The FCC also subsidizes the deployment of wired and wireless networks in schools. Accessing the E-rate budget for Wi-Fi networks is an indicator of whether districts are aware their E-rate budget can be used to upgrade Wi-Fi networks. Lastly, \$3/Mbps is a price target that will enable school districts to meet Internet access goals.

Additional information and maps of district fiber connectivity are available through the Federal Communications Commission website (<https://www.fcc.gov/reports-research/maps/e-rate-fiber-map/>).

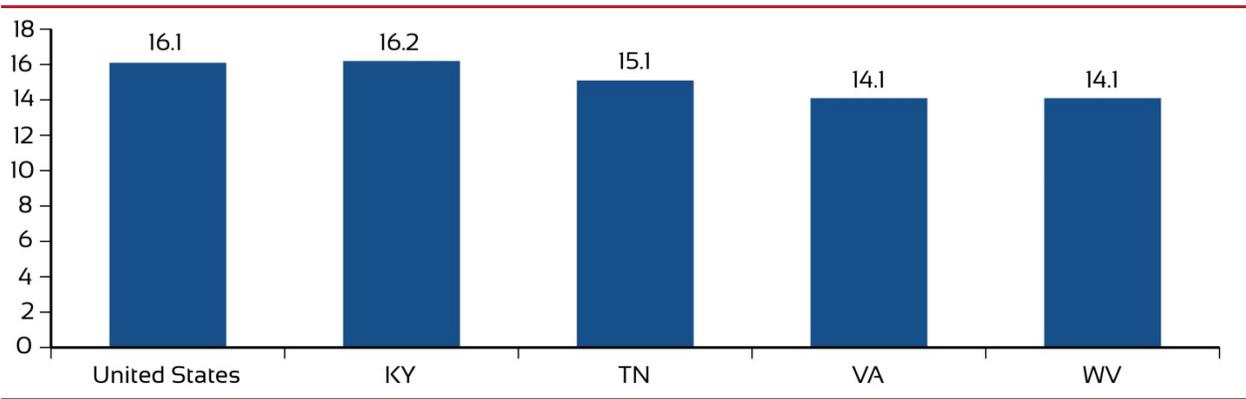
**Table 15. School district broadband connectivity, 2015**

State	Percent of School Districts			
	Meeting the Minimum 100 Kbps per Student Goal	That Have Fiber Connections To Meet Bandwidth Goals	That Accessed Their E-Rate Budget for Wi-Fi Networks	Meeting the \$3/Mbps Internet Access Affordability Target
Kentucky	92	100	83	1
Tennessee	64	97	42	0
Virginia	46	94	64	5
West Virginia	90	98	45	3

Source: Education Superhighway. (2015.) 2015 State of the States. Retrieved July 12, 2016, from [http://stateofthestates.educationsuperhighway.org/assets/sos/full\\_report-55ba0a64dcae0611b15ba9960429d323e2eadbac5a67a0b369bedbb8cf15ddbb.pdf](http://stateofthestates.educationsuperhighway.org/assets/sos/full_report-55ba0a64dcae0611b15ba9960429d323e2eadbac5a67a0b369bedbb8cf15ddbb.pdf).

Another educational resource is teachers. Figure 2 presents the pupil-to-teacher ratio.

**Figure 2. Pupil-to-teacher ratio, fall 2013**



Source: 2015 Digest of Education Statistics, table 208.40. Retrieved July 6, 2016, from [http://nces.ed.gov/programs/digest/d15/tables/dt15\\_208.40.asp?current=yes](http://nces.ed.gov/programs/digest/d15/tables/dt15_208.40.asp?current=yes).

## Teacher Preparation, Qualifications, and Certification

Tables 16 through 20 display data on teacher preparation programs, the percentage of teachers who completed their training in a different state from where they are teaching, and ways teacher preparation programs are addressing shortages of highly qualified teachers.

All the data come from the Title II Reports National Teacher Preparation Data file.

**Table 16. Number of completers of teacher preparation programs in 2013–14, by program type and state**

State	Total Enrollment	Total Completers	Completers by Program Type		
			Traditional	Alternative, IHE-Based	Alternative, not IHE-Based
United States	465,540	180,745	149,369	13,011	18,365
Kentucky	7,429	2,752	2,545	193	14
Tennessee	7,678	4,182	3,332	626	224
Virginia	12,408	3,924	3,535	201	188
West Virginia	3,625	1,178	1,137	41	N/A

Source: 2015 All States Report Data File, Title II Reports: National Teacher Preparation Data. Retrieved July 12, 2016, from <https://title2.ed.gov/Public/Home.aspx>.

