Diversifying the Teaching Profession:
How to Recruit and Retain Teachers of Color

Desiree Carver-Thomas

Diversifying the Teaching Profession:

How to Recruit and Retain Teachers of Color

Desiree Carver-Thomas

Acknowledgments

Table of Contents

Figures

Executive Summary

As more states and districts look to diversify their teacher workforces, it is important that, in order to develop holistic, evidence-based strategies for recruiting and retaining more teachers of color, decision makers carefully consider why it is that the teacher workforce is not currently as diverse as it could be. This report draws on recent nationally representative data as well as a body of research on recruiting and retaining teachers of color to summarize the primary barriers to recruitment and retention of teachers of color all along the teacher pipeline. Fortunately, there are a host of initiatives across the country aimed at addressing those very barriers.

It is no surprise that districts and states are eager to increase teacher diversity, given its significant benefits to students. Being taught by teachers of color offers benefits to all students, and especially to students of color, in the following ways:

- Teachers of color are a resource for students in hard-to-staff schools. Many teachers of color report feeling called to teach in low-income communities of color where positions are often difficult to fill. Indeed, three in four teachers of color work in the quartile of schools serving the most students of color nationally.
- Studies have found that teachers of color boost the academic performance of students of color. Scholars cite improved reading and math test scores, improved graduation rates, and increases in aspirations to attend college.
- Students of color can experience social-emotional and nonacademic benefits from having teachers of color, such as fewer unexcused absences and lower likelihood of chronic absenteeism and suspension. Students of color and White students also report having positive perceptions of their teachers of color, including feeling cared for and academically challenged.
- Teacher diversity may also benefit teachers of color who experience feelings of isolation, frustration, and fatigue when there are few other teachers of color in their schools. Increasing teacher diversity may improve satisfaction for teachers of color and decrease turnover, a key contributor to teacher shortages and school instability.

Racial and Ethnic Diversity in the Teacher Workforce Today

Over the past 30 years, the percentage of teachers of color in the workforce has grown from 12% to 20%. Incoming teachers, as a whole, are even more diverse. A quarter of first-year teachers in 2015 were non-White, up from 10% in the late 1980s. However, the teacher workforce still does not reflect the growing diversity of the nation, where people of color represent about 40% of the population and 50% of students. And the share of Native American and Black teachers in the workforce is actually in decline, not growing like the populations of Latinx and Asian American teachers. Furthermore, teachers of color have higher turnover rates than White teachers. For that reason, policies designed to increase teacher diversity should include not only strategies for recruiting more teachers of color, but also for retaining them over the long term.

Barriers to Recruiting and Retaining Teachers of Color

Studies show that both teacher recruitment and retention policies must be designed to more effectively retain teachers of color if diversity in the teaching profession is to be sustained. While more teachers of color are being recruited than in years past, high turnover rates result from

inadequate preparation and mentoring; poor teaching conditions; and displacement from the high-need schools they teach in, where accountability strategies can include reconstituting staff or closing schools rather than investing in improvements. Increasing the number of teachers of color in the workforce requires intentional preparation and hiring, and providing ongoing support to overcome these barriers to recruitment and retention. Programs and initiatives across the country provide evidence that an intentional and sustained approach to recruiting and retaining teachers of color can be successful.

Promising Practices

1. Build high-retention, supportive pathways into teaching.
Research shows that improving teacher retention begins with high-quality teacher preparation: Candidates who receive comprehensive preparation are two to three times more likely to stay in teaching than those who receive little training. In many cases, however, teachers of color are more likely to begin teaching without having completed comprehensive preparation and entering instead through alternative routes that often skip student teaching and key coursework, while teachers strive to learn on the job. This is not surprising, given the cost of traditional teacher preparation programs (TPPs) and the debt burden faced by college students of color. State and local policymakers can encourage more students of color to pursue a teaching career—and to do so through a high-quality program—in several ways:

- States can support candidates of color by underwriting the cost of teacher preparation. **Service scholarship and loan forgiveness programs** cover or reimburse a portion of tuition costs in exchange for a commitment to teach in high-need schools or subject areas, typically for 3 to 5 years. These programs tend to be more effective when they underwrite a significant portion of educational costs.

- States can provide funding for **teacher residencies**, which are partnerships between districts and universities that subsidize and improve teachers' training to teach in high-need schools and in high-demand subject areas. Participants spend a year working as apprentices with highly effective mentor teachers, while completing related coursework at partnering universities. During this time, residents receive financial support, often in the form of a stipend and tuition assistance. They commit to teaching an additional 3 to 4 years in their district, with ongoing mentoring support.

- Districts can develop **Grow Your Own** programs that recruit teacher candidates from nontraditional populations (e.g., high school students, paraprofessionals, and after-school program staff) who are more likely to reflect local diversity and more likely to continue to teach in their communities. States can also support these programs through university-based partnerships and other financial and programmatic policies and support.

- States can also support candidates of color by funding intensive teacher preparation support programs that offer **ongoing mentorship**, tutoring, exam stipends, job placement services, and other supports that ensure their successful completion of preparation programs. States and districts can fund and offer similar programs to teachers of color in the field to support greater retention. States can adjust **teacher licensure requirements** to allow teaching candidates to demonstrate their competency through rigorous but more authentic performance assessments, such as the edTPA, that do not generate the racial

disparity in pass rates of traditional multiple-choice exams. Such a shift may encourage more students of color to enter and complete high-quality TPPs.

- States can design **data systems** that monitor the racial diversity of enrollees in TPPs, as well as those who complete the programs. This creates an incentive for TPPs to take innovative approaches to recruiting and supporting teacher candidates of color into high-quality programs—a crucial first step often missing in state pathway policies and practices.

2. Create proactive hiring and induction strategies.

Once a prospective teacher is trained and certified, district and school hiring practices can influence their decisions to enter the teaching force and whether to stay in their schools. States and districts can influence several hiring conditions associated with effectively recruiting and retaining teachers, including timing of hiring, information in the hiring process, and licensure and pension portability.

- Districts can **shift hiring timelines** earlier. Research suggests in-demand candidates of color may be more likely to be available for hire earlier in the year. Districts can offer incentives for veteran teachers to announce their resignation, retirement, and transfer intentions in early spring so that it is possible to recruit new hires earlier in the season.

- Districts can **partner with local TPPs** to coordinate student teaching placements and vet candidates for hire before they graduate. They can also focus on working with Minority-Serving Institutions (MSIs) or Historically Black Colleges and Universities (HBCUs), Hispanic-Serving Institutions (HSIs), Tribal Colleges and Universities (TCUs), and Asian American and Native American Pacific-Islander Serving Institutions (AANAPISIs), as well as traditional programs.

- Districts can **include teachers of color in the hiring process** in meaningful and collaborative ways, such as by creating diverse hiring committees in which teachers of color can shape recruitment and hiring strategies. This sends positive signals to recruits and can ensure greater fairness in the hiring process.

- Districts can offer **comprehensive induction** to support beginning teachers of color in their first years of teaching. Induction often includes being matched with a veteran mentor teacher and can also include seminars, classroom assistance, time to collaborate with other teachers, coaching and feedback from experienced teachers, and reduced workloads.

3. Improve school teaching conditions through improved school leadership.

Teaching conditions, and administrative support particularly, play a key role in teachers' decisions to stay in a school or in the profession. Recent evidence shows that administrative support is especially critical in improving the retention of teachers of color. School administrators are responsible for making hiring decisions, being instructional leaders, setting norms for students and staff, nurturing a positive and encouraging culture, keeping schoolwide systems running smoothly, and more. State and district policies can help school leaders develop the skills to do these things well and create school environments in which teachers want to stay.

- States can support improved principal preparation by strengthening **program accreditation and licensure standards** to ensure that principals have clinical experiences in schools with diverse students and staff and learn to create collaborative, supportive work environments for the teachers with whom they work.

- States can take advantage of **Title II's optional 3% leadership set-aside funds** to strengthen the quality of school leaders, including by investing in principal recruitment, preparation, induction, and development focused on supportive school leadership.

- States and districts can invest in evidence-based school improvement strategies to improve instructional quality and supports for students rather than closing schools. This will reduce displacement of teachers of color, who most often teach in struggling schools. Strategies can include schoolwide **professional development** and **community schools**, which focus on whole child development through community partnerships.

- Districts can **develop partnerships** with local universities and teachers of color to actively recruit talented teachers into administrator preparation, especially those who have demonstrated a commitment to working in hard-to-staff schools.

- Districts can provide **ongoing professional learning** opportunities for school leaders to develop the skills to support teachers effectively.

Together, these policies can help recruit, fully prepare, support, and retain teachers of color in ways that benefit all students.

Introduction

Recruiting and retaining a racially and ethnically diverse teacher workforce is crucial to ensuring that all young people have role models who reflect the nation's diversity and to meeting the needs of all students. However, faced with a national teacher shortage, schools across the country are struggling to hire a diverse workforce of qualified educators.[1] While current conditions in many states have contributed to widespread shortages of teachers of all types—such as mathematics, science, special education, and English language development teachers[2]—teachers of color encounter unique barriers to entering the profession and to continuing to teach for the long haul. Fortunately, a variety of programs, policies, and practices hold promise in helping to bolster the pipeline of teachers of color recruited and retained in teaching.

> A variety of programs, policies, and practices hold promise in helping to bolster the pipeline of teachers of color recruited and retained in teaching.

This research review analyzes studies on the recruitment and retention of teachers of color in order to examine the current state of teachers of color in the workforce; understand the factors that affect their recruitment, hiring, and retention; and highlight opportunities for policymakers to grow a stable workforce of teachers of color in their districts and states.

The first section of this paper, Racial and Ethnic Diversity in the Teacher Workforce Today, includes a description of the proportion and growth of teachers of color in the workforce based on several national data sources and an analysis of the most recent nationally representative datasets from the U.S. Department of Education Schools and Staffing Survey (SASS) 2011–12 and the SASS Teacher Follow-up Survey (TFS) 2013–14. This section also summarizes recent literature regarding the value to students of a racially diverse teacher workforce, followed by a discussion of the significant role teacher retention plays in shortages of teachers of color.

The second section of this paper, Barriers to Recruiting and Retaining Teachers of Color, summarizes the most recent literature on factors affecting the recruitment, hiring, and retention of teachers of color. Included within this discussion is enrollment in and completion of high-quality TPPs, school closure and turnaround policies, and teaching conditions.

Finally, the last section of this paper, Promising Practices, examines the evidence for promising practices aimed at overcoming the common barriers to recruiting, hiring, and retaining teachers of color identified in section two. These practices include funding high-retention pathways into teaching, such as teacher residencies, Grow Your Own programs, and college mentoring and support programs; creating proactive hiring and induction strategies; and improving school teaching conditions through improved school leadership.

Racial and Ethnic Diversity in the Teacher Workforce Today

We analyzed the most recent nationally representative datasets from the U.S. Department of Education—the SASS 2011–12, the SASS TFS 2013–14, and other national data sources—to understand the current state of teachers of color in the United States. At 20% of the teacher workforce in 2015–16, teachers of color comprise an increasing share of the U.S. teacher workforce.[3] They made up just 12% of the workforce 30 years ago.[4] Still, that share is disproportionately low compared to the percentage of students of color in public schools (50% in 2014)[5] and people of color in the nation (about 40% in 2016).[6] It is also too low to meet the demand from school districts and families.[7]

The gap between the percentage of Latinx teachers and students is larger than for any other racial or ethnic group. In 2014, more than 25% of students were Latinx, while Latinx teachers represented fewer than 9% of teachers in 2015 (see Figure 1)[8]—despite the fact that the shares of Latinx teachers and students are growing faster than those of any other racial or ethnic group. The population of Latinx students has increased 159% since 1987, and the share of Latinx teachers has increased 245% over the same period.[9]

While the population of teachers of color as a collective group is growing, Black and Native American teachers are a declining share of the teaching force (see Figure 1). Black teachers made up more than 8% of teachers in 1987 but made up 6.7% in 2015. Similarly, the share of Native American teachers declined from 1.1% in 1987 to 0.4% in 2015. Meanwhile, the percentage of Latinx teachers increased from 2.9% of teachers in 1987 to 8.8% in 2015. The share of Asian American teachers increased from 0.9% to 2.3% over the same period.

Figure 1
The Share of Teachers of Color in the Teacher Workforce
1987–2015
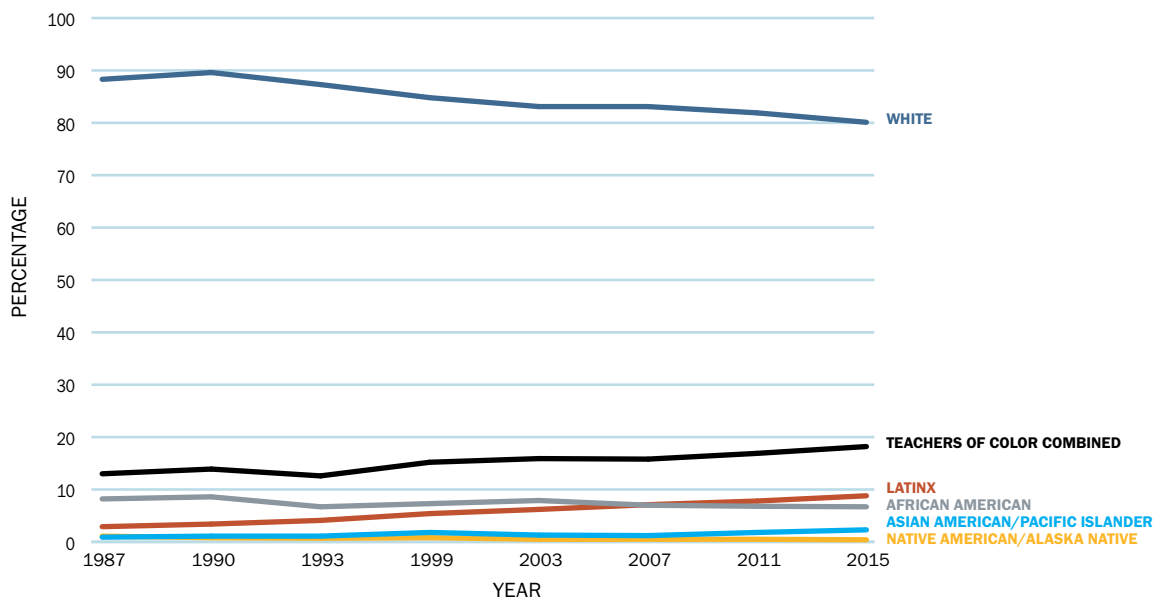
Note: Analysis by Learning Policy Institute. See the appendix for full source information.

Furthermore, the pool of potential Black and Latinx teaching candidates dwindles along the potential-teacher pipeline from high school graduation to college enrollment, teacher preparation, and employment in the teacher workforce (see Figure 2). For example, in 2007, Black and Latinx students made up over 38% of k–12 students but less than 28% of high school graduates and about 24% of high school graduates who went on to enroll in a 2- or 4-year college the next fall. Black and Latinx candidates made up just 19% of teacher preparation candidates, including baccalaureate and post-baccalaureate candidates, in fall 2008. Four years later, in 2012, Black and Latinx candidates comprised about 20% of bachelor's degree earners in 2012, but only 14% of bachelor's degrees in education.