Note: IHE = Institute of Higher Education

**Table 17. Percentage of completers of teacher preparation programs in 2013–14, by program type and state**

State	Total Completers	Program Type		
		Percent Traditional	Percent Alternative, IHE-Based	Percent Alternative, not IHE-Based
United States	180,745	82.6	7.2	10.2
Kentucky	2,752	92.5	7.0	0.5
Tennessee	4,182	79.7	15.0	5.4
Virginia	3,924	90.1	5.1	4.8
West Virginia	1,178	96.5	3.5	0.0

Source: 2015 All States Report Data File, Title II Reports: National Teacher Preparation Data. Retrieved July 12, 2016, from <https://title2.ed.gov/Public/DataTools/2015/AllStates.xls>.

**Table 18. Number and percentage of newly licensed teachers who received their credential from a teacher preparation program in a different state**

State	Total Number Receiving Initial Credential in the State in 2013-14	Total Number Who Completed Their Teacher Preparation Program in Another State	Percent Who Trained Out of State
United States	254,272	56,718	22
Kentucky	3,226	561	17
Tennessee	4,994	2,683	54
Virginia	5,576	3,325	60
West Virginia	1,435	428	30

Source: 2015 All States Report Data File, Title II Reports: National Teacher Preparation Data. Retrieved July 12, 2016, from <https://title2.ed.gov/Public/DataTools/2015/AllStates.xls>.

**Table 19. Do teacher preparation programs address shortages of highly qualified teachers by area of certification or licensure, subject, or specialty**

State	Area of Certification or Licensure	Subject	Specialty
Kentucky	No	No	No
Tennessee	Yes	Yes	Yes
Virginia	Yes	Yes	Yes
West Virginia	Yes	Yes	Yes

Source: 2015 All States Report Data File, Title II Reports: National Teacher Preparation Data. Retrieved July 12, 2016, from [https://title2.ed.gov/Public/Report/DataFiles/DataFiles.aspx?p=5\\_01](https://title2.ed.gov/Public/Report/DataFiles/DataFiles.aspx?p=5_01).

**Table 20. Description of ways teacher preparation programs are addressing shortages of highly qualified teachers**

State	Description of the Extent to Which Teacher Preparation Programs Are Addressing Shortages of Highly Qualified Teachers
Kentucky	<p>Kentucky's institutions offer certification programs in the shortage areas. In addition, alternative route programs such as the university-based Option 6 program and Teach for America assist with these as well.</p> <p>Kentucky does not have an issue with shortages of highly-qualified teachers. Much of this may be contributed to limiting the number of emergency certificates an individual may obtain to one. Additionally, the university-based alternative routes lead to highly qualified status.</p> <p>In 2013-2014 99.9% of courses at low, middle ,and high poverty elementary schools were taught by HQT.</p> <p>In 2013-2014, 99.7% of courses at low poverty secondary schools were taught by HQT, 99.6% of mid poverty secondary schools, and 99.5% for high poverty secondary schools with 99.6% overall average.</p>
Tennessee	<p>Tennessee has determined that the following endorsement areas are "shortage areas" in terms of the supply of qualified teachers: Mathematics, Biology, Chemistry, Physics, all World Languages, ESL, and all areas of Special Education. The following recruitment/training programs support efforts to address these shortages: Teach for America, New Teacher Project, and Tennessee STEM Innovation Network (TSIN). In addition, some educator preparation programs are working more closely with their partner school districts and schools in determining specific needs and developing strategies to address needs through projects such as the UTeach (U of Texas Austin) Replication Model and Teacher Residency Programs</p>

State	Description of the Extent to Which Teacher Preparation Programs Are Addressing Shortages of Highly Qualified Teachers
Virginia	Institutions of higher education have formed numerous PreK-12 partnerships with public school divisions in Virginia. Examples of these partnerships include the following: Special Education Adapted Curriculum, K-12 Consortium; Consortium for Visual Impairments, PreK-12; Mentor Teacher/Clinical Faculty Grants; Special Education grant collaborations to support provisionally licensed teachers in the areas of special education general curriculum K-12, early childhood special education; grant-funded offerings for teachers enrolled in deaf/hearing impairments programs.
West Virginia	Each institution with a WVBE-approved program shall report annually to the WVBE on its progress to follow-up of the institution's graduates to ensure an adequate assessment of West Virginia's supply and demand for educational personnel. The annual report shall include evidence that the program informs candidates of certification areas that are identified as low-need areas. Evidence that the program encourages candidates to pursue certification in high-shortage areas as well as provide a brief narrative of the institution's annual quantifiable goals for increasing the number of candidates completing endorsements in high-shortage areas.

Source: 2015 All States Report Data File, Title II Reports: National Teacher Preparation Data. Retrieved July 12, 2016, from [https://title2.ed.gov/Public/Report/DataFiles/DataFiles.aspx?p=5\\_01](https://title2.ed.gov/Public/Report/DataFiles/DataFiles.aspx?p=5_01).

## Student Educational Attainment

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Indicators of student educational attainment include

- ▶ Fourth grade literacy;
- ▶ Advanced Placement participation and performance;
- ▶ performance on college readiness assessments (ACT and SAT);
- ▶ averaged freshman graduation rates; and
- ▶ college completion rates.

### A. Fourth Grade Literacy

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Research has shown that students who are not reading well by third grade have a higher probability of dropping out of high school. Each state uses different assessments of reading and literacy. Table 21 presents results from the 2015 4th grade National Assessment of Educational Progress (NAEP) reading assessment.

**Table 21. Percentage at each achievement level on the 2015 4th grade NAEP reading assessment, 2015**

State	Achievement Level				
	Below Basic	Basic	Proficient	Advanced	At or Above Proficient
United States	32	33	27	8	35
Kentucky	25	34	30	10	40
Tennessee	34	32	26	8	33
Virginia	26	31	29	14	43
West Virginia	36	34	24	6	30

Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. *The Nation's Report Card*. Retrieved July 12, 2016, from [www.nationsreportcard.gov/reading\\_math\\_2015/#reading/state/acl?grade=4](http://www.nationsreportcard.gov/reading_math_2015/#reading/state/acl?grade=4).

### B. Advanced Placement Participation and Performance

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Participation in Advanced Placement (AP) courses and performance on AP exams are predictors of college enrollment and performance. By taking AP courses, students are exposed to college-level course material while in high school. There are currently more than 30 AP courses. At the end of the school year, students in AP courses have the opportunity to take the associated AP exam. The exams are scored on a scale of 1 to 5. Many colleges and universities grant college credit, depending on the score. Each college has discretion for awarding credit based on AP exam performance, but generally a student must earn at least a 3 to receive college-level credit. Table 22 provides the number of students who took an AP course in 2015, the number of exams taken, the average exam score, and the percentage of exams scored 3 or higher. There are more exams taken than students taking AP courses because individual students may take more than one AP course in a given year. The College Board provides detailed reports for each state, available [here](#).

**Table 22. AP participation and exam performance, 2015**

State	Number of Students Taking AP Course	Total Number of Exams Taken	Average Exam Score (1 to 5 Scale)	Percent of Exams Scored 3 or Higher
United States	2,416,329	4,343,547	2.82	57
Kentucky	35,069	56,684	2.60	50
Tennessee	31,110	52,709	2.85	59
Virginia	77,939	155,426	2.94	61
West Virginia	7,812	12,745	2.39	42

Source: *College Board State Summary Reports*. Retrieved July 12, 2016, from <https://research.collegeboard.org/programs/ap/data/participatioN/Ap-2015>.

### C. Meeting College Readiness Benchmarks

The two primary college readiness assessments in the United States are the ACT® and the SAT. Both tests have historically been taken by high school students planning on attending college. The test taken is largely a function of the state where a student attends high school. Recently, several states began providing all students the opportunity to take college readiness assessments. In 2015, 13 states had 100-percent participation of graduates in the ACT assessment: Alabama, Colorado, Illinois, Kentucky, Louisiana, Michigan, Mississippi, Montana, North Carolina, North Dakota, Tennessee, Utah, and Wyoming. Because not all students participate in the ACT® and/or SAT assessments, it is not appropriate to make comparisons between states. When larger percentages of students in a state participate in the assessment, the average score is generally lower because students from all ability levels are tested. In states with lower participation rates, the students tested are often more likely to be higher achieving.

The ACT® consists of four subject area tests (English, Mathematics, Reading, and Science), which are often combined for a composite score. ACT® sets benchmarks for each subject-area test. The ACT® benchmarks are the scores associated with a 50-percent chance of earning a B or higher in corresponding first-year college courses. The ACT® benchmarks are 18 in English, 22 in both Mathematics and Reading, and 23 in Science.

The SAT consists of three subject area tests (Critical Reading, Mathematics, and Writing). The College Board sets a benchmark for the SAT composite score associated with a 65-percent probability of obtaining a first-year GPA of a B-minus or higher. The SAT college readiness benchmark is a 1550 composite score. The College Board produces detailed program results for each state. The state reports provide additional details and breakdowns by student subgroup. See more at <https://www.collegeboard.org/release/2015-program-results>.