Figure 2
The Pool of Potential Black and Latinx Teachers Dwindles Along the Teacher Pipeline
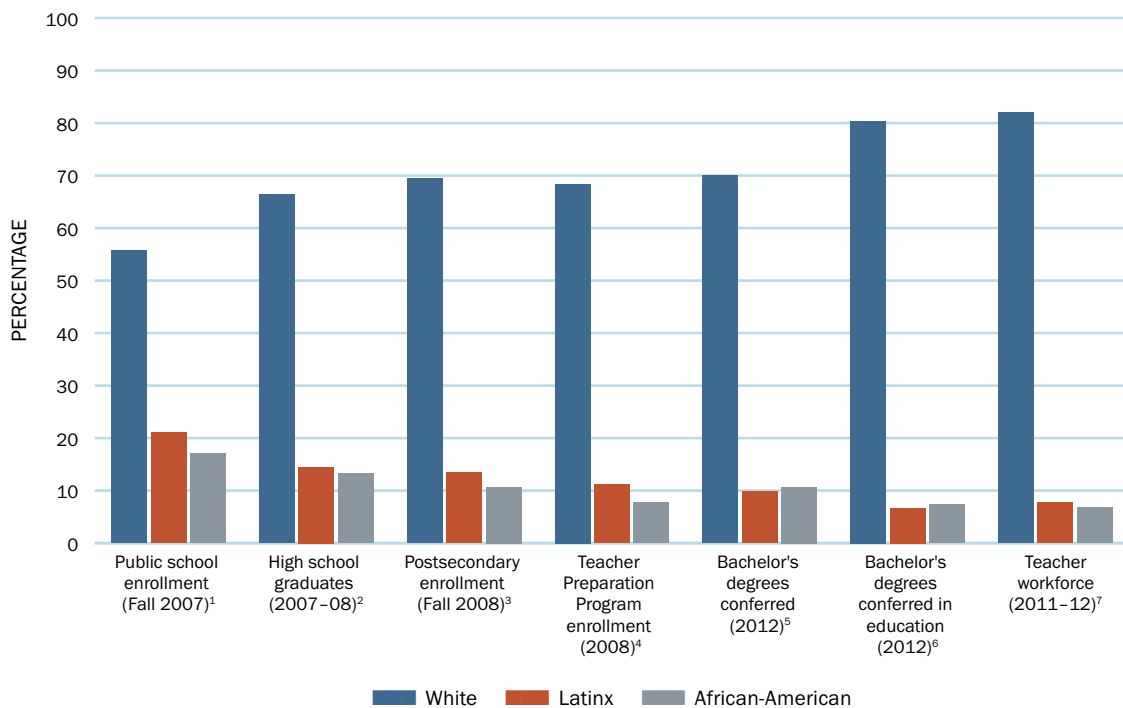
Note: Analysis by Learning Policy Institute. See the appendix for full source information.

Despite these facts, there is also promising news for teacher diversity. Evidence suggests that new teachers entering the field are increasingly teachers of color. White teachers made up 90% of first-year teachers in 1987 but 75% of first-year teachers in 2015–16.[10] Meanwhile, the percentage of first-year teachers identifying as Latinx increased from 4% to more than 11% over the same period. There has also been an increase in the proportion of Black first-year teachers during that time period—from 4% to 8%. The growing diversity of new teachers makes efforts to retain teachers of color all the more important as described in a later section, The Importance of Retention. Many of these newly recruited teachers currently do not remain in the profession.

Why Increase Teacher Diversity? The Positive Impacts on Students

While all teachers require intentional, culturally based preparation to reach an increasingly diverse student population,[11] greater diversity in the teaching profession can also have positive impacts on student educational experiences and outcomes. This is especially true for students of color, who demonstrate greater academic achievement and social and emotional development in classes with teachers of color. However, having teachers of color benefits White students as well.

Many teachers of color report feeling called to teach in low-income communities of color, positions that are often difficult to fill.[12] Thus, three in four teachers of color work in the quartile of schools serving the most students of color nationally. Teachers of color play an important role in filling gaps in these schools, and their retention decisions have significant impacts on students of color.[13]

Some studies have found that teachers of color boost the academic performance of students of color. One reanalysis of test score data from the Tennessee STAR class size study found that Black elementary students with Black teachers had reading and math test scores 3 to 6 percentile points higher than students without Black teachers and that gains in test scores accumulated with each year students were in a class with a race-matched teacher.[14] Another recent reanalysis of the same data found that being taught by a teacher of color can also have significant long-term academic benefits. That study found that Black k–3 students assigned to a Black teacher in their first year of the STAR program were 15% less likely to drop out of high school and 10% more likely to take a college entrance exam.[15]

Longitudinal data from North Carolina showed similar long-term benefits. Black students who were assigned to a class with a Black teacher at least once in 3rd, 4th, or 5th grade were less likely to drop out of high school and more likely to aspire to go to college.[16] Having at least one Black teacher in grades 3 to 5 cut the high school dropout rate in half for Black boys. Black boys from low-income families who had at least one Black teacher in grades 3 to 5 were 39% less likely to drop out of high school than those who had never had a Black teacher. For Black students identified as "persistently low-income," who received free or reduced-price lunch every year of grades 3 through 8, having a Black teacher increased their intentions of going to college by 19%, and by 29% for Black boys specifically.

In other words, the benefit of having a Black teacher for just 1 year in elementary school can persist over several years, especially for Black students from low-income families. However, less than half of the Black students in the sample population in this study were taught by a Black teacher in grades 3 to 5. Notably, Black teachers tended to have similar effects on non-Black students, though these effects were smaller and not statistically significant.

> The benefit of having a Black teacher for just 1 year in elementary school can persist over several years, especially for Black students from low-income families.
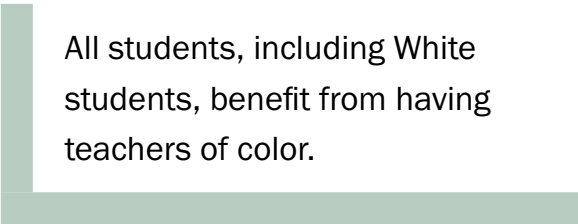
Other studies of North Carolina student standardized test performance have also found positive, though smaller, effects of racial matching on student test scores.[17] Scholars have found similar patterns in higher education. For example, underrepresented community college students of color (Black, Latinx, Native American, and Pacific Islander students) fared better when taught by

underrepresented faculty of color.[18] They were more likely to pass a class and earn a B or higher than underrepresented students of color in classes taught by White faculty.

In addition to academic benefits, students of color can experience social and emotional benefits from having teachers of color. A study using longitudinal data on North Carolina k–5 students and teachers between 2006 and 2010, found that students with teachers of another race had more unexcused absences and an increased likelihood of being chronically absent than students with race-matched teachers.[19] In particular, boys of color taught by White teachers were even more likely to be chronically absent and to have ever been suspended, and they experienced more suspensions than did other students. More recently, a similar study of North Carolina elementary, middle, and high school students found that Black students with more Black teachers were less likely to experience exclusionary discipline; that is, suspension and expulsion.[20] Black students with more Black teachers were even less likely to experience exclusionary discipline for incidents that would require a subjective judgment, such as "willful defiance." Non-Black students also had lower likelihoods of discipline when taught by a Black teacher, though the effect was less extreme than for Black students.

Scholars suggest that there might be a variety of reasons for the positive educational experiences students of color often have when taught by teachers of color: Teachers of color have a role model effect, whereby students of color identify with seeing people of color in professional roles.[21] Teachers of color can also undermine stereotype threat (the phenomenon of underperforming because of feeling stereotyped as an underperformer),[22] and they typically have higher expectations for students of color than do White teachers.[23] Teachers of color often function as cultural translators and advocates for students of color[24] because they have multicultural awareness,[25] and they tend to provide superior quantity and quality of instructional support than White teachers to students of color.[26]

Studies also suggest that all students, including White students, benefit from having teachers of color because they bring distinctive knowledge, experiences, and role modeling to the student body as a whole. Another study using the MET database, analyzed the perceptions of students in grades 6 to 9 of Black, Latinx, and White teachers

> All students, including White students, benefit from having teachers of color.

along seven outcome measures, which included feeling cared for and academically challenged, among others.[27] In several models controlling for student, teacher, and school conditions, these researchers consistently found students expressed more favorable perceptions of Black and Latinx teachers than of White teachers. Latinx teachers were almost always rated higher than White teachers across all seven measures. Students rated Black teachers higher on three of seven measures, and Black students reported especially favorable attitudes toward Black teachers across all outcome measures. Asian American students also rated Black teachers higher on most of the outcome measures. In demonstrating the positive perceptions students have of teachers of color, these studies suggest that all students can benefit from a more diverse teacher workforce. Other research has found that overall ratings of teachers on this survey can predict student learning gains for those who responded to the survey as well as for other students in the class.[28]

Research on implicit bias has found that when individuals of diverse racial and ethnic backgrounds have childhood interactions with individuals of other racial backgrounds—including friends, caretakers, neighbors, and classmates, for example—they are less likely to hold implicit biases in adulthood than those who have had less interracial contact in childhood.[29] Businesses appreciate

the importance of hiring employees who can work well with others in a diverse and global society. In an amicus brief to the Supreme Court, several leading American companies, including Apple, Walmart, Shell Oil, and others, argued that employees educated in more diverse learning environments are "better able to work productively with business partners, employees, and clients in the United States and around the world; and they are likely to generate a more positive work environment by decreasing incidents of discrimination and stereotyping."[30] Being taught by a diverse teacher workforce can help all students develop dispositions that prepare them for civic life and the workforce.

Most of the literature explores the impact teachers of color have in directly affecting students, but there is also some evidence to suggest that increasing teacher diversity may also benefit teachers of color already in the field. In several qualitative studies, teachers of color expressed feelings of isolation, frustration, and fatigue when they were one of few teachers of color in their schools.[31] This finding suggests that increasing the diversity of the teaching force may also benefit students indirectly if it helps to improve teacher satisfaction and decrease teacher turnover, a key contributor to teacher shortages and school instability.[32]

The Important Role of Retention

When districts and states experience teacher shortages, some attempt to boost the teacher supply by increasing teacher recruitment and even lowering the bar to enter the field.[33] However, research shows that teacher retention is also crucial in reducing shortages of all teachers, including teachers of color. High turnover rates have offset successful recruitment of teachers of color in recent years and continue to contribute to unmet demand for teachers of color.[34] In addition to negatively impacting student achievement, high teacher turnover rates exacerbate teacher shortages because inexperienced and underprepared teachers—those with some of the highest turnover rates—are often hired in place of those who leave, resulting in a "revolving door" of teachers.[35] A key step to increasing the proportion of teachers of color in the workforce is addressing the factors that contribute to their decisions to move schools or leave teaching.

> High teacher turnover rates exacerbate teacher shortages because inexperienced and underprepared teachers—those with some of the highest turnover rates—are often hired in place of those who leave, resulting in a "revolving door" of teachers.

An estimated 90% of teacher demand is driven by teachers who leave the profession. Two thirds of that demand is caused by teachers who have left for reasons other than retirement.[36] Teacher shortages generally result from voluntary preretirement attrition (that is, teachers leaving the profession before retirement age).

Teachers of color move schools or leave the profession at a higher annual rate than do White teachers (19% versus 15%). While teachers of color and White teachers leave the workforce at similar rates over time, mover rates (transferring from one school to another) over time are much higher for teachers of color (see Figures 3 and 4). Although the overall teacher mover rate has

remained fairly steady at 8%, the mover rates for teachers of color have increased from 7% to 10% between 1992 and 2013, resulting in a widening gap between mover rates of teachers of color and White teachers. Teacher mover rates have serious impacts on students who are most affected. When a teacher leaves a school, it similarly impacts the school and students as if that teacher had left the profession altogether. Higher mover rates among teachers of color disproportionately impact students of color and students in poverty whom teachers of color most often serve.[37]

Figure 3
Teacher Leaver Rates
1988–89 to 2012–13
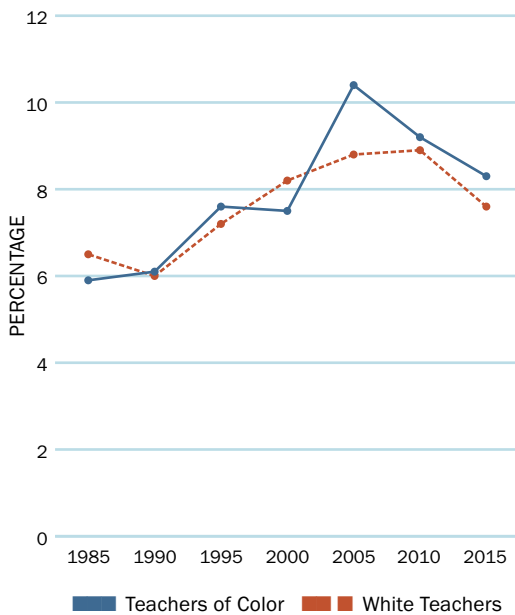
Source: Learning Policy Institute analysis of National Center for Education Statistics School and Staffing Survey, 2011–12, and Teacher Follow-up Survey, 2012–13

Figure 4
Teacher Mover Rates
1988–89 to 2012–13
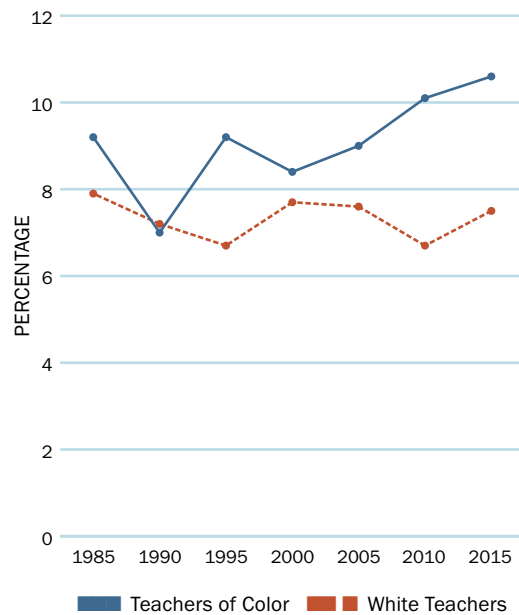
Source: Learning Policy Institute analysis of National Center for Education Statistics School and Staffing Survey, 2011–12, and Teacher Follow-up Survey, 2012–13

Teachers of color are also more likely to enter teaching through alternative pathways, increasing the likelihood that they will leave. In 2013, a quarter of all new teachers of color entered teaching through an alternative certification pathway. That is double the share of White teachers who entered through an alternative certification pathway. While the quality of alternative certification programs varies, research has shown that teachers with the least comprehensive teacher preparation are two to three times more likely to leave their teaching position or teaching altogether than the most prepared candidates, exacerbating shortages of teachers of color and contributing to school instability, often in the neediest schools.[38] Recent evidence also shows that alternatively certified teachers are 25% more likely to turn over than their traditionally certified counterparts, even after controlling for key student, teacher, and school characteristics.[39]

It is important to note that alternative certification programs differ considerably in terms of the comprehensiveness of preparation and rigor they provide. Teacher residencies, for example, offer full certification and extensive preservice preparation on par with high-quality traditional TPPs.[40]
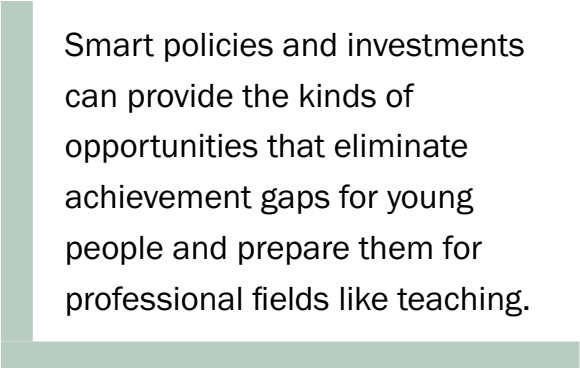
Teachers of color are also more likely to teach in schools that serve large numbers of students of color and that are often under-resourced with higher turnover rates for all teachers. While there is a statistically significant difference in the overall turnover rates between teachers of color and White teachers, this does not hold true across school types. When teachers of color and White teachers work in schools with the same proportion of students of color, their turnover rates are statistically indistinguishable.[41] However, as noted earlier, because teachers of color tend to work in schools with higher concentrations of students of color, they are more likely to teach in schools with higher turnover rates.

Teachers of color were more likely, compared to the average teacher, to report on the federal teacher follow-up survey in 2013 that certain factors were very or extremely important in their decision to leave teaching: concerns about compensation tied to student performance, lack of administrative support, lack of classroom autonomy and school influence, poor teaching conditions, and the desire to pursue another career or improve their opportunities in education.