**Table 23. ACT® and SAT participation and mean scores, 2015**

State	Percent of Graduates Taking ACT® <sup>a</sup>	Average ACT® Composite Score (Benchmark 21.25) <sup>a</sup>	Percent of Graduates Taking SAT <sup>b</sup>	Average SAT Composite Score (Benchmark 1550) <sup>b</sup>
United States	51 to 60	21.0	N/A	1,490
Kentucky	91 to 100	20.0	0 to 10	1,749
Tennessee	91 to 100	19.8	0 to 10	1,723
Virginia	21 to 30	23.1	71 to 80	1,533
West Virginia	61 to 70	20.8	11 to 20	1,501

Source: <sup>a</sup> *The Condition of College and Career Readiness 2015*. Retrieved July 2, 2016, from <http://www.act.org/content/act/en/research/condition-of-college-and-career-readiness-report-2015.html?page=0&chapter=9>.  
<sup>b</sup> *The College Board Program Results, SAT State Profile Reports*. Retrieved July 15, 2016, from <https://www.collegeboard.org/release/2015-program-results>.

**Table 24. Percentage of ACT® and SAT test takers meeting college readiness benchmarks, 2015**

State	Seniors Taking ACT® <sup>a</sup>	Met ACT® College Readiness Benchmark				Seniors Taking SAT <sup>b</sup>	Met SAT College Readiness Benchmark <sup>b</sup>
		English <sup>a</sup>	Reading <sup>a</sup>	Mathematics <sup>a</sup>	Science <sup>a</sup>		
United States	59	64	46	42	38	N/A	42
Kentucky	100	60	39	32	32	4	76
Tennessee	100	58	38	30	29	7	72
Virginia	30	77	61	58	53	72	47
West Virginia	66	69	48	34	34	15	42

Source: <sup>a</sup> *The Condition of College and Career Readiness 2015*. Retrieved July 2, 2016, from <http://www.act.org/content/act/en/research/condition-of-college-and-career-readiness-report-2015.html?page=0&chapter=9>.  
<sup>b</sup> *The College Board Program Results, State Reports*. Retrieved July 15, 2016, from <https://www.collegeboard.org/release/2015-program-results>.

## D. Public High School Graduation Rates

The adjusted cohort graduation rate (known as ACGR) measures the percentage of public school students who attain a regular high school diploma within 4 years of starting 9th grade for the first time.

**Table 25. Adjusted cohort graduation rate for public high school students overall and by race/ethnicity, 2013/14**

State	All	White	Black	Hispanic	Asian/Pacific Islander	American Indian/Alaska Native
United States	82	87	73	76	89	70
Kentucky	88	89	79	84	89	84
Tennessee	87	91	79	81	93	81
Virginia	85	89	79	76	91	—
West Virginia	85	85	79	89	95	59

— Not available.

Source: *2015 Digest of Education Statistics*, table 219.46. Retrieved July 5, 2016, from [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_219.46.asp?current=yes](https://nces.ed.gov/programs/digest/d15/tables/dt15_219.46.asp?current=yes).

## E. College Completion Rates

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One way that secondary schools measure their performance is by the transition of high school graduates into postsecondary education or the labor force. One source of longitudinal data on postsecondary enrollment and completion is the National Student Clearinghouse (NSC). Following are data from a new report that shows 6-year outcomes for students aged 20 or younger at time of first entry. A detailed report and data tables are available for download from NSC (see <https://nscresearchcenter.org/signaturereport10-statesupplement/>).

Table 26 shows 6-year completion rates for students aged 20 or younger who were first-time degree-seeking students who started their postsecondary studies in fall 2009. The states refer to the state where a student entered an institution of higher education, not the state where a student graduated from high school.

**Table 26. Overall 6-year completion rates for students aged 20 or younger who were first-time, degree-seeking students in postsecondary institutions in fall 2009, by institution type**

State	4-Year Public	4-Year Private Nonprofit	2-Year Public
United States	64.97	76.02	40.72
Kentucky	59.10	65.79	40.64
Tennessee	59.34	72.35	40.37
Virginia	78.38	70.01	48.51
West Virginia	58.23	N/A	N/A

Source: Shapiro, D., Dundar, A., Wakhungu, P., Yuan, X., and Harrell, A. (2015, February). *Completing College: A State-Level View of Student Attainment Rates* (Signature Report No. 8a). Herndon, VA: National Student Clearinghouse Research Center.

**Appendix B. Needs and Recommendations  
From Committee Members**

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# Individual Needs Assessment

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**Name:** Bob Alvey

**Affiliation:** National School Board Association, School Board member, business

## ***Priority Need 1. Preparing students to be college and career ready***

**Justification:** Students do not have the skills to communicate, problem solve, and function in the career opportunities that exist today. Schools need to give students these skills to allow them to successfully compete in the job market.

**Recommended Strategy for Technical Assistance:** Utilize teachers from these careers to ensure that training is relevant and dialed in to the needs of industry. Work with local colleges and technology centers to allow AP or dual credit classes where students can accelerate their advanced training for these careers. The use of technology to analyze data and problem solve is also a critical part of the skills that these students need to fit into the workforce demands.

## ***Priority Need 2. Supporting the lowest performing schools and closing achievement gaps***

**Justification:** Students in these schools often experience teacher turnover, as well as many good teachers are not attracted to these needs because of how difficult it is. They are expected to invest more time and energy with no incentive to do this.

**Recommended Strategy for Technical Assistance:** Provide incentives to draw the best teachers to these settings. These could include higher pay, smaller class sizes, parental requirements, etc. to help these teachers meet these needs. Districts need the development capability to help develop teachers with the skills to thrive in these situations, and provide ongoing training to help continue to develop them with the skills to engage parents and students.

## ***Priority Need 3. Developing and ensuring equitable distribution of highly effective teachers and leaders***

**Justification:** Teachers are retiring at a high rate early in their career, new teachers stay in the teaching career less than 5 years, and the numbers of teachers entering the profession are in decline nationally.

**Recommended Strategy for Technical Assistance:** Teacher prep programs need help in preparing new teachers for the profession, and how to deal with students in poverty and low performing situations. Superintendents and Principals need to be trained on how to attract teachers and put teachers in positions of success. This would include how to mine teacher effectiveness and student learning capabilities.

# Individual Needs Assessment

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**Name:** Tate Gould

**Affiliation:** AnLar (Research, Policy Analysis, Technical Assistance)

## **Priority Need 1. Preparing students to be college and career ready**

**Justification:** In the Appalachian region, regardless of the state where survey participants were located, the most commonly reported first priority need was an improvement in the college and career readiness of students. Respondents stressed the impact that a student's level of college and career readiness has in multiple areas. Better preparation for life after secondary school is instrumental in allowing students to discover the skills and passions that will drive them in the future, increasing the ability to obtain and maintain a job, and ensuring students move on to function as productive contributors to society as a whole.

**Recommended Strategy for Technical Assistance:** Participants from various backgrounds including classrooms, community, and businesses stressed the importance of college and career readiness, but their responses are indicative of the many different variables that influence the readiness of students to enter higher education or the workforce.

Funding to implement and maintain technology and equipment access for all students was mentioned by multiple respondents from various backgrounds as a driver that could increase students' college and career readiness in the region. Respondents suggested the Comprehensive Assistance Centers take the following specific steps:

1. The Center could develop and have schools and/or districts complete a developed needs assessment template, providing a structure for schools/districts to articulate their needs to receive targeted technical assistance from the Comp Centers. Often, less-financed schools or rural districts don't know the issues. This needs assessment will provide an interview template that can help them identify their issues so it can be clearly communicated and passed on to the Comp Center for targeted assistance.
2. The Center could create a comprehensive plan to educate legislators on importance of restoring funding to underfunded programs and equitable funding across districts so rural and poorer areas have the resources to maintain student access to technology. Developing a reliable plan for maintenance/continued funding is particularly important to ensure that these schools and districts are able to keep up with future changes in technology, keeping their students up to date and ready for their futures.
3. The Center could research avenues for funding to be provided to the Health Sciences and Technology Academy HSTA program to prepare and graduate African American and undergraduate students for college and stem careers.

## **Priority Need 2. Developing and ensuring equitable distribution of highly effective teachers and leaders**

**Justification:** Many respondents identified school and district struggles to attract and maintain highly effective teachers as an issue of particular concern, particularly in rural areas of the region where teaching vacancies abound and high teacher turnover is the current norm. Respondents from the Appalachia region, most were teachers, indicated a high level of concern over this issue and its wide-ranging effects – which they identified as everything from lack of college and career readiness for students; lack of continuity in the classroom resulting in an endless cycle of substitute or short-term educators for students; and difficulties for teachers who do continue to teach in high need areas due to inadequate pay, lack of support, and the feeling that they’ve been set up to fail.