Barriers to Recruiting and Retaining Teachers of Color

Barriers to recruiting teachers of color exist at each stage of the teacher pipeline, beginning at the k–12 level. According to data from the National Center for Education Statistics, reading and mathematics scores on the National Assessment of Educational Progress (NAEP) have increased for students across the board since the early 1990s, but Native American, Black, and Latinx students still score below their White and Asian American peers, and achievement gaps have grown.[42] In 2013, Native American, Alaska Native, and Pacific Islander students were the least likely of all student groups to have perfect attendance, and Native American and Alaska Native students had the highest rate of chronic absenteeism. In 2012, the percentage of Black boys and girls who had ever been suspended was more than twice the rates for boys and girls in other racial and ethnic groups. High school dropout rates have fallen since 2013, but dropout rates for Native American and Latinx students remain among the highest (12% and 13%, respectively). Dropout rates are especially high for Latinx and Pacific Islander students born outside the U.S. (22% and 13%). These disparities in access to educational opportunity and student outcomes might set the stage for a less diverse teacher candidate pool, but there are at least two reasons to believe that greater teacher diversity is possible.

First, it is clear that smart policies and investments can provide the kinds of opportunities that eliminate achievement gaps for young people and prepare them for professional fields like teaching. That was the case during the 1960s and 1970s, when President Lyndon B. Johnson's Great Society programs poured investments into health care, employment, and the social safety net in urban and rural communities. On top of those anti-poverty measures, federal education funding dedicated to desegregation efforts, teacher education, curriculum development and innovation, and better teacher salaries led to significant gains for students of color.[43] Between 1971 and 1988, the achievement gap between Black and White students in reading narrowed by half, and the achievement gap in math narrowed by a third. As those investments were diminished by the Reagan administration, however, so were the gains for students of color. This history offers a road map for improving outcomes for students of color once again, which would increase the pool of prospective teachers of color.

> Smart policies and investments can provide the kinds of opportunities that eliminate achievement gaps for young people and prepare them for professional fields like teaching.

Second, even after k-12 schooling, there are multiple junctures along the teacher pipeline, from enrollment in postsecondary education to veteran teaching status, in which policies and practices exclude teachers of color. If, at each of those junctures, federal, state, and local policies were to reduce or eliminate those barriers, the pool of teachers of color might grow. To that end, this section describes obstacles to college completion, the impact of student debt on teacher preparation enrollment and completion, how the quality of teacher preparation affects the retention of teachers of color, the impact school teaching conditions and improvement policies have on teacher retention, and the role of school closures.

Obstacles to Completing College

Unfortunately, completion rates are low among those students of color who enroll in college generally and education programs specifically. U.S. Department of Education data show that Black, Latinx, Pacific Islander, and Native American or Alaska Native college students are less likely than students overall to graduate within 6 years. Nationally, 40% of full-time students who began any bachelor's programs in 2008 at 4-year colleges graduated within 4 years, and 60% graduated within 6 years. However, fewer than 25% of Black or Native American or Alaska Native students graduated within 4 years, and just 41% graduated within 6 years. For Latinx students, 54% graduated within 6 years, and 50% of Pacific Islander students graduated within 6 years.[44] In addition, among students of color who completed their degrees, those studying to become teachers may switch their field of study. With mass teacher layoffs during the Great Recession, for example, college graduates might have switched majors or pursued employment outside of teaching.

Students of color attempting to complete bachelor's degrees face several challenges. Scholars have cited increased financial burdens as a key contributor to reduced college completion among students generally, claiming that this leads students to work more and take fewer classes.[45] In addition, students of color may be discouraged from completing their degrees due to factors such as being underprepared for college-level coursework caused by a lack of exposure in high school,[46] family responsibilities, transportation difficulties, dissatisfaction with little faculty diversity, and the difficulty of being in an environment that does not reflect or respect their culture or experience.[47] A study of Native American college student completion issues suggests colleges consider embedding Native cultures, family support, quality interactions with faculty, mentoring, and student engagement in academic life.[48]

> Students of color may be discouraged from completing their degrees due to factors such as being underprepared for college-level coursework caused by a lack of exposure in high school, family responsibilities, transportation difficulties, dissatisfaction with little faculty diversity, and the difficulty of being in an environment that does not reflect or respect their culture or experience.

However, low college completion rates for students of color are not inevitable. Some schools are successfully helping candidates of color to complete college and pursue education degrees. According to a survey of TPPs administered by the American Association of Colleges for Teacher Education (AACTE), in 2009–10, Minority-Serving Institutions (MSIs) produced a more diverse candidate pool than Predominantly White Institutions (PWIs).[49] Additionally, teachers of color who attended an MSI were more likely to graduate with a bachelor's degree from a school or department of education compared to teachers of color who attended a PWI.[50] It is possible that the structure of education programs and the supports provided at MSIs make teaching seem more attractive to college students of color and make completing college more manageable.

The Impact of Student Debt on Teacher Preparation Enrollment and Completion

Increasing the pool of teachers of color depends in part on increasing the number of college students enrolling in and completing teacher preparation. Currently, college students of color are less likely to enroll in TPPs than are White college students, despite an increase in overall college enrollment over the past two decades for students of color.[51]

The increasing debt burden of college may play a role in declining interest in pursuing education careers. The average student loan balance increased nearly 60% between 2005 and 2012 to about $25,000.[52] College students' potential debt burdens influence their decisions about what profession to enter, with the result that they are less likely to pursue education careers or take other low-paying jobs after graduation when they expect to incur more debt.[53] This is especially true for students of color. According

> Undergraduate and graduate Black, Latinx, and Asian American students were more likely than White students to report that student loans limited their choice of educational institution.

to a study of college loan debt, even expecting the same debt burden and postgraduation salary, undergraduate and graduate Black, Latinx, and Asian American students were more likely than White students to report that loans limited their choice of educational institution, and Latinx students were most likely to report feeling limited by loans.[54] Black students were more likely to report that they wished they had borrowed less to fund their postsecondary education, that they changed their career plans because of their loans, or that their loan payments were burdensome.

Student loan debt is much greater for Black students than for White students, and both the amount of debt and the gap between Black and White borrowers grows substantially over time. Based on an analysis of administrative loan data and Department of Education Baccalaureate and Beyond data, Black undergraduates graduate with about $7,400 more debt than White graduates, but have more than $25,000 more debt than White graduates 4 years after graduation.[55] The gap more than quadruples over 12 years, with Black graduates owing $43,000 more than White graduates.[56] This debt gap between Black and White college graduates is due to greater undergraduate borrowing, greater graduate school borrowing, and greater loan interest accumulation when interest accrues faster than loan payments are made. While Latinx college students tend to borrow about as much as White borrowers, their loan default rates are about twice as high, suggesting that even the same debt amount presents a greater relative burden. Rising tuition and the high cost of student loans can dissuade students of color from pursuing careers in education.[57]

Insufficient Teacher Preparation

High-quality teacher preparation is key to teacher retention. As noted earlier, teachers who enter the field with little preparation are two to three times more likely to leave their schools than those who had comprehensive preparation.[58] However, teachers of color are more likely to enter the profession through an alternative certification pathway than are White teachers, a trend that has increased over the past several years.

State data reported in compliance with Title II of the Higher Education Act show that enrollments in both traditional and alternative certification programs have been declining over the last decade, but candidates of color were 44% more likely to enroll in an alternative certification program in 2014–15 than in 2008–09. In 2014–15, more than one in five candidates of color enrolled in an alternative certification program, compared to about one in 10 White candidates.[59] As noted earlier, while variation exists in the quality of preservice preparation of alternative certification programs, on average, these teachers complete less coursework and student teaching, if any, and teachers entering through alternative pathways are more likely to leave their schools or leave the profession than teachers certified through traditional pathways.

For Black teachers, alternative certification has become increasingly common. Black teachers have about the same average age and teaching experience as other teachers, but Black teachers in their first year in 2012 were three-and-a-half times more likely to have no student teaching experience than all other first-year teachers (28.2% versus 7.9%), a discrepancy driven by disproportionate entry through alternative certification routes and emergency hiring. Nearly half of newly hired Black teachers were certified through an alternative pathway, compared to just 22% of all other first-year teachers.[60]

> Nearly half of newly hired Black teachers were certified through an alternative pathway, compared to just 22% of all other first-year teachers.

Teacher licensure exams

Among the many requirements teacher candidates must fulfill (including earning a bachelor's degree, student teaching, and completing teacher training), most states require that teacher candidates demonstrate subject-matter competence by passing standardized exams, the most common of which is the Praxis series of teacher licensure exams. About two thirds of states include satisfactory performance on the Praxis as a requirement for a teaching credential.[61] Several other states require a passing score on their own state-specific standardized exams, including the Oklahoma Subject Area Test (OSAT) and the Georgia Assessments for the Certification of Educators (GACE). The Praxis I exam is meant to assess high school-level mathematics, reading, and writing skills and can be used for entry into a TPP or for state teacher licensure.[62] Praxis II exams measure subject-specific content knowledge, general pedagogy, and content-specific pedagogy and are used to meet state licensure requirements.[63]

Black and Latinx teacher candidates disproportionately fail these standardized exams.[64] Historically, the disparities in failure rates have been large. For example, over 18% of Black teachers and administrators failed a Texas teacher exam that is now out of use, while just 1% of White test takers did.[65] A Georgia teacher certification exam resulted in failure rates four times higher for Black test takers, with just 40% passing. A 1985 report by the Educational Testing Service—maker of the National Teacher Examination (NTE), which later became Praxis—estimated that based on the lowest and highest passing scores in each state, between 31% and 70% of Black teacher candidates would be disqualified from teaching. Between 15% and 45% of Latinx candidates would be disqualified. In contrast, only 2% to 14% of White candidates would fall short of passing.[66] Later, an examination of 1998–99 Praxis scores in states across the country found that Latinx, Black, and Asian American test takers had lower average scores and lower pass rates than White test takers.[67] That analysis found a gap in pass rates as high as 38 percentage points.

It is important to note that the proliferation of teacher licensure exams with deeply disparate outcomes was not happenstance. Indeed, it was those disparate outcomes that prompted much of the initial uptake in the use of these tests. The number of test takers taking the most common modern teacher licensure exam, NTE, increased nearly sixfold between 1948 and 1962.[68] With 80% of 1963 test takers residing in the South, much of that increase was driven by new exam requirements in southern states, created in the wake of civil rights litigation, including the NAACP efforts to equalize salaries between Black and White teachers and school desegregation efforts related to the 1954 *Brown v. Board of Education* Supreme Court decision.[69] The NTE director of teacher testing at the time, Arthur Benson, went so far as to point out to southern school officials "that black and white teachers tended to score differently on the teacher examinations. He suggested that with the use of the exams 'the South [could] face its future with confidence.'"[70]

An analysis of teacher test design later indicated that cultural bias contributed to disparate test score outcomes.[71] Researchers found that when a version of the NTE general knowledge test replaced traditional questions with test items based on Black culture, Black women scored higher than White women. The reverse was true when questions were drawn exclusively from non-Black culture.

Critically, Title VII of the Civil Rights Act of 1964 forbids racial discrimination in hiring, as well as hiring and evaluation practices that disproportionately exclude racial minorities and other groups, unless the policies are directly job related. Teacher licensure exams have often resulted in far fewer teachers of color earning certifications, and, as described later in this section, there is limited evidence that a teacher candidate's performance on these exams is associated with their students' achievement.

> Studies have continued to find higher fail rates for prospective teachers of color but have not found that the exams accurately and consistently predict their effectiveness as teachers.

Even after the NTE test makers made several modifications to the exam, studies have continued to find higher fail rates for prospective teachers of color but have not found that the exams accurately and consistently predict their effectiveness as teachers.[72]

In addition, the cost of teacher licensure exams, which ranges from $100 to $300 each, can be particularly burdensome to low-income students. Some teacher candidates may have to pay to take several different subject-matter exams to earn their certification. These costs are amplified for teachers who do not pass their exams initially and must pay to retake them.[73]

Since 2014, many states have begun to incorporate performance assessment, such as Praxis Performance Assessment for Teachers and edTPA, into their licensure processes, either as standard requirements or as optional substitutions for traditional tests. These newer assessments typically require teaching candidates to develop portfolios of work that include unit plans, videos of their instruction, evaluation of student work, and written reflections that connect their teaching practice to theory. They are designed to more authentically evaluate candidates' readiness for teaching, and indeed, initial research finds that teacher candidates' scores on the performance assessment often predict their students' academic gains.

Research on beginning teacher performance assessments, such as the Performance Assessment for California Teachers (PACT), Connecticut's Beginning Teacher Educator Support and Training Program (BEST), and edTPA suggests that, like the National Board assessment, teacher candidates' scores on the performance assessment predict their students' gains on standardized tests.[74] These assessments also function as learning tools, and they have been found to develop teachers' skills and increase their effectiveness as they learn to demonstrate the ability to plan and implement curriculum, address a range of student needs, instruct effectively, and assess student learning to improve instruction.[75]
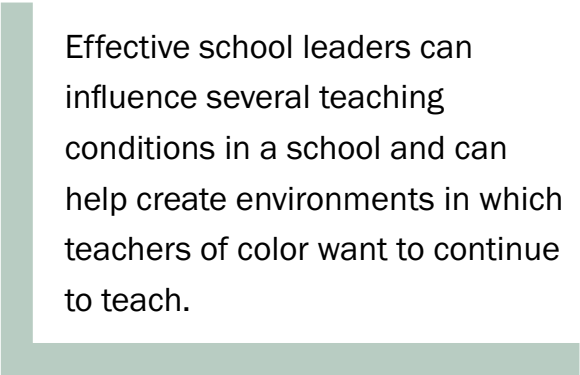
Furthermore, initial data suggest that performance assessments may reduce barriers to entry into the profession for teachers of color. A study of PACT in California found no disparities in pass rates between candidates of color and White candidates.[76] A study by edTPA found that while the average score for Black teachers was somewhat lower than for White teachers, the gaps were smaller than those found in more traditional teacher licensure exams.[77] A later study of the edTPA in Washington found no disparities in pass rates between Black and White candidates, but somewhat higher failure rates for Latinx candidates.[78] These results are significantly better than the outcomes of traditional multiple-choice teacher exams, and they are arguably more important because they deal with the actual ability of candidates to teach.

Federal regulation could incentivize greater use of performance assessments in lieu of traditional exams. Sections 204 and 205 of the Higher Education Act, which regulate accountability systems for TPPs, could be amended to explicitly allow states to use teacher performance assessments as part of their **reporting under Title II** and to dedicate grant funding to implement use of these assessments.

Challenging Teaching Conditions

Once teachers of color enter the classroom, the teaching conditions they encounter can discourage them from staying at the same school or even staying in the profession. This is important because three in four teachers of color work in the quartile of schools that serve the most students of color. Scholars have noted that schools that serve the most students of color often contend with a range of challenges, including accountability pressures and a lack of resources and support.[79] Teachers citing a lack of administrative support, in particular, were more than twice as likely to leave their school or teaching entirely.[80] For teachers of color, specifically, an analysis of 2011–13 nationally representative teacher survey data found that turnover was strongly associated with a lack of classroom autonomy and school influence.[81]

Effective school leaders can influence several teaching conditions in a school and can help create environments in which teachers of color want to continue to teach. Unfortunately, many school leadership training programs do not prepare principals to be effective in all the roles they must play. A 2005 study of school administrator training programs found that these programs were considered among the weakest U.S. education school programs.[82] Clinical training requirements, for example,

> Effective school leaders can influence several teaching conditions in a school and can help create environments in which teachers of color want to continue to teach.
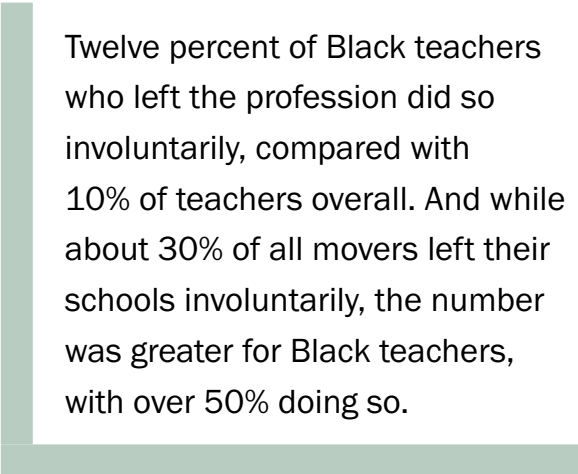
varied considerably between programs, with some requiring as few as 45 hours at a school site and others requiring as many as 300. Many prospective principals reported that their coursework failed to prepare them for the realities of leading a school.[83]

Studies also suggest that teachers of color experience unique adverse teaching conditions regardless of the quality of the schools in which they teach. In a qualitative study of Black teachers across the U.S., teachers reported facing racial discrimination and stereotyping in their schools. Many respondents said their colleagues lacked respect for their expertise as educators, and they were often pigeonholed as disciplinarians.[84] For some Black teachers, that might mean they were assigned disciplinary roles instead of other leadership roles they might be more interested in, such as roles recognizing their content expertise. Or they might be criticized by school leaders or colleagues if they do not embody the disciplinarian persona expected of them.[85] Teachers also reported that they felt obligated to take on additional responsibilities to support their Black students who might not otherwise receive the support they needed. While most Black educators described feeling called to the profession to improve schooling experiences for students of color, the added workload outside of teaching could contribute to increased turnover.