**Recommended Strategy for Technical Assistance:** Though there was a significant range of suggestions recommended to the Comprehensive Assistance Centers, some of the most commonly suggested strategies and steps are listed below:

1. The Comprehensive Center could be an asset to assisting schools and districts in developing plans to offer more incentives to teachers, encouraging them to come and stay in rural and/or high needs schools. Teachers should not simply be offered incentives at the beginning of their work in lower performing schools, but high performing teachers should also be continually incentivized to stay in their positions over time. Comp Centers could provide a TA expert to help identify areas for incentive pay within existing budgets, offering advice on how various funding sources could be used for incentives. Often, schools and districts may not realize that some sources of funding are allowed to be used for incentive pay. The Comp Center expert deployed to the school or district can provide that direct communication.
2. Higher pay for teachers working in lower performing schools and districts was mentioned repeatedly by respondents as a way to ensure more equitable distribution of highly effective teachers. However, respondents struggled to define realistic mechanisms for the sources for these funds and/or sustaining additional funding required to significantly increase teacher salaries. The Comprehensive Center could support the identification of potential sources of increased school/district funding for teachers, or in assisting schools/districts in identifying ways to adjust their current budgets to allow more funding to go toward teacher salaries. Similar to the first suggestion identified by respondents, the Comp Centers can deploy a TA expert to help identify how existing budgets for teacher salaries are sources, and what funds could be used.

## **Priority Need 3. Supporting the lowest performing schools and closing achievement gaps**

**Justification:** The Appalachian region has a significant variation in the types of areas for its schools, from large urban centers to small towns and rural regions. These differences in our region also reflect the significant variation that exist in the resources allocated to different schools and districts, especially in schools that serve low socioeconomic areas. Many respondents indicated that a sustainable model to ensure equitable education (not strictly defined by equal funding) is key to support the lowest performing schools, thereby closing achievement gaps.

**Recommended Strategy for Technical Assistance:** Respondents suggested multiple strategies to address the issue of supporting low performing school. First, the Comprehensive Center could assist states in developing a plan for continued communication among local school districts that develops a community of practice, rather than a competitive or isolated grouping of school district. The Comprehensive Center

could research what has been accomplished in states and regions that have successfully supported lower performing schools and improved performance to identify ways that local school districts could best support one another (medium of communication such as webinars, how often it should occur, incentives that could be offered to encourage higher performing schools to participate, etc.). Similarly, respondents suggested that opportunities for face-to-face regional collaboration supported through state-funded conferences as another way for higher performing schools to share best practices with lower performing schools. Lastly, respondents suggested that assistance from the Comp Centers in implementing the Every Students Succeeds Act (ESSA) would be helpful to districts and states for developing plans supporting their lower performing schools. The Center could survey school and district staff to determine where they have faced issues implementing the act, and develop a focus group comprised of a select group of these respondents to ensure that states and districts get the clarity and assistance they need.

# Individual Needs Assessment

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**Name:** Gary Higginbotham

**Affiliation:** School Principal and State Board of Education, West Virginia

## **Priority Need 1. Support for low-performing schools**

**Justification:** Living in an area that is considered to be over 65% low income, survey results indicated that both teachers and parents feel that more federal support is needed to equalize the opportunities for our students. When compared to the educational opportunities give to students in more affluent areas, our parents and teachers feel quite strongly that more resources need to be given to the lower economic areas. Without the extra support, whether it be monetarily or resource assistance, they feel that our students are behind other areas when they go to compete in the job market or for higher education opportunities.

**Recommended Strategy for Technical Assistance:** Comp Centers need to disseminate professional development resources and guides to SEAs as they work with teachers on overcoming the lack of physical resources and do more with less. Schools could then provide face to face professional development or webinars, giving teachers ideas on how to overcome the systems deficiencies. Teachers for the most part do the best that they can with the resources available, but they need more training as to how they can expand the resources that they have.

## **Priority Need 2. Preparing student to be college and career ready**

**Justification:** Living in a rural area, one that is also a high poverty zone, not all students are college bound. It is important that we prepare our non-college bound students for vocational careers. One of the best ways to do this is through vocational and agricultural programs. Without career options, many of our students will follow along the same path in which they were raised.

The college-bound students must be challenged and provided with the opportunities and resources to overcome their backgrounds.

**Recommended Strategy for Technical Assistance:** Students need to be given information about the resources available to them outside of their area, region, or state. Comp Centers can identify resources and dissemination information to SEAs to share on the resources available to students, not only for colleges, but also for career and technical schools.

Students who are college bound need to be shown how to access the resources they will need to be accepted and afford their college choices. Financing a college education is a fundamental concern of our students and parents. Comp Centers could work to disseminate information on planning for college, making college affordable, and other practice guides developed through the content centers, RELs, and other federally funded sources.

On the other end of the spectrum, students not going to further their education on the college level need to be provided with a career and vocational track during their high school years to assist them in being successful once they graduate. Centers can help states with developing partnerships between K-12 schools and local colleges, universities, and technology centers on creating career pathways.