In a qualitative study of Latinx teachers, Latinx teachers reported being viewed as inferior to other teachers or only being beneficial for Latinx students.[86] They also reported receiving criticism from other teachers and school leaders when they embedded culturally relevant materials into their curricula or allowed or encouraged students to speak Spanish in the classroom. Many bilingual teachers discussed wanting to support their schools, students, and families by helping with translation but also described the added burden of being expected to do so.

School Closures

Even for teachers of color committed to continuing to teach in their schools, district and state policies can increase turnover rates. In 2012, in an era of school closings and layoffs in many cities, the rate of involuntary turnover was much higher for Black teachers than for all other teachers, constituting nearly a third of all turnover. Disproportionately high rates of involuntary turnover among Black teachers were the result of Black teachers involuntarily leaving the profession and moving schools. Twelve percent of Black teachers who left the profession did so involuntarily, compared with 10% of teachers overall.[87] And while about 30% of all movers left their schools involuntarily, the number was greater for Black teachers, with over 50% doing so.[88]

> Twelve percent of Black teachers who left the profession did so involuntarily, compared with 10% of teachers overall. And while about 30% of all movers left their schools involuntarily, the number was greater for Black teachers, with over 50% doing so.

Teacher layoffs during the recession and school closings in urban districts were largely due to both declining enrollments and sanctions for schools with low test scores under No Child Left Behind.[89] Decreases in the numbers of Black teachers have been proportionally much greater than decreases in the size of the overall teaching force in these cities. In New Orleans, more than 7,000 teachers—most of whom were Black—were fired en masse after Hurricane Katrina. They were replaced by

predominantly young, White teachers brought in to teach in the charter schools that replaced the district schools.[90] As a result, the number of Black teachers there declined by more than 62%. In other major cities, the decline in the number of Black teachers ranges from 15% to 39%.[91]

A report on One Newark, a school restructuring plan led by the New Jersey Department of Education to improve Newark Public Schools, found that schools targeted for closure, turnaround, or replacement by charter schools in 2012–13—processes often involving massive staffing changes— served higher shares of Black children and were disproportionately staffed by Black and Latinx teachers. They were not, however, necessarily the worst-performing schools.[92] Based on the analysis in the report, Black teachers were twice as likely to have to reapply for a teaching position as were White teachers in similar school settings. Latinx and Native American teachers also were more likely to have their employment disrupted. The teachers employed in charter schools in the district were far more likely to be White than Black, Latinx, or Native American and were more likely to have less than 5 years of experience.

Promising Practices

Increasing the number of teachers of color in the workforce requires both intentional preparation and hiring, and providing them with ongoing support to overcome the barriers to recruitment and retention described above. Fortunately, programs and initiatives across the country provide evidence that an intentional and sustained approach to recruiting and retaining teachers of color can be successful. This section describes policy strategies aimed at overcoming barriers to recruiting and retaining teachers of color and provides examples of how they have been implemented. Most of the programs and policies described below were created at the state or local level; however, the federal government has an important role to play in supporting these efforts. Reauthorization of the Higher Education Act, for example, offers the opportunity to address the increasing cost of teacher preparation and other key issues. In some cases, provisions of the Every Student Succeeds Act can support programs and practices that help to recruit and retain teachers of color.

> Increasing the number of teachers of color in the workforce requires both intentional preparation and hiring, and providing them with ongoing support to overcome the barriers to recruitment and retention.

1. Build High-Retention, Supportive Pathways Into Teaching

Given the evidence that teacher turnover is a primary driver of shortages of teachers of color, it is critical that policies are tailored not only to recruit new teachers, but to retain them for the long haul. Research shows that improving teacher retention begins with high-quality teacher preparation; however, in many cases, teachers of color are more likely to begin teaching without having completed comprehensive preparation. This is not surprising, given the cost of traditional TPPs and the debt burden faced by college students of color. Enrollments in alternative certification programs have increased for teachers of color, but the vast majority of new teachers are still educated through traditional TPPs at colleges and universities. Changes to admissions policies and student financial support can help mitigate the need for candidates of color to enter teaching through alternative certification pathways by increasing access to high-quality teacher preparation institutions. Increased access to high-quality preparation can improve the chances of teachers of color feeling successful in the classroom and continuing to teach long term.[93] By underwriting the cost of completing a high-quality TPP, state and local policymakers can encourage more students of color to pursue a teaching career—and to do so through a high-quality program. Among the high-retention pathways into teaching are increasing access to comprehensive preservice preparation through service scholarship and loan forgiveness programs, teacher residencies, and Grow Your Own programs. Other measures, such as inclusive admissions policies, course articulation agreements, ongoing mentoring and support, and accreditation and licensure policies can help increase access to high-retention pathways into teaching for teachers of color.

Service scholarships and loan forgiveness programs

States can support candidates of color by underwriting the cost of teacher preparation. **Service scholarship and loan forgiveness programs** cover or reimburse a portion of tuition costs in exchange for a commitment to teach in high-need schools or subject areas, typically for 3 to 5 years. These programs are effective at recruiting teachers, especially when they underwrite a significant portion of educational costs.[94] A recent study of the correlation between financial incentives and teacher diversity found that the availability of loan forgiveness in a district was associated with an increase in teachers of color of nearly 4 percentage points—25% more than the average district.[95]

> A recent study of the correlation between financial incentives and teacher diversity found that the availability of loan forgiveness in a district was associated with an increase in teachers of color of nearly 4 percentage points.

One of the most lauded service scholarship programs was the recently relaunched **North Carolina Teaching Fellows Program**, a highly selective scholarship program that provides fellows up to $8,250 annually for up to 4 years to attend an approved North Carolina university in exchange for a commitment to teach in the state for at least 4 years. From 1986 to 2015, the program recruited nearly 11,000 candidates into teaching,[96] and fellows were far more likely to continue teaching in North Carolina public schools than teachers credentialed through other programs.[97] The program made a concerted effort to recruit at least 20% aspiring teachers of color in each cohort, in alignment with the proportion of teachers of color in the state.[98] Though briefly discontinued due to budget cuts, the state has recently restarted the program and has invested $6 million to begin supporting 160 candidates each year beginning in 2018–19.[99]

Several states currently offer service scholarship or loan forgiveness programs aimed at increasing the number of teachers of color. **Minnesota's Collaborative Urban and Greater Minnesota Educators of Color Program** is a grant program that funds four of the state's urban TPPs and, beginning in 2018, offers additional grants on a competitive basis.[100] The four universities that are longtime recipients of this funding offer supports to teacher candidates of color that include subsidized tuition, mentoring, exam preparation, and stipends for candidates who are student teaching.[101] Two of the Minnesota partner universities offer programs tailored to candidates of East African and Southeast Asian descent, specifically. Together, the state's four long-term partners have prepared a quarter of the state's current workforce of teachers of color. Other state scholarship programs include Florida's Fund for Minority Teachers, the Kentucky Minority Educator Recruitment and Retention Scholarship, the Missouri Minority Teaching Scholarship, and the Tennessee Minority Teaching Fellows Program. These programs offer candidates $3,000 to $5,000 per year for 2 to 4 years in exchange for a commitment to teach, often for the number of years they received funding.

The federal government can support state loan forgiveness programs for teachers of color through **increased funding for the Teacher Education Assistance for College and Higher Education (TEACH) grant program**, under Title IV of the Higher Education Act. Currently, TEACH grant recipients who commit to teaching in a high-need subject in a high-poverty school for 4 years can receive up to $4,000 per year for up to 4 years of their undergraduate or graduate study. A total

grant award of up to $16,000 falls far short of the average cost of teacher preparation. TEACH grants would more effectively recruit prospective teachers of color into high-quality TPPs if they were increased to cover a more significant portion of the cost of preparation.

Teacher residencies

Teacher residencies—modeled on medical residencies—are another promising high-retention approach to preparing teachers of color. Teacher residencies are partnerships between districts and universities that subsidize and improve teachers' training to teach in high-need schools and in high-demand subject areas.[102] There are at least 50 residency programs currently operating around the country. Participants spend a year working as apprentices with highly effective mentor teachers, while completing related coursework at partnering universities. During this time, residents receive financial support, often in the form of a stipend and tuition assistance. They commit to teaching an additional 3 to 4 years in their district, with ongoing mentoring support.

This model, which provides comprehensive preparation, improves upon alternative certification programs in a few ways. Teacher residents gain extensive classroom experience by learning from an accomplished veteran teacher in a high-need school before becoming solely responsible for their own class. This increases their chances of success as classroom teachers and gives the residency program an opportunity to assess residents' performance before entrusting them with students of their own. The service commitment has the dual effect of filtering out candidates not willing to make

> The residency model helps new teachers build strong relationships by clustering cohorts in university classes and school sites and by providing ongoing mentoring and support once residents become teachers.

a serious commitment to teach and ensuring that they continue to teach in high-need schools as their effectiveness increases.[103] It also allows the partnering school district to closely shape the type of coursework and other preparation the residents receive, so that residents fully understand the local district context. The residency model helps new teachers build strong relationships by clustering cohorts in university classes and school sites, and by providing ongoing mentoring and support once residents become teachers. Thus, residents can collaborate with and support one another through the challenges of being novice teachers.[104]

Research on teacher residency programs shows that they are effective both in bringing more teachers of color into the profession and in preparing them to stay for the long term. Nationally, about 49% of residents are people of color. That is the same as the proportion of public school students of color and far more than the 20% of teachers who are people of color nationally.[105] Principals find graduates of residency programs to be well prepared, and in many cases to be better prepared than typical new teachers. In addition, a review of residency program evaluations shows that residents tend to have higher retention rates over time than non resident teachers.[106]

In Massachusetts, the **Boston Teacher Residency** (BTR) has committed to graduating cohorts comprising 50% people of color. With 49% of current graduates identifying as people of color and 35% identifying as Black or Latinx, BTR has just about met that commitment.[107] BTR residents are far more likely to continue teaching in Boston Public Schools than other new teachers: 71% of BTR

graduates continued teaching in the district through year 6, compared to just 51% of their peers. Evidence also suggests that BTR graduates are very strong teachers. In 2014–15, BTR graduates were twice as likely to be rated "Exemplary" than other Massachusetts teachers. Other residency programs can be found in urban and rural communities throughout the country.[108] Two thirds of **San Francisco Teacher Residency** (SFTR) residents identify as people of color, compared to 49% of the San Francisco Unified School District (SFUSD) teacher workforce, and graduates of the program have impressive retention rates once they enter the field.[109] After 5 years, 80% of SFTR graduates are still teaching in SFUSD, compared to just 38% of beginning teachers hired by SFUSD and 20% of Teach for America corps members placed in the district. One hundred percent of principals in SFUSD reported the residents were more effective than other beginning teachers.

Teacher Quality Program grants, funded through Title II Part A of the Higher Education Act, can be used to fund teacher residency programs, and other resources, such as Americorps and TEACH grants, can help pay for teacher stipends and loan forgiveness.

Inside a North Carolina Teacher Residency

North Carolina Agricultural and Technical State University (NC A&T) a historically Black university in Greensboro, has been working to address longstanding teacher shortages in nearby rural communities, especially in STEM subjects. The university launched **a teacher residency program** in 2017, with funding from a federal Teacher Quality Program grant, to prepare a racially diverse workforce of high-quality teachers for rural schools. Residents at NC A&T experience a year in the life of a teacher. They spend 40 hours per week at their placement site at a partnering rural district, observing and student teaching under the guidance of a strong mentor teacher, while working toward a master's degree in teaching. In addition, each resident has a coach who visits them at their school site and helps them to improve their planning and instruction. Residents attend monthly professional development workshops together as a cohort, on a range of topics, including culturally responsive teaching and implicit bias.

Nichole Smith, an associate professor and coordinator of the NC A&T Teacher Residency program, helped develop partnerships with local districts and worked with principals to identify mentor teachers. As the residency has gotten underway with its first cohort, she can already see the impact of closely tying theory and practice. She says the residents "understand what the year looks like from beginning to end. And they have been able to go in, having support, and use the information from professional development and coaching for their students."

Residents receive a $20,000 stipend that goes toward tuition, living expenses, and exam fees. This funding allows residents to participate in a fully immersive preparation experience, with less financial pressure to take on a job at the same time. The first cohort of residents were nearly half residents of color, including Black, Latinx, and Asian American residents, and the second cohort is expected to host even more residents of color and STEM candidates. As the program expands to additional cohorts, NC A&T is hoping to learn how to provide longer and more meaningful clinical experiences to all of its students.

Inclusive admissions strategies

Minneapolis Public Schools (MPS) uses **high-touch recruitment methods** (actively prioritizing and following up with prospective applicants of color, building relationships with them, and offering them support), to bring more candidates into the profession who might otherwise be discouraged from applying.[110] To recruit a diverse pool of applicants for the district's residency program, MPS holds information sessions, speaks with principals who could refer paraprofessionals to the program, and builds relationships in the community. The program leadership even surveyed MPS paraprofessionals to learn how the district could reduce barriers to entry into the program. Understanding that fear of failing teacher licensure exams can discourage teacher preparation

enrollment, the residency program offers admitted residents math, reading, and writing courses and one-on-one tutoring to prepare for the Minnesota Teacher Licensure Exam. As a result of these recruitment efforts—and the program's generous financial supports—the first MPS residency cohort included 40% bilingual residents and 75% residents of color.
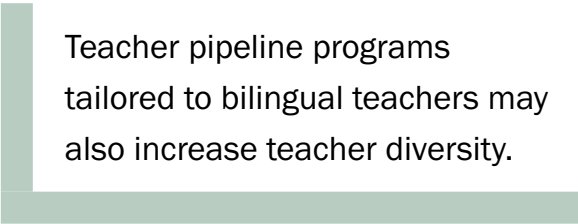
In other states that require candidates to take the Praxis I, the SAT, or some other standardized exam for admission to TPPs, **conditional admission** policies can allow TPPs to evaluate candidates on a holistic set of criteria, including applicant dispositions, values, and experiences, as well as their academic achievement. In Rhode Island, teacher preparation programs are permitted to have conditional admissions policies that allow them to admit applicants who have not met GPA or test score requirements, as long as the TPP also provides supports to help those candidates learn the content and skills they need to be effective educators.[111]

Grow Your Own programs

Grow Your Own programs recruit teacher candidates from nontraditional populations who are more likely to reflect local diversity and are more likely to continue to teach in their communities. These candidates include high school students, paraprofessionals, after-school program staff, and other community members.[112] The **South Carolina Teacher Cadet** program, which offers a yearlong course for college credit to 2,700 high school students each year, has more than 60,000 graduates over 30 years. One in five cadets goes on to earn a teacher certification at a cost of just $100 per student.[113] In 2016–17, more than a third of the students who completed the cadet program were students of color.[114] By comparison, fewer than 20% of the state's traditional TPP enrollees in 2014–15 were students of color.[115]

Another such program, **Pathways2Teaching** (P2T), based in Colorado, is working to increase teacher diversity by offering programs to high school students in low-performing schools that emphasize the role of teachers in advancing social justice. High school participants, mostly students of color, engage in weekly field experiences building elementary students' literacy skills. They earn college credit for the course and receive support throughout the college search and application process. As of 2013, 100% of the first P2T cohort were taking college courses and 18% had declared an education major, exceeding national averages.[116] The program recently expanded to Metro Nashville Public Schools and began offering courses at five schools in the fall of 2017 as part of the district's commitment to increasing teacher diversity.[117]

Teacher pipeline programs tailored to bilingual teachers may also increase teacher diversity. The Foundation for Oklahoma City Public Schools launched the **Bilingual Teacher Pipeline Project** (BTPP) in 2016 with the mission of providing funding for tuition and teacher certification costs for bilingual paraprofessionals

> Teacher pipeline programs tailored to bilingual teachers may also increase teacher diversity.

in the district as they work to become certified teachers.[118] In return, program participants agree to teach in the district for at least 3 years after they have been certified. As of 2017, the BTPP had 34 bilingual paraprofessionals enrolled in college. Other states, including California, Connecticut, South Dakota, and Washington, have passed legislation or initiated programs with similar goals of increasing the ranks of bilingual teachers.

Homegrown Teachers in Washington State

Washington state's **Recruiting Washington Teachers** (RWT) program is a Grow Your Own program created to diversify the educator workforce by exposing current, underrepresented high school students to the teaching profession. The need for diversification is urgent. With a teacher workforce that is 89% White, Washington state can hardly expose all students to a diverse set of role models.[i] The state of Washington Professional Educator Standards Board has identified educator workforce diversity as a state priority in recognition of the benefits a diverse workforce provides to students. In response, the state legislature has issued RWT grant funding since 2007 to pilot programs across the state.

RWT programs expose high school students to the teaching profession through various activities. While each site is unique, all participants engage in classroom field experiences (such as tutoring and teaching opportunities with elementary and middle school students), take a specialized course introducing the teaching profession, receive one-on-one advising, conduct college visits, and attend a summer institute. Each of these elements is embedded within a program culture and curriculum that focuses on achievement in academics and leadership; emphasizes equity and culturally responsive pedagogy; and affirms culture, language, and identity as assets for learning and empowerment in school and in life. Program completers are also guaranteed an interview at their graduating district to work as a paraeducator or teacher. This both acknowledges their accomplishments and helps to attract them back to the district.

One student described RWT as a "space where I can seek comfort," and another called it an opportunity "that helped me learn a lot about different cultures." A third noted that it affirmed their career beliefs: "I just know that I need to be in a school building." One student simply said, "[It was] life changing."[ii]

Survey evidence also indicates RWT is making a difference toward diversifying the teaching workforce. At all sites, the rate at which students of color participated in the program far exceeds the statewide and district percentages of teachers of color. Satisfaction with the program is also high; 90% of respondents described their overall experience as "good" or "very good." Additionally, over half (54%) of respondents reported that participation in RWT increased their interest in the teaching profession. This was certainly the case for RWT graduate Alejandro Castro-Wilson. In an interview, he shared, "Without a doubt, if it wasn't for this program, I would not be in the classroom today." After RWT, Castro-Wilson spent several years working as a paraeducator, while simultaneously completing teacher preparation. He began his first year as a licensed public elementary teacher in 2017. Program Director Beth Geiger attributes this broad success to the program's focus on students, saying, "This is about supporting students to see their own cultural identity as valuable and as a reason that they would be an asset in the classroom."[iii]

After years of developing best practices and curriculum materials at pilot sites, the Washington Professional Educators Standards Board (PESB) hopes to scale RWT by making these resources available to all districts in the state. In 2017, PESB also began a Bilingual Educators Initiative, a pilot project aimed at developing future bilingual teachers and resources for the statewide expansion of teacher academies with a bilingual focus.[iv] Through these efforts, Washington state is working to build a public education system in which teachers of color are the norm, not the exception.

[i] Office of the Superintendent of Public Instruction. (2017). Washington State report card. Olympia, WA: Office of Superintendent of Public Instruction. http://reportcard.ospi.k12.wa.us/summary.aspx?groupLevel=District&schoolId=1&reportLevel=State&yrs=2015-16&year=2016-17.

[ii] Geiger, B., & Hougan, E. (2017). Recruiting Washington teachers: 2016–17 annual report. Olympia, WA: Professional Educators Standards Board.

[iii] Interview with Beth Geiger, Educators Pathways Projects, Evaluation, and Research, Washington Professional Educator Standards Board (2018, March 5).

[iv] Washington Professional Educator Standards Board. (n.d.). Recruiting Washington teachers—Bilingual Educators Initiative. https://www.pesb.wa.gov/innovation-policy/grants-pilots/bilingual-educators-initiative/.

Course articulation agreements

TPPs can also increase recruitment efforts by partnering with community colleges to create degree articulation agreements. **Stone Child College** (SCC) is a tribal community college of the Chippewa Cree Tribe in Montana. The college offers associate degrees in early childhood education and elementary education. These degrees simultaneously prepare candidates for employment as paraprofessionals and for transfer to a 4-year education program. Through an articulation agreement with Montana State University-Northern (MSU-Northern), all education courses required by SCC are accepted at MSU-Northern.[119] Similar **2+2** programs that offer access to teacher preparation courses at community colleges in rural communities can help build the pipeline of teachers in hard-to-staff rural communities. Because community colleges often serve students of color, they can be a useful source for diversifying the pool of aspiring teachers.

How 2+2 Programs Are Increasing Teacher Diversity From Hawaii to North Carolina

In Oahu, Hawaii, high-need communities across the island have faced ongoing shortages of qualified educators. Historically, they have relied on importing teachers from the mainland to fill positions in their hard-to-staff schools. Meanwhile, across the country, Halifax County Schools in North Carolina have also struggled with acute teacher shortages and poor teacher retention. As a rural district hours from traditional TPPs, the county has in the past relied on alternative certification programs to fill shortage positions. However, it found that the high turnover rates of those teachers made that an unsustainable solution. Responding to similar challenges in their distinct communities, **Leeward Community College** in Hawaii and **Elizabeth City State University** (ECSU) in North Carolina established 2+2 TPPs with local partner institutions of higher education to "home grow" teachers from within their communities, where shortages are most acute.

As the community college partner, Leeward prepares candidates during their first 2 years of preparation. Leeward's intensive Associate of Arts in Teaching (AAT) degree offers candidates—predominately from underrepresented communities, and Native Hawaiian communities in particular—the option to become paraeducators or to continue to a 4-year university seeking teacher licensure. Numerous field experiences, practical case studies, and multilayered supports are hallmarks of the program. Program Coordinator Roberta Martel articulated their focus on putting the candidate at the center of their work, explaining, "We understand that life gets in the way sometimes, especially [for students from] hard-to-serve communities. We don't water down anything that we do, but we do provide safety nets." These supports take the form of peer mentors for struggling students, dedicated counselors committed to the success of each student, and multiple submissions of case study work to ensure students understand content deeply. In this way, Leeward strives to nurture each aspiring teacher it enrolls, hoping they will show the same care to students in their future classrooms.

ECSU, as the university partner in its 2+2 program, supports students during the last 2 years of their teacher preparation, despite being nearly 100 miles from Halifax County. ECSU faculty travel to the county to offer classes on-site at the local community college, and they offer virtual classes as well. Students, nearly all of whom are candidates of color, graduate from the 2+2 program having earned a bachelor's degree and certification for elementary teacher licensure. By extensively tying academic coursework to fieldwork, the program stresses immersing candidates in the rural communities in which they will teach. For example, the methods courses for each subject area require students to engage for 10 to 30 hours in multiple clinical settings; through observations, interviews, and shadowing of skilled teachers, candidates can connect coursework content to what occurs in schools. All of this comes before the 1-year clinical experience that occurs in candidates' senior year. After graduation, ECSU offers all graduates an "Educational Warranty Program," whereby they can seek individualized coaching and mentoring support from ECSU clinical faculty for up to 3 years.

Through their versatile 2+2 partnerships, both Leeward Community College and ECSU are responding to the needs of local, underserved communities and addressing chronic teacher shortages. Their approach is being noticed. For its part, Leeward has seen ballooning enrollment over the past decade—from 24 to 500 students—in a period when teacher preparation enrollment is declining nationally.

Ongoing mentoring and support for candidates and teachers of color

Colleges can offer support to students of color throughout the college and teacher preparation experience to improve the likelihood that they will complete the training and certification process. Modeled on the Peace Corps, **California Mini-Corps** was founded in 1967 with Elementary and Secondary Education Title I funding to offer greater educational support to California's rural migrant students.[120] The program—active at more than 20 community colleges and universities across the state, including HSIs—recruits bilingual college students who are mostly Latinx to be tutors. Many Mini-Corps tutors are former rural migrant students themselves. Tutors participate in a cohort model, are paid for their time, and receive support with teacher licensure requirements, including exams, and career counseling. In addition, tutors are mentored by master teachers, receive frequent observation and feedback on their teaching, and attend monthly professional development workshops.[121] Program coordinators, who support cohorts of 18 to 20 tutors, even monitor tutors' grades. Through this experience, Mini-Corps tutors receive between 3,000 and 4,000 hours of classroom experience,[122] far more than the state's 600-hour clinical practice requirement.[123] This level of support helps tutors to understand whether teaching is the right career for them, to complete college, and to enter the teaching profession with extensive preparation. About 80% of Mini-Corps tutors go on to pursue a teaching career,[124] and 50% of the state's bilingual teachers participated in the program.[125]
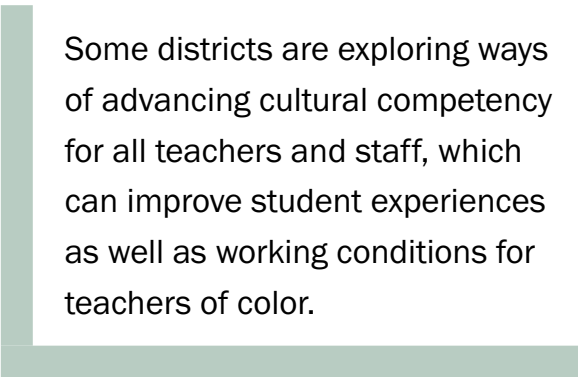
> About 80% of Mini-Corps tutors go on to pursue a teaching career, and 50% of the state's bilingual teachers participated in the program.

Call Me MISTER (Mentors Instructing Students Toward Effective Role Models), founded at Clemson University in 2000 and active in several other colleges throughout the South, works to increase the pool of Black male teachers through a comprehensive system of supports that includes loan forgiveness, mentorship, academic and peer support, preparation for state licensure exams, and assistance with job placement. Participants commit to teaching in a local school for each year they receive financial support. The program maintains contact with graduates, and graduates are expected to become mentors to new program participants. Of the approximately 150 participants who have graduated since 2004, 100% remain in education and 95% are teaching in South Carolina schools, far exceeding national retention rates.[126]

Other initiatives—such as the Sherman STEM Teacher Scholars Program at the University of Maryland, Baltimore County, and the Montclair State University Teacher Education Advocacy Center—are also working to provide support to teacher preparation candidates, including academic coaching, mentoring and advising, and peer support. Also building on the success of the Call Me MISTER peer support model, **The Fellowship: Black Male Educators for Social Justice** is a professional membership organization designed to build and strengthen networks of Black male educators. Through The Fellowship, which is based in Philadelphia, more than 600 current and prospective Black male educator members are expected to mentor at least one high schooler or college student, or a man who is considering a mid-career switch to teaching. That mentorship might include tutoring, offering professional guidance, or providing technical assistance to those seeking help with entering the field. In addition, The Fellowship hosts an annual conference and a career fair that offers résumé feedback, mock interviews, advice from career advisers, and opportunities to meet with potential employers.

The **Black Teacher Project** (BTP), a nonprofit based in San Francisco, Oakland, and New York City, has a two-pronged approach to sustaining Black teachers.[127] First, the organization offers opportunities for personal and professional growth, such as book clubs, inquiry groups to work through a problem of practice, a fellowship program, social activities, and wellness workshops. Second, BTP is working with districts, such as Oakland Unified School District, to help shift the environment from one that teachers want to leave to one where teachers want to stay. For example, BTP offers "Hiring Black Teachers 101," a workshop that gets at the heart of how hiring practices can be more inclusive of prospective Black teachers. The group has also partnered with the district to walk teachers through the teacher credentialing process and to offer tutoring for teacher licensure exams. Micia Mosely, founder of the Black Teacher Project, says of the BTP participants, "Being a part of the BTP community and receiving supports has literally kept them in the classroom. They wanted to leave and then realized they just needed a community." Other programs, such as Boston's Male Educators of Color and NYC Men Teach, similarly build community and facilitate mentorship for male teachers of color.[128]

Some districts are exploring ways of advancing cultural competency for all teachers and staff, which can improve student experiences as well as working conditions for teachers of color. Jefferson County Public Schools in Kentucky, for example, offers the Equity and Inclusion Institute, where teachers learn about the need for culturally relevant pedagogy, connecting with parents, building relationships, and classroom management, as well as developing the skills to implement these practices.[129] An evaluation of the institute in 2013–14 found that of the more than 300 educators who attended, 91% changed the way they viewed their students, suggesting that they developed a greater equity lens toward students of color.[130] Programs like these may reduce feelings of isolation, frustration, and fatigue teachers of color express at having to advocate for students of color on their own.

> Some districts are exploring ways of advancing cultural competency for all teachers and staff, which can improve student experiences as well as working conditions for teachers of color.
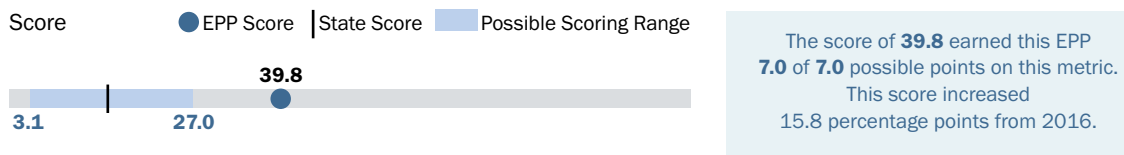
Teacher preparation accreditation and licensure policies

States can increase enrollments of candidates of color by implementing **data monitoring policies** for TPPs. In Tennessee, for example, the State Board of Education revised the state's Teacher Preparation Report Card in 2016.[131] Each TPP (also known as educator preparation programs, or EPPs) receives an overall score and several subscores, including one for candidate profile. The candidate profile score is based, in part, on the percentage of program completers who are non-White. Title II of the Higher Education Act requires that all states report on the racial and ethnic diversity of teacher preparation enrollees; however, they are not required to report on the diversity of program completers. Tennessee is unique in requiring and monitoring that data point, which is a better indicator of the supply of teachers of color than is enrollment data. Figure 5 shows a sample of the candidate profile for one Tennessee university. Fred Hardeman University received full points for the diversity of its program completers in 2017, which increased since 2016. TPPs may be more likely to actively recruit and support candidates of color because their performance on that indicator impacts the program's standing in the state, and they are required to report this data to meet state accreditation requirements.

Figure 5
Tennessee Teacher Report Card, Candidate Profile

PERCENTAGE OF RACIALLY DIVERSE COMPLETERS
This measure reports the percentage of completers who reported having a racially or ethnically diverse background. N-Size: 254

Score   ● EPP Score | State Score   ▬ Possible Scoring Range

39.8

The score of **39.8** earned this EPP
7.0 of **7.0** possible points on this metric.
This score increased
15.8 percentage points from 2016.

3.1   27.0

Source: Tennessee State Board of Education Teacher Preparation Report Card. (2017). Retrieved from: http://teacherprepreportcard.tn.gov.

In addition, states can **adjust licensure requirements** to allow teaching candidates to demonstrate their competency through rigorous, but more authentic, performance assessments that do not typically generate the racial disparity in pass rates of traditional exams. In Tennessee, candidates can submit edTPA scores for licensure in lieu of taking the Praxis exam, and by 2019, edTPA will be required of all teaching candidates.[132] The same is true in several states across the country. As noted earlier, performance assessments are both more predictive of classroom effectiveness and less likely to produce large disparities in pass rates than multiple choice standardized tests.