Programs also need to be put into place to assist the high school drop outs, to extend to them the opportunities to take the GED or provide some kind of job assistance. Centers can identify resources states can use to design GED completion and job assistance programs for high school dropouts.

### ***Priority Need 3. Improving assessment and accountability systems***

**Justification:** In the past several years in West Virginia, we have moved from the WESTEST to the Smarter Balanced Program. Parents in particular have expressed complaints that the system continually changes and that the current system does not work. Many have no clue as to what is being tested and that the results are difficult to understand and decipher. Many complain that it is unfair to compare a student from rural West Virginia with another student from a high income, suburban area. Parents are concerned that a student's entire school year is judged on 3–4 days of testing.

**Recommended Strategy for Technical Assistance:** An evaluation of the entire testing procedure needs to be re-evaluated. Comprehensive Centers can provide access to research on testing procedures and impact of high stakes testing on student achievement and development. The center can outline potential options for testing and accountability systems, with balanced assessment of pros and cons of each.

### ***Priority Need 4. Develop strategies to promote personalized learning***

**Justification:** In a rural environment, students all learn in in different ways and at different levels, so it is important that within our school we provide differentiation and personalized learning. For example, we identify students below grade level and develop an individualized learning environment, such as tiering or tutoring for students.

**Recommended Strategy for Technical Assistance:** Provide access to resources and best practices related to personalized learning that SEAS can use to develop a professional development series for teachers around personalized learning.

# Individual Needs Assessment

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**Name:** Beverly Kingery

**Affiliation:** West Virginia State Board of Education

## **Priority Need 1. Preparing students to be college and career ready**

**Justification:** In West Virginia, the overarching priority need was college and career readiness. Citizens and educators have heard these words; however, they struggle with a definitive explanation of what this means and evidence of such in WV schools. It is widely recognized within the state that students are held, and must be held, to a higher standard than in previous years to be successful productive members of society after high school graduation. Jobs available in WV and elsewhere after graduation from high school, technical training, or higher education require more skills and personal collaboration than in previous decades. Therefore, school systems are struggling and seeking information to identify the necessary benchmarks during the Pre-K–12 years that solidify that preparation.

**Recommended Strategy for Technical Assistance:** The Appalachia comprehensive center technical assistance center is positioned to provide effective and efficient guidance with understanding and implementing college and career readiness. It is technical assistance and the sharing of information and ideas that will be beneficial to WV as they identify successful tenets of a college and career ready student.

The comprehensive center could assist by facilitating a state stakeholder committee to serve three major functions.

1. Identifying the research based components of a viable and effective college and career ready state, regional, and local environment.
2. Facilitate a focus group discussion with public education and higher education to identify perceptions of college and career readiness in order to align a seamless Pre-K–12 to higher education student experience.
3. Assist in identifying to state leaders (public education, higher education, business/community leaders, legislatures) the three to five nonnegotiable benchmarks to emphasize at each of the following grade configurations to ensure a WV graduate is college and career ready.
  - ▶ Birth–grade K
  - ▶ Grade 1–4
  - ▶ Grade 6–8
  - ▶ Grade 9–12

## **Priority Need 2. Developing and ensuring equitable distribution of highly effective teachers and leaders**

**Justification:** West Virginia the past 2 years has had approximately 600 teaching vacancies. When considering the population of the state, that is an extremely high significant number. This translates to thousands of students receiving an education from an army of substitute teachers that in many

instances are not certified in the area of assignment. WV high school math scores accentuate this crisis. Although increasing, high school student achievement in math is 30%. A direct corollary to this percentage is a substantial number of uncertified math teachers in high school math classrooms. The teaching vacancies in years past were generally in select areas at the high school level (e.g., math, science); however, those vacancies now exist in all programmatic areas.

The issue of equitable distribution with highly effective educators is worsening. An additional concern is that many highly qualified and effective teachers opt to work in more affluent and high performing schools. It is no surprise that a wide array of West Virginian's felt this to be a concern as the quality of education in a classroom affects their children and grandchildren. WV House Bill 4301 attempts to begin to address this issue but it will not be without opposition as it would move from generally a linear personnel system to a merit and reward type system.

**Recommended Strategy for Technical Assistance:** The comprehensive center would be of great assistance in analyzing House Bill 4301 and offering suggestions based on that bill as well as obstacles and successes other states have experienced in the area of equitable distribution and effective educators. For example, a report of obstacles experienced and specific actionable steps other states overcame in report form would be most useful for the West Virginia Board of Education (WVBE) High Teacher Educator Committee and West Virginia Legislature. The legislature will ultimately determine legislation that can begin to resolve this issue impeding student achievement.

The comprehensive center could facilitate a focus group and forum sponsored with the WVBE High Teacher Educator Committee to discuss barriers and solutions. Such topics may include, but not be limited to, career ladders, incentives for educator service in underserved areas, and effective leadership development programs.

### **Priority Need 3. Supporting the lowest performing schools and closing achievement gaps**

**Justification:** West Virginia has labored 5 years in developing a comprehensive accountability system—standards, assessment, accountability. The critical and absent element has been continuous school improvement. Once the accountability system is fully operational as it will be by November 2016 the focus must shift to continuous school improvement. It is the belief if low performing schools with achievement gaps knew how to improve, they would be doing so. Therefore, continuous school improvement is the next essential step to be identified and implemented in the accountability system.

The state has witnessed previous school improvement efforts that have been widely successful, moderately successful, or not successful. There has been little effort in sharing strategies to replicate successful models and/or studying other national successful models. The comprehensive center would be a valuable asset in this crucial area of improving student achievement.

**Recommended Strategy for Technical Assistance:** The comprehensive center would be an asset in identifying national and state models of school improvement with like demographics to various school enrollment and poverty structures as those in WV and perhaps make contacts for WV with those school systems and schools (e.g., phone, facetime, skype, visitation). Technical assistance and guidance would also be useful in “customizing” school improvement as in the past a one size fits all approach has generally been utilized in WV and been difficult to replicate in many schools due to varying school factors (e.g., enrollment, poverty, financing, facility, certified teachers).

Identification of successful intervention models to close the achievement gap that have shown long term effects would accentuate school improvement. The comprehensive center could provide the WVBE School Improvement Committee research based models at various programmatic levels that have been most effective “*across*” school variables and models that have proven most successful with “*specific*” school variables. This information might best be presented to the committee in a face to face setting as webinars or conference calls are at times difficult to follow.

# Individual Needs Assessment

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**Name:** Sonia Michael

**Affiliation:** Early Childhood Education Specialist at Berea Early Childhood Regional Training Center

## ***Priority Need 1. SEA and LEA staff need professional learning experiences and ongoing support focused on implementing student-focused instruction***

**Justification:** In the Appalachian region, preparing students to be college and career ready was identified as the top priority, followed by supporting the lowest performing schools and ensuring equity. High quality professional learning opportunities that support the implementation of hands-on, student focused instruction will benefit schools and districts in addressing the stated priorities. Several respondents from local education agencies identified providing hands-on learning opportunities and individualized instruction as an important component of student focused instruction. One school administrator described a need for individualized instruction across all grade levels. Additionally, a school board member from another district identified experience based learning opportunities as an important instructional component that might be used to enhance student engagement and learning.

**Recommended Strategy for Technical Assistance:** State and local education agencies would benefit from professional learning opportunities specifically targeting individualized and experiential teaching techniques. One component of individualized instruction would be the ability to identify student needs through assessment processes, thus professional learning would also need to target the use of assessment information in planning instruction. The Comprehensive Centers could assist with these professional learning opportunities by vetting sources of professional learning in the targeted areas, and providing a data base of these sources to state and local education agencies.

## ***Priority Need 2. Educators need access to information that will assist with implementation of family engagement strategies***

**Justification:** Two of the three highest ranked priority needs in the Appalachian region were closing the achievement gap and ensuring equity. In order to ensure all students have access to appropriate learning opportunities, educators must be able to support family engagement in their student's learning. An often cited need throughout respondents was family involvement in their child's education. Survey respondents also described the need for improved family/school partnerships and family training related to supporting education and learning.

**Recommended Strategy for Technical Assistance:** State and local education agencies would benefit from access to a compendium of effective family engagement strategies. The Comprehensive Centers could conduct research related to family identified needs associated with family/school partnerships. Condensing and publishing this type of information would assist educators in better understanding barriers to family involvement. An additional support in this area would be research syntheses of family engagement strategies from recently published reports.

### **Priority Need 3. SEA and LEA staff need support in improving access to early childhood education**

**Justification:** The three highest ranked priority needs in the Appalachian region were college and career readiness, ensuring equity, and closing the achievement gap. A very close fourth ranked priority was access to early childhood education. Many respondents identified access to early education as an important component of school success. For example, one school board member stated that early childhood education is necessary to school readiness and academic success. The importance of providing early access to high quality education was voiced multiple times across respondents.

**Recommended Strategy for Technical Assistance:** State and local agencies need innovative ideas for improving access to early education. The Comprehensive Centers could identify and compile a list of effective practices from across the country. Once effective practices have been identified, methods for implementing such practices could be shared with state education agencies in order to improve their ability to provide access.