2. Create Proactive Hiring and Induction Strategies

Once a prospective teacher is trained and certified, district and school hiring practices can influence their decisions to enter the teaching force and whether to stay in their schools. A review of teacher recruitment and retention strategies identified several hiring conditions associated with effectively recruiting and retaining teachers, including timing of hiring, information in the hiring process, and licensure and pension portability.[133] These factors affect the recruitment and retention of all teachers, but some may be particularly pertinent for schools looking to hire and retain teachers of color.

A report detailing the **Boston Public Schools (BPS) Human Capital Initiative (HCI)**, a hiring policy change initiated in 2014, showed that initiating hiring timelines earlier in the year resulted in more racially diverse teacher hires. Essentially, HCI allowed BPS to post open teaching positions to both internal and external candidates simultaneously rather than posting and interviewing internal candidates based on seniority first, as was previously done. The authors posited that in-demand candidates of color were more likely to be available for hire earlier in the year, which their data confirmed. Black and Latinx teachers comprised nearly 40% of teachers hired before August, but only 27% of hires made in August.[134] Given the pressure of student loan debt on students of color

> A review of teacher recruitment and retention strategies identified several hiring conditions associated with effectively recruiting and retaining teachers, including timing of hiring, information in the hiring process, and licensure and pension portability.
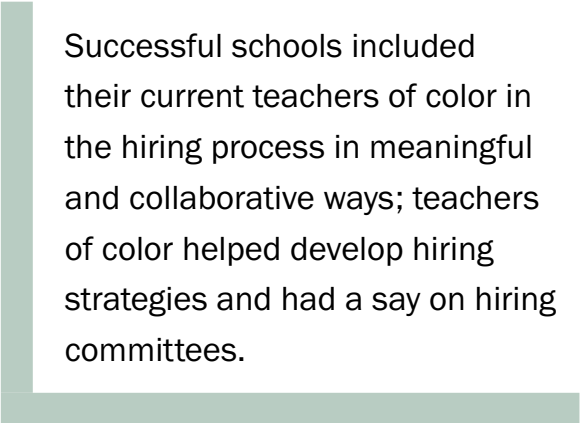
mentioned earlier, securing a teaching position before graduation or soon thereafter may help ensure that they enter the teaching workforce, rather than having to choose a nonteaching position.

Districts can also partner with local TPPs to coordinate student teaching placements and vet candidates for hire before they graduate. In California's **Long Beach Unified School District**, this strategy allows student teachers to learn district teaching expectations, while the district can identify strong candidates for teaching positions.[135] This is a strategy that can be pursued specifically with MSIs.

Through a qualitative analysis of six schools serving majority Black and Latinx students from low-income families, scholars found that schools had to commit time, resources, and effort to successfully increase their numbers of teachers of color.[136] Successful schools proactively partnered with "human capital pipeline organizations," such as MSIs and other colleges and universities with sizable Black and Latinx populations. They also narrowed their recruitment efforts to college clubs and organizations with Black and Latinx memberships, including scholarship groups and military veterans. Successful schools also formed informal relationships with "connectors" who could help them communicate with communities of color. In many cases, these connectors were teachers of color already at the school site who could reach out to their churches, alumni organizations, fraternal organizations, and other networks.

Importantly, successful schools included their current teachers of color in the hiring process in meaningful and collaborative ways; teachers of color helped develop hiring strategies and had a say on hiring committees. This approach was more effective than superficial efforts, such as including teachers of color in promotional materials or having prospective teachers observe the classrooms of teachers of color, which some teachers said felt tokenizing. Successful schools also prioritized applicants of color in the hiring process by moving them to the front of the interview process and offering explicit guidance about their hiring criteria.

> Successful schools included their current teachers of color in the hiring process in meaningful and collaborative ways; teachers of color helped develop hiring strategies and had a say on hiring committees.

Furthermore, districts can offer **comprehensive induction to support** beginning teachers of color in their first years of teaching. Induction often includes being matched with a veteran mentor teacher and can also include seminars, classroom assistance, time to collaborate with other teachers, coaching and feedback from experienced teachers, and reduced workloads. Induction is especially effective when teachers participate in a comprehensive set of induction activities. Additionally, first-year teachers who receive induction support are found to be twice as likely to stay in teaching as those who did not receive early support.[137] An analysis of the **Texas Beginning Educator Support System** (TxBESS) found that participants left teaching at significantly lower rates than did nonparticipating novice teachers in the state. The analysis also found improved retention rates among participants teaching in schools serving students of color and students from low-income families, where attrition rates tended to be quite high and where teachers of color are most likely to teach.[138] The finding suggests that teachers of color, in particular, could benefit from participating in strong induction programs.

3. Improve School Teaching Conditions Through Improved School Leadership

Teaching conditions, and administrative support particularly, play a key role in teachers' retention decisions. Recent evidence shows that administrative support is especially critical in improving the retention of teachers of color. An analysis of national data from select years between 1999 and 2011 found that teachers of color in schools in which 90% of the teaching staff or more were White were far more likely to switch schools than their White peers if they perceived a lack of administrative support. However, their retention decisions were similar to White teachers when they felt strong administrative support in their schools.[139] Strong school leaders may be addressing some of the challenges teachers of color report experiencing when they are among few teachers of color on staff.

Districts can provide training for school administrators so they can create work environments that encourage teachers of color to stay. Even if teachers are prepared for the challenges of teaching, undesirable teaching conditions can drive them to other schools or out of the profession entirely. School administrators are responsible for making hiring decisions, being instructional leaders, setting norms for students and staff, nurturing a positive and encouraging culture, keeping schoolwide systems running smoothly, and more.[140] When they are not able to do those things well, the consequences are teaching and learning environments that make it difficult for teachers of color to stay. Poor school leadership more than doubles the likelihood that teachers, in general, will move or leave their classrooms and schools.[141]

> Districts can provide training for school administrators so they can create work environments that encourage teachers of color to stay.

Some university-district partnerships have made progress in training effective school principals by actively recruiting talented future administrators, and especially those who have demonstrated a commitment to working in hard-to-staff schools. A review of the nationally recognized educational leader cohort program at **Delta State University** (DSU) in the Mississippi Delta, for example, found that the program partnered with local school districts to recruit excellent teachers with strong school leadership potential into a well-supported principal training program, and that half of their recruits each year were Black.[142] Most of the teachers had been working in the Delta—a mostly rural region plagued by poverty and racial segregation—and they had undergone a demanding selection process to be nominated for the program by their district. With state, federal, district, and university funding, DSU funds its full-time paid internships at school sites. This joint investment of funds allows well-qualified candidates to participate regardless of their financial means. According to DSU, 85% of all graduates hold administrative positions in Delta schools and districts.[143]

Inservice leadership training can also make a difference in teacher retention. An analysis of the **McREL Balanced Leadership Development Program** (McREL BLDP), a program that focuses on principals developing 21 leadership responsibilities over 10 two-day cohort-based sessions, found that it resulted in a 7-point reduction in teacher turnover in schools that fully participated in the intervention (and a 23-point reduction in principal turnover).[144]

States can support improved principal preparation by establishing holistic principal preparation program accreditation and licensure standards and funding effective school leadership development programs. State **principal preparation and licensure regulations** play a significant role in

shaping the content and format of principal preparation programs and can help ensure that these programs are held to a standard of excellence. These regulatory strategies could help improve retention rates for teachers of color by requiring that program participants have clinical experiences in schools with diverse students and staff, and learn to create collaborative, supportive work environments for the teachers they work with. In the program accreditation process, states can require that programs survey graduates on how well prepared they felt to handle each of the duties, including supporting a diverse staff. The Every Student Succeeds Act (ESSA) permits states to set aside 3% of their Title II formula funds to strengthen the quality of school leaders, including by investing in principal recruitment, preparation, induction, and development.[145]

Rethinking school improvement

In lieu of school districts closing low-performing schools, and in turn, increasing teacher turnover, especially for teachers of color, ESSA provides states and districts greater flexibility in implementing alternatives that bolster school communities. One such strategy is **High Schools That Work** (HSTW), which was established by the Southern Regional Education Board in 1987 and is a school improvement initiative that helps schools to improve student achievement through intensive teacher and leader professional development and technical assistance in more than 1,200 sites nationally.[146] HSTW works with schools to increase academic rigor, student engagement, teacher collaboration, student support, and use of data with the goal of improving student performance and preparation for postsecondary success. A mixed-methods study of the program found that teachers observed improved student behavior and attitudes and decreased dropout rates after the implementation of HSTW.[147]

States and districts can consider other evidence-based investments in schools that improve instructional quality and supports for students without displacing the teachers of color who most often teach in struggling schools. For example, **community schools**, which focus on whole child development through community partnerships, have been found in a recent extensive research review to support gains in student behavior, achievement, and attainment, as well as greater collaboration among staff and parents, which supports stronger satisfaction and retention.[148]

Conclusion

Teachers of color face barriers to entry and to continuing in teaching, from preservice to veteran teaching status. The debt burden of college discourages students of color from pursuing traditional preservice preparation programs, and those who are interested in teaching may instead enter through alternative certification programs that often bypass student teaching and key coursework. While some alternative certification programs might offer high-quality training, overall, teachers who enter through these programs are less likely to continue teaching in their schools, further exacerbating shortages of teachers of color and negatively impacting student learning. In addition to completing their preparation, teaching candidates of color must meet several state-mandated requirements that often include standardized tests. The most common of these tests disproportionately fail candidates of color, keeping them out of the profession or requiring many attempts that present a financial burden. Candidates of color who successfully enter the field encounter undesirable working conditions in the schools they most often serve and are more likely to be pushed out of their schools involuntarily due to school closure and turnaround policies.

Fortunately, there are many successful approaches for overcoming those barriers. Financial investments that underwrite the cost of high-quality teacher preparation for candidates of color—such as loan forgiveness programs, service scholarships, teacher residencies, and Grow Your Own programs—have proven effective in enabling candidates of color to enter teaching through high-retention pathways. Mentoring and support, both during their preparation and through their first years in the classroom, can help candidates complete their programs and begin teaching successfully.

> A common theme among the promising practices in recruitment and retention of teachers of color is that they require an intentional commitment to increasing teacher diversity, including commitments of funding, staff, and time.

Districtwide cultural competency training and more effective preparation for school leaders can help make schools positive working environments for teachers of color. Finally, state and district policies aimed at school improvement can focus on investing in schools in which teachers of color teach, instead of pursuing school closure policies that push them out of the field. A common theme among the promising practices in recruitment and retention of teachers of color is that they require an intentional commitment to increasing teacher diversity, including commitments of funding, staff, and time. Research shows that investments in a high-quality, diverse teaching workforce are repaid in reduced teacher turnover and improved learning and achievement for all students.

Appendix

Sources for Figures 1 and 2

Figure 1

1987: Hammer, C., & Gerald, E. (1990). *Selected characteristics of public and private school teachers: 1987-88*. Washington, DC: National Center for Education Statistics, U.S. Department of Education.

1990: Learning Policy Institute analysis of Schools and Staffing Survey 1990–91 public use data file.

1993: Henke, R. R., Choy, S. P., Chen, X, Geis, S., Alt, M. N., & Broughman, S. P. (1997). *America's teachers: Profile of a profession, 1993–94.* (NCES 97-460). Washington, DC: National Center for Education Statistics, U.S. Department of Education.

1999: Luekens, M. T., Lyter, D. M., & Fox, E. E. (2004). *Teacher attrition and mobility: Results from the Teacher Follow-up Survey, 2000–01.* (NCES 2004-301). Washington, DC: National Center for Education Statistics, U.S. Department of Education.

2003: Strizek, G. A., Pittsonberger, J. L., Riordan, K. E., Lyter, D. M., & Orlofsky, G. F. (2006). *Characteristics of schools, districts, teachers, principals, and school libraries in the United States: 2003-04 Schools and Staffing Survey.* (NCES 2006-313 Revised). Washington, DC: National Center for Education Statistics, U.S. Department of Education.

2007: Strizek, G. A., Pittsonberger, J. L., Riordan, K. E., Lyter, D. M., & Orlofsky, G. F. (2006). *Characteristics of schools, districts, teachers, principals, and school libraries in the United States: 2003–04 Schools and Staffing Survey.* (NCES 2006-313 Revised). Washington, DC: National Center for Education Statistics, U.S. Department of Education.

2011: Goldring, R., Gray, L., & Bitterman, A. (2013). *Characteristics of public and private elementary and secondary school teachers in the United States: Results from the 2011–12 Schools and Staffing Survey.* (NCES 2013-314). Washington, DC: National Center for Education Statistics, U.S. Department of Education.

2015: Taie, S., & Goldring, R. (2017). *Characteristics of public elementary and secondary school principals in the United States: Results from the 2015–16 National Teacher and Principal Survey First Look.* (NCES 2017-070). Washington, DC: National Center for Education Statistics, U.S. Department of Education.

Figure 2

[1] U.S. Department of Education, Digest of Education Statistics. (2009). Table 41: Percentage distribution of enrollment in public elementary and secondary schools, by race/ethnicity and state or jurisdiction: fall 1997 and fall 2007. Washington, DC: Author.

[2] U.S. Department of Education, Digest of Education Statistics. (2009). Table 201: Recent high school completers and their enrollment in college, by race/ethnicity: 1960 through 2008. Washington, DC: Author.

[3] U.S. Department of Education, Digest of Education Statistics. (2009). Table 201: Recent high school completers and their enrollment in college, by race/ethnicity: 1960 through 2008. Washington, DC: Author.

[4] Learning Policy Institute analysis of Title II enrollment data available at https://title2.ed.gov/Public/DataTools/Tables.aspx.

[5] U.S. Department of Education, Digest of Education Statistics. (2014). Table 322.30: Bachelor's degrees conferred by postsecondary institutions, by race/ethnicity and field of study: 2011–12 and 2012–13. Washington, DC: Author.

[6] U.S. Department of Education, Digest of Education Statistics. (2014). Table 322.30: Bachelor's degrees conferred by postsecondary institutions, by race/ethnicity and field of study: 2011–12 and 2012–13. Washington, DC: Author.

[7] Learning Policy Institute analysis of Schools and Staffing Survey 2011–12.

Endnotes

1. Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Palo Alto, CA: Learning Policy Institute.

2. Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Palo Alto, CA: Learning Policy Institute.

3. Taie, S., & Goldring, R. (2017). *Characteristics of public elementary and secondary school teachers in the United States: Results From the 2015–16 National Teacher and Principal Survey.* Washington, DC: National Center for Education Statistics.

4. Ingersoll, R., May, H., & Collins, G. (2017). *Minority teacher recruitment, employment, and retention: 1987 to 2013.* Palo Alto, CA: Learning Policy Institute.

5. U.S. Department of Education, National Center for Education Statistics. (2016). Table 203.50: Enrollment and percentage distribution of enrollment in public elementary and secondary schools, by race/ethnicity and region: Selected years, fall 1995 through fall 2026. In U.S. Department of Education, National Center for Education Statistics (Ed.), *Digest of Education Statistics* (2016 ed.). Retrieved from https://nces.ed.gov/programs/digest/d16/tables/dt16_203.50.asp.

6. Estimates vary from between 37% and 39%. See U.S. Census Bureau. (2016). American Community Survey 1-Year Estimates: *Selected characteristics of the native and foreign-born populations.* Washington, DC: U.S. Census Bureau. (2016). Population Estimates Program (PEP). Updated annually. Washington, DC: U.S. Census Bureau.

7. Goldring, R., Taie, S., & Riddles, M. (2014). *Teacher attrition and mobility: Results from the 2012–13 Teacher Follow-up Survey.* Washington, DC: National Center for Education Statistics; Ingersoll, R., & May, H. (2011). *Recruitment, retention and the minority teacher shortage. CPRE Research Report #RR-69.* Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania.

8. U.S. Department of Education, National Center for Education Statistics. (2016). Table 216.55: Number and percentage distribution of public elementary and secondary school students, by percentage of student's racial/ethnic group enrolled in the school and student's racial/ethnic group: Selected years, fall 1995 through fall 2014. In U.S. Department of Education, National Center for Education Statistics (Ed.), *Digest of Education Statistics* (2016 ed.). Retrieved from https://nces.ed.gov/programs/digest/d16/tables/dt16_216.55.asp.; Taie, S., & Goldring, R. (2017). *Characteristics of Public Elementary and Secondary School Teachers in the United States: Results From the 2015–16 National Teacher and Principal Survey.* Washington, DC: National Center for Education Statistics.

9. Ingersoll, R., May, H., & Collins, G. (2017). *Minority teacher recruitment, employment, and retention: 1987 to 2013.* Palo Alto, CA: Learning Policy Institute.

10. Warner-Griffin, C., Noel, A., & Tadler, C. (2016). *Sources of newly hired teachers in the United States: Results from the Schools and Staffing Survey, 1987– 88 to 2011–12* (NCES 2016-876). U.S. Department of Education. Washington, DC: National Center for Education Statistics; LPI analysis of National Teacher and Principal Survey, 2015–16. Washington, DC: National Center for Education Statistics.

11. Higgins, P., Shaffer, S., & Schlanger, P. 2017. School integration—Preparing teachers for working in diverse classrooms. IDRA *Newsletter 44*(4). San Antonio, TX: IDRA.

12. Villegas, A. M., & Irvine, J. J. (2010). Diversifying the teaching force: An examination of major arguments. *Urban Review, 42*(3), 175–192.

13. Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it.* Palo Alto, CA: Learning Policy Institute.

14. Dee, T. (2004). Teachers, race and student achievement in a randomized experiment. *The Review of Economics and Statistics, 86*(1), 195–210.

15. Gershenson, S., Hart, C. M. D., Lindsay, C. A., & Papageorge, N. W. (2017). *The long-run impacts of same-race teachers.* Bonn, Germany: IZA Institute of Labor Economics. Discussion Paper Series.

16. Gershenson, S., Hart, C. M. D., Lindsay, C. A., & Papageorge, N. W. (2017). *The long-run impacts of same-race teachers.* Bonn, Germany: IZA Institute of Labor Economics. Discussion Paper Series.

17. Clotfelter, C. T., Ladd, H. F., & Vigdor, J. L. (2007). Teacher credentials and student achievement: Longitudinal analysis with student fixed effects. *Economics of Education Review, 26*(6), 673–682; Goldhaber, D., & Hansen, M. (2010). Race, gender, and teacher testing: How informative a tool is teacher licensure testing? *American Educational Research Journal, 47*(1), 218–251; Egalite, A. J., Kisida, B., & Winters, M. A. (2015). Representation in the classroom: The effect of own-race teachers on student achievement. *Economics of Education Review, 45*, 44–52.

18. Fairlie, R. W., Hoffmann, F., & Oreopoulos. P. (2014.) A community college instructor like me: Race and ethnicity interactions in the classroom. *American Economic Review, 104*(8): 2567–2591.

19. Holt, S. B., & Gershenson, S. (2015). *The impact of teacher demographic representation on student attendance and suspensions*. Bonn, Germany: IZA Institute of Labor Economics. Discussion Paper Series.

20. Lindsay, C. A., & Hart, C. M. D., (2017). Exposure to same-race teachers and student disciplinary outcomes for Black students in North Carolina. *Educational Evaluation and Policy Analysis, 39*(3): 485–510.

21. Auerbach, S. (2007). From moral supporters to struggling advocates: Reconceptualizing parent roles in education through the experience of working-class families of color. *Urban Education, 42*(3), 250–283; Guarino, C. M., Santibañez, L., & Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research, 76*(2), 173–208; Boser, U. (2011). Teacher diversity matters: A state-by-state analysis of teachers of color. Washington, DC: Center for American Progress; Evans, M. O. (1992). An estimate of race and gender role model effects in teaching high school. *The Journal of Economic Education, 23*(3): 209–217; Clewell, B. C., & Villegas, A. M. (1998). Diversifying the teaching force to improve urban schools: Meeting the challenge. *Education and Urban Society, 31*(1), 3–17; Quiocho, A., & Rios, F. (2000). The power of their presence: Minority group teachers and schooling. *Review of Educational Research, 70*(4), 485–528; Villegas, A. M., & Lucas, T. F. (2004). Diversifying the teacher workforce: A retrospective and prospective analysis. *Yearbook of the National Society for the Study of Education, 103*, 70–104.

22. Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist, 52*(6), 613–629; Dee, T. (2004). Teachers, race and student achievement in a randomized experiment. *The Review of Economics and Statistics, 86*(1), 195–210.

23. Fox, L. (2015). Seeing potential: The effects of student-teacher demographic congruence on teacher expectations and recommendations. *AERA Open*; Ouazad, A. (2014). Assessed by a teacher like me: Race and teacher assessments. *Education Finance and Policy, 9*(3), 334–372; Gershenson, S., Holt, S. B., & Papageorge, N. W. (2015). *Who believes in me? The effect of student-teacher demographic match on teacher expectations.* (Upjohn Institute Working Paper 15–231). Kalamazoo, MI: W. E. Upjohn Institute for Employment Research; Baron, R. M., Tom, D. Y. H., & Cooper, H. M. (1985). Social class, race and teacher expectations. In J. B. Dusek (Ed.), *Teacher expectations* (pp. 251–269). Hillsdale, NJ: Lawrence Erlbaum Associates; Tenenbaum, H. R. & Ruck, M. D. (2007). Are teachers' expectations different for racial minority than for European American students? A meta-analysis. *Journal of Educational Psychology, 99*(2): 253–273; Downey, D. B., & Ainsworth-Darnell, J. W. (2002). The search for oppositional culture among Black students. *American Sociological Review, 67*(1), 156–164.

24. Warikoo, N. (2004). Race and the teacher-student relationship: Interpersonal connections between West Indian students and their teachers in a New York City high school. *Race Ethnicity and Education 7*(2): 135–147; King, S. H. (1993). The limited presence of African-American teachers. *Review of Educational Research, 63*(2), 115–149; Irvine, J. J. (1990). *Black students and school failure: Policies, practices, and prescriptions*. Westport, CT: Praeger; Achinstein, B., Ogawa, R. T., Sexton, D., & Freitas, C. (2010). Retaining teachers of color: A pressing problem and a potential strategy for "hard-to-staff" schools. *Review of Educational Research 80*(1), 71–107; Villegas, A. M., & Irvine, J. J. (2010). Diversifying the teaching force: An examination of major arguments. *Urban Review 42*(3), 175–92.

25. Cherng, H.-Y. S., & Davis, L. A. (2017). Multicultural matters: An investigation of key assumptions of multicultural education reform in teacher education. *Journal of Teacher Education*.

26. Casteel, C. A. (1998). Teacher-student interactions and race in integrated classrooms. *Journal of Educational Research, 92*(2), 115–120; Taylor, M. C. (1979). Race, sex, and the expression of self-fulfilling prophecies in a laboratory teaching situation. *Journal of Personality and Social Psychology, 37*(6), 897–912.

27. Cherng, H.-Y. S., & Halpin, P. F. (2016). The importance of minority teachers: Student perceptions of minority versus White teachers. *Educational Researcher, 45*(7), 407–420; Irvine, J. J. (1988). An analysis of the problem of disappearing Black educators. *Elementary School Journal, 88*(5), 503–514.

28. Raudenbush, S. W., & Jean, M. (2014). To what extent do student perceptions of classroom quality predict teacher value added? In T. J. Kane, K. A. Kerr, & R. C. Pianta (Eds.), *Designing Teacher Evaluation Systems.* San Francisco, CA: John Wiley & Sons, Inc.

29. Kubota, J. T., Peiso, J., Marcum, K., & Cloutier, J. (2017). Intergroup contact throughout the lifespan modulates implicit racial biases across perceivers' racial group. *PLoS ONE 12*(7): e0180440.

30. Brief of Fortune-100 and other leading American businesses as amici curiae in support of respondents in *Fisher v. University of Texas at Austin*. (2015).

31. Simon, N. S., & Johnson, S. M. (2015). Teacher turnover in high-poverty schools: What we know and can do. *Teachers College Record, 117*(3), 1–36; Griffin, A., & Tackie, H. (2016). *Through our eyes: Perspectives and reflections from Black teachers.* Washington, DC: The Education Trust.

32. Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal, 38*(3), 499–534; Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). How teacher turnover harms student achievement. *American Educational Research Journal, 50*(1), 4–36; Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Palo Alto, CA: Learning Policy Institute.

33. Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal, 38*(3), 499–534.

34. Ingersoll, R., & May, H. (2011). *Recruitment, retention and the minority teacher shortage. CPRE Research Report #RR-69.* Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania; Ingersoll, R. & May, H. (2016). *Minority teacher recruitment, employment, and retention: 1987 to 2013.* (Research brief). Palo Alto, CA: Learning Policy Institute.

35. Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal, 38*(3), 499–534.

36. Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Palo Alto, CA: Learning Policy Institute.

37. Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it.* Palo Alto, CA: Learning Policy Institute.

38. Ingersoll, R., & May, H. (2011). *Recruitment, retention and the minority teacher shortage. CPRE Research Report #RR-69.* Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania.

39. Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it.* Palo Alto, CA: Learning Policy Institute.

40. Guha, R., Hyler, M. E., & Darling-Hammond, L. (2016). *The teacher residency: An innovative model for preparing teachers.* Palo Alto, CA: Learning Policy Institute.

41. Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it.* Palo Alto, CA: Learning Policy Institute.

42. Musu-Gillette, L., Robinson, J., McFarland, J., KewalRamani, A., Zhang, A., & Wilkinson-Flicker, S. (2016). *Status and Trends in the Education of Racial and Ethnic Groups 2016* (NCES 2016-007). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

43. Darling-Hammond, L. (2018). *Education and the path to one nation, indivisible.* Palo Alto, CA: Learning Policy Institute.

44. U.S. Department of Education, National Center for Education Statistics. (2008). Table 326.10: Graduation rate from first institution attended for first-time, full-time bachelor's degree-seeking students at 4-year postsecondary institutions, by race/ethnicity, time to completion, sex, control of institution, and acceptance rate: Selected cohort entry years, 1996 through 2009. In U.S. Department of Education, National Center for Education Statistics (Ed.), *Digest of Education Statistics* (2016 ed.). Washington, DC: Author. Retrieved from https://nces.ed.gov/programs/digest/d16/tables/dt16_326.10.asp.

45. Santos, J. L., & Haycock, K. (2016). *Fixing America's college attainment problems: It's about more than affordability.* Oakland, CA: The Education Trust.

46. Hargrove, L., Godin, D., & Dodd, B. (2008). *College outcomes comparisons by AP and non-AP high school experiences.* New York, NY: The College Board; Mattern, K. D., Marini, J. P., & Shaw, E. J. (2013). *Are AP students more likely to graduate from college on time?* New York, NY: The College Board.

47. Stewart, S., Lim, D. H., & Kim, J. (2015). Factors influencing college persistence for first-time students. *Journal of Developmental Education, 38*(3), 12–20; Al-Asfour, A., & Abraham, M. (2016). Strategies for retention, persistence, and completion rate for Native American students in higher education. *Tribal College and University Research Journal 1*(1), 46–56.

48. Al-Asfour, A., & Abraham, M. (2016). Strategies for retention, persistence, and completion rate for Native American students in higher education. *Tribal College and University Research Journal 1*(1), 46–56.

49. American Association of Colleges for Teacher Education. (2013). *The changing teacher preparation profession.* Washington, DC: American Association of Colleges for Teacher Education.

50. Gasman, M., Samayoa, A. C., & Ginsberg, A. (2017). Minority serving institutions: Incubators for teachers of color. *The Teacher Educator, 52*(2): 84–98.

51. U.S. Department of Education, National Center for Education Statistics. (2009). Table 306.10: Total fall enrollment in degree-granting postsecondary institutions, by level of enrollment, sex, attendance status, and race/ethnicity of student: Selected years, 1976 through 2014. In U.S. Department of Education, National Center for Education Statistics (Ed.), *Digest of Education Statistics* (2015 ed.). Retrieved from https://nces.ed.gov/programs/digest/d15/tables/dt15_306.10.asp.

52. Federal Reserve Bank of New York. (2013, March 29). Student loan debt by age group. https://www.newyorkfed.org/studentloandebt/index.html.

53. Rothstein, J., & Rouse, C. E. (2011). Constrained after college: Student loans and early-career occupational choices. *Journal of Public Economics, 95*(1), 149–163.

54. Baum, S., & O'Malley, M. (2003). College on credit: How borrowers perceive their education debt. *Journal of Student Financial Aid, 33*(3): 7–19.

55. Scott-Clayton, J., & Li, J. (2016). *Black-White disparity in student loan debt more than triples after graduation.* Washington, DC: Brookings Institution.

56. Scott-Clayton, J. (2018). *The looming student loan default crisis is worse than we thought.* Washington, DC: Brookings Institution.

57. Gasman, M., Samayoa, A. C., & Ginsberg, A. (2017). Minority serving institutions: Incubators for teachers of color. *The Teacher Educator, 52*(2): 84–98.

58. Ingersoll, R., Merrill, L., & May, H. (2012). Retaining teachers: How preparation matters. *Educational Leadership, 69*(8), 30–34.

59. U.S. Department of Education, Higher Education Act Title II State Report Card System. (2015). Enrollment, by state, by gender and race/ethnicity. Retrieved from https://title2.ed.gov/Public/DataTools/Tables.aspx.

60. Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it.* Palo Alto, CA: Learning Policy Institute.

61. LPI analysis of Praxis State Requirements. (n.d.). From State Requirements, Educational Testing Service, https://www.ets.org/praxis/states.

62. Tyler, L. (2011). *Toward increasing teacher diversity: Targeting support and intervention for teacher licensure candidates.* Princeton, NJ: Educational Testing Service.

63. Tyler, L. (2011). *Toward increasing teacher diversity: Targeting support and intervention for teacher licensure candidates.* Princeton, NJ: Educational Testing Service.

64. National Research Council. (2001). *Testing teacher candidates: The role of licensure tests in improving teacher quality.* Committee on Assessment and Teacher Quality, K. J. Mitchell, D. Z. Robinson, B. S. Plake, & K. T. Knowles (Eds.). Washington, DC: National Academy Press; Nettles, M. T., Scatton, L. H., Steinberg,

J. H., & Tyler, L. L. (2011). *Performance and passing rate differences of African American and White prospective teachers on Praxis examinations.* Princeton, NJ: Educational Testing Service; Cole, B. P. (1986). The Black educator: An endangered species. *Journal of Negro Education, 55*(3), 326–334.

65. Report of the NCTE Task Force on teacher competency issues. (1987). *English Education, 19*(3), 181–192.

66. Goertz, M. E., & Pitcher, B. (1985). *The impact of NTE use by states on teacher selection.* (RR-85-1). Princeton, NJ: Educational Testing Service.

67. National Research Council. (2001). *Testing teacher candidates: The role of licensure tests in improving teacher quality.* Committee on Assessment and Teacher Quality, K. J. Mitchell, D. Z. Robinson, B. S. Plake, & K. T. Knowles (Eds.). Washington, DC: National Academy Press.

68. Haney, W., Madaus, G., & Kreitzer, A. (1987). Charms talismanic: Testing teachers for the improvement of American education. *Review of Research in Education 14*(1987): 169–238.

69. Baker, R. S. (2006). *Paradoxes of desegregation: African American struggles for educational equity in Charleston, South Carolina, 1926–1972.* Columbia, SC: University of South Carolina Press, p. 46–62; Haney, W., Madaus, G., & Kreitzer, A. (1987). Charms talismanic: Testing teachers for the improvement of American education. *Review of Research in Education 14*(1987): 169–238.

70. Haney, W., Madaus, G., & Kreitzer, A. (1987). Charms talismanic: Testing teachers for the improvement of American education. *Review of Research in Education 14*(1987): 169–238; Baker, R. S. (2006). *Paradoxes of desegregation: African American struggles for educational equity in Charleston, South Carolina, 1926–1972.* Columbia, SC: University of South Carolina Press, p. 61–62.

71. Medley, D. M., & Quirk, T. J. (1974). The application of a factorial design to the study of cultural bias in general culture items on the National Teacher Examination. *Journal of Educational Measurement, 11*(4): 235–245.

72. Haney, W., Madaus, G., & Kreitzer, A. (1987). Charms talismanic: Testing teachers for the improvement of American education. *Review of Research in Education 14*(1987): 169–238; National Research Council. (2001). *Testing teacher candidates: The role of licensure tests in improving teacher quality.* Committee on Assessment and Teacher Quality, K. J. Mitchell, D. Z. Robinson, B. S. Plake, & K. T. Knowles (Eds.). Washington, DC: National Academy Press; Goldhaber, D., & Hansen, M. (2017). Race, gender, and teacher testing: How informative a tool is teacher licensure testing? *American Educational Research Journal, 47*(1): 218–251.

73. Kolman, J. S., Gellert, L. M., & McLurkin, D. L. (2017). Lifting gates and building skills: Preparing diverse candidates to pass new certification exams. In E. Petchauer & L. Mawhinney (Eds.), *Teacher education across minority serving institutions: Programs, policies, and social justice.* New Brunswick, NJ: Rutgers University Press.

74. Darling-Hammond, L. (2010). *Evaluating teacher effectiveness: How teacher performance assessments can measure and improve teaching.* Washington, DC: Center for American Progress; Wilson, M., Hallam, P. J., Pecheone, R., & Moss, P. A. (2014). Evaluating the validity of portfolio assessments for licensure decisions. *Education Policy Analysis Archives, 22*(6); edTPA. (2015). *Educative assessment & meaningful support: 2014 edTPA administrative report.* Stanford, CA: edTPA; Goldhaber, D., Cowan, J., & Theobald, R. (2017). Evaluating prospective teachers: Testing the predictive validity of the edTPA. *Journal of Teacher Education, 68*(4), 377–393.

75. Darling-Hammond, L. (2010). *Evaluating teacher effectiveness: How teacher performance assessments can measure and improve teaching.* Washington, DC: Center for American Progress.

76. Darling-Hammond, L. (2010). *Evaluating teacher effectiveness: How teacher performance assessments can measure and improve teaching.* Washington, DC: Center for American Progress.

77. edTPA. (2015). *Educative assessment & meaningful support: 2014 edTPA administrative report.* Stanford, CA: edTPA.

78. Goldhaber, D., Cowan, J., & Theobald, R. (2017). Evaluating prospective teachers: Testing the predictive validity of the edTPA. *Journal of Teacher Education, 68*(4), 377–393.

79. Simon, N. S., & Johnson, S. M. (2015). Teacher turnover in high-poverty schools: What we know and can do. *Teachers College Record, 117*(3), 1–36; Ingersoll, R., & May, H. (2011). *Recruitment, retention and the minority teacher shortage. CPRE Research Report #RR-69.* Philadelphia, PA: Consortium for Policy Research

in Education, University of Pennsylvania; Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). How teacher turnover harms student achievement. *American Educational Research Journal, 50*(1), 4–36.

80. Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it.* Palo Alto, CA: Learning Policy Institute.

81. Ingersoll, R., & May, H. (2016). *Minority teacher recruitment, employment, and retention: 1987 to 2013.* (Research brief). Palo Alto, CA: Learning Policy Institute.

82. Levine, A. (2005). *Educating school leaders.* Princeton, NJ: The Education Schools Project; see also Fry, B., Bottoms, G., & O'Neill, K. (2005). *The principal internship: How can we get it right?* Atlanta, GA: Southern Regional Education Board.

83. The Wallace Foundation. (2016). *Improving university principal preparation programs: Five themes from the field.* New York, NY: The Wallace Foundation.

84. Griffin, A., & Tackie, H. (2016). *Through our eyes: Perspectives and reflections from Black teachers.* Washington, DC: The Education Trust.

85. Brockenbrough, E. (2015). "The discipline stop": Black male teachers and the politics of urban school discipline. *Education and Urban Society, 47*: 499–522.

86. Griffin, A. (2018). *Our stories, our struggles, our strengths: Perspectives and reflections from Latino teachers.* Washington, DC: The Education Trust.

87. Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Palo Alto, CA: Learning Policy Institute.

88. Goldring, R., Taie, S., & Riddles, M. (2014). *Teacher attrition and mobility: Results from the 2012–13 Teacher Follow-up Survey.* Washington, DC: National Center for Education Statistics; Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it.* Palo Alto, CA: Learning Policy Institute.

89. Executive Office of the President. (2012). *Investing in our future: Returning teachers to the classroom.* Washington, DC: Executive Office of the President, https://obamawhitehouse.archives.gov/sites/default/files/Investing_in_Our_Future_Report.pdf.

90. Holley-Walker, D. (2007). The Accountability Cycle: The Recovery School District Act and New Orleans' charter schools. *Connecticut Law Review, 40*(1), 125–163; Ciolino, M. S., Kirylo, J. D., Mirón, L., & Frazier, K. (2015). Education reform in New Orleans: Voices from the recovery school district. In L. Mirón, B. R. Beabout, & J. L. Boselovic (Eds.), *Only in New Orleans: School Choice and Equity Post-Hurricane Katrina.* Rotterdam, Netherlands: Sense Publishers.

91. Bond, B., Quintero, E., Casey, L., & Di Carlo, M. (2015). *The state of teacher diversity in American education.* Washington, DC: Albert Shanker Institute.

92. Weber, M., Baker, B., & Oluwole, J. (2014). *"One Newark's" racially disparate impact on teachers.* New Brunswick, NJ: New Jersey Education Policy Forum.

93. We define high-quality preparation as teacher preparation that offers the pedagogical theory and opportunities for clinical application that prospective teachers need for long-term success in the classroom. A study by Ingersoll, Merrill, and May of beginning teacher turnover found that those first-year teachers who had entered the classroom having received the most comprehensive preparation—five or more teaching methods courses, preparation in using instructional materials, learning theory or child psychology courses, conducting classroom observations, and at least a semester of student teaching with feedback—were two to three times less likely to leave the profession after the first year than those who received little preparation to teach before entering the classroom. Ingersoll, R., Merrill, L., & May, H. (2014). *What are the effects of teacher education and preparation on beginning teacher attrition?* Philadelphia: Consortium for Policy Research in Education, University of Pennsylvania.

94. Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). *Solving the teacher shortage: How to attract and retain excellent educators.* Palo Alto, CA: Learning Policy Institute.

95. Hansen, M., Quintero, D., & Feng, L. (2018). *Can money attract more minorities into the teaching profession?* Washington, DC: Brookings Institution.

96. Podolsky, A., & Kini, T. (2016). *How effective are loan forgiveness and service scholarships for recruiting teachers?* (Policy brief). Palo Alto, CA: Learning Policy Institute.

97. Henry, G. T., Bastian, K. C., & Smith, A. A. (2012). Scholarships to recruit the "best and brightest" into teaching: Who is recruited, where do they teach, and how long do they stay? *Educational Researcher, 41*(3), 83–92.

98. Public School Forum of North Carolina. (2016). *A legacy of inspired educators: A report on the North Carolina Teaching Fellows Program, 1986–2015.* Raleigh, NC: Public School Forum of North Carolina. https://www.ncforum.org/wp-content/uploads/2016/09/PSF_TeachingFellowsReport_HRsingles.pdf.

99. North Carolina Teaching Fellows. (2017). The program. https://ncteachingfellows.com/the-program/.

100. Minnesota Department of Education. (n.d.). *Collaborative Urban and Greater Minnesota Educators of Color Program, Introduction memo.* https://education.mn.gov/mdeprod/groups/educ/documents/grant/bwrl/mdcx/~edisp/mde071939.pdf.

101. Augsburg University. (January 2018). *EAST program interim progress report, 2017–2019 CUE funding cycle.* https://www.leg.state.mn.us/docs/2018/mandated/180369.pdf.; Concordia University, University of St. Thomas & Hamline University. (January 2018). Collaborative Urban Educator Grant Program Legislative Report. https://www.leg.state.mn.us/lrl/mndocs/mandates_detail?orderid=9959.

102. Guha, R., Hyler, M. E., & Darling-Hammond, L. (2016). *The teacher residency: An innovative model for preparing teachers.* Palo Alto, CA: Learning Policy Institute.

103. Wiswall, M. (2013). The dynamics of teacher quality. *Journal of Public Economics, 100*, 61–78; Kini, T., & Podolsky, A. (2016). *Does teaching experience increase teacher effectiveness? A review of the research.* Palo Alto: Learning Policy Institute.

104. Guha, R., Hyler, M. E., & Darling-Hammond, L. (2016). *The teacher residency: An innovative model for preparing teachers.* Palo Alto, CA: Learning Policy Institute.

105. Guha, R., Hyler, M. E., & Darling-Hammond, L. (2016). *The teacher residency: An innovative model for preparing teachers.* Palo Alto, CA: Learning Policy Institute.

106. Guha, R., Hyler, M. E., & Darling-Hammond, L. (2016). *The teacher residency: An innovative model for preparing teachers.* Palo Alto, CA: Learning Policy Institute; National Center for Teacher Residencies. (2016). *2015 Network Impact Overview.* Chicago: National Center for Teacher Residencies; Solomon, J. (2009). The Boston Teacher Residency: District-based teacher education. *Journal of Teacher Education, 60*(5), 478–488; Sloan, K., & Blazevski, J. (2015). *New Visions Hunter College Urban Teacher Residency: Measures of success.* Bloomington, IN: Rockman.

107. Boston Teacher Residency. (2016). Impact. http://www.bpe.org/boston-teacher-residency/about/impact/.

108. Guha, R., Hyler, M. E., & Darling-Hammond, L. (2016). *The teacher residency: An innovative model for preparing teachers.* Palo Alto, CA: Learning Policy Institute.

109. Learning Policy Institute. (2016). *Teacher Residencies in California* (Policy brief). Palo Alto, CA: Learning Policy Institute.

110. Garcia, A. (2016, February 2). *Growing their own in Minneapolis: Building a diverse teacher workforce from the ground up.* Washington, DC: New America. https://www.newamerica.org/education-policy/edcentral/minneapolis-grow-your-own/.

111. Rhode Island Department of Education. (n.d.). Academic requirements for entry into educator preparation programs implementation guidance for the 2018–19 cohort year. http://www.ride.ri.gov/Portals/0/Uploads/Documents/Teachers-and-Administrators-Excellent-Educators/Educator-Certification/Becoming-an-Educator/Min_Admission_Requirement_Implementation_Guidance.pdf.

112. Reininger, M. (2012). Hometown disadvantage? It depends on where you're from: Teachers' location preferences and the implications for staffing schools. *Educational Evaluation and Policy Analysis, 34*(2): 127–145; Boyd, D., Lankford, H., Loeb, S., & Wyckoff, J. (2005). Explaining the short careers of high-achieving teachers in schools with low-performing students. *American Economic Review, 95*(2), 166–171; Clewell, B. C., & Villegas, A. M. (2001). *Absence unexcused: Ending teacher shortages in high-need areas.* Washington, DC: Urban Institute.

113. Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). *Solving the teacher shortage: How to attract and retain excellent educators.* Palo Alto, CA: Learning Policy Institute.

114. Teacher Cadets. (2017). Research. https://www.teachercadets.com/research.html.

115. U.S. Department of Education, Higher Education Act Title II State Report Card System. (2015). Enrollment, by state, by gender and race/ethnicity. Retrieved from https://title2.ed.gov/Public/DataTools/Tables.aspx.

116. Tandon, M., Bianco, M., & Zion, S. (2014). Pathways2Teaching: Being, and becoming a "Rida." In C. E. Sleeter, L. I. Neal, & K. K. Kumashiro (Eds.), *Addressing the Demographic Imperative: Recruiting, Preparing, and Retaining a Diverse and Highly Effective Teaching Force* (pp. 111–125). NY: Routledge.

117. Beuten, C. (2017, July 24). Pathways2Teaching encourages youths to teach close to home: High schoolers in underserved communities examine how to break the cycle of inequity. University of Colorado. https://www.cu.edu/article/pathways2teaching-encourages-youths-teach-close-home.

118. Mélon, M. (2017, June 18). Bilingual Teacher Pipeline Project impacts schools, students. *NewsOK*. http://newsok.com/article/5553093.

119. Stone Child College. (n.d.). AA general studies—Teacher education option: Elementary education. http://www.stonechild.edu/images/PDFs/DegreesOffered/AA/Elementary_Education.pdf.

120. CitySpan Technologies, Inc. (2009). California Mini-Corps, 2008–2009 Annual Evaluation. Berkeley, CA: CitySpan Technologies, Inc. https://bcoe.ss3.sharpschool.com/UserFiles/Servers/Server_747631/File/minicorps/2008-2009%20MC_Program_Data%20Report.pdf.

121. Turner, C. S., Cosmé, P. X., Dinehart, L., Martí, R., McDonald, D., Ramirez, M., Rápalo, L. S., & Zamora, J. (2017). Answering the call: Hispanic-Serving Institutions as leaders in the quest for access, excellence, and equity in American higher education. *Association of Mexican American Educators Journal, 11*(3): 251–275.

122. Ginsberg, A., Gasman, M., & Samayoa, A. C. (2017). The role of Minority Serving Institutions in transforming teacher education and diversifying the teaching profession: A literature review and research agenda. *Teachers College Record, 119*(100303): 1–31.

123. California Commission on Teacher Credentialing. (April 2016). Accreditation: Delivery models for teacher preparation programs, options for clinical practice and data collection. https://www.ctc.ca.gov/docs/default-source/commission/agendas/2016-04/2016-04-5b-pdf.pdf?sfvrsn=65079ee2_0.

124. Turner, C. S., Cosmé, P. X., Dinehart, L., Martí, R., McDonald, D., Ramirez, M., Rápalo, L. S., & Zamora, J. (2017). Answering the call: Hispanic-Serving Institutions as leaders in the quest for access, excellence, and equity in American higher education. *Association of Mexican American Educators Journal, 11*(3): 251–275.

125. Lomeli, J., Parks, J., Basurto, I., & Padilla, F. (2006). California Mini-Corps: Developing quality teachers for 40 Years. *Education, 127*(1): 100–108.

126. Cary, N. (2016, April 27). Call Me MISTER goes to Washington. *Greenville News.* http://www.greenvilleonline.com/story/news/education/2016/04/27/call-me-mister-goes-washington/83591664/.

127. Interview with Micia Mosely, founder of the Black Teacher Project, March 2018.

128. Iasevoli, B. (April 25, 2017). *Boston launches program to retain and groom minority teachers.* Bethesda, MD: Education Week. https://www.edweek.org/ew/articles/2017/04/26/boston-program-supports-male-educators-of-color.html.

129. Vanderhaar, J. (2014). *Equity & Inclusion Institute Jefferson County Public Schools 2013–14: Evaluation report.* Louisville, KY: Jefferson County Public Schools.

130. Vanderhaar, J. (2014). *Equity & Inclusion Institute Jefferson County Public Schools 2013–14: Evaluation report.* Louisville, KY: Jefferson County Public Schools.

131. State Collaborative on Reforming Education. (2016). *Prepared for day one: Improving the effectiveness of early-career teaching.* Nashville, TN: State Collaborative on Reforming Education.

132. State Collaborative on Reforming Education. (2016). *Prepared for day one: Improving the effectiveness of early-career teaching.* Nashville, TN: State Collaborative on Reforming Education.

133. Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). *Solving the teacher shortage: How to attract and retain excellent educators.* Palo Alto, CA: Learning Policy Institute.

134. Boston Municipal Research Bureau. (2016). *Boston Public Schools Human Capital Initiative: A bold approach to improve the quality of BPS teachers in the classroom.* Boston, MA: Boston Municipal Research Bureau.

135. Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). *Solving the teacher shortage: How to attract and retain excellent educators.* Palo Alto, CA: Learning Policy Institute.

136. Simon, N. S., & Johnson, S. M. (2015). Teacher turnover in high-poverty schools: What we know and can do. *Teachers College Record, 117*(3), 1–36; Griffin, A., & Tackie, H. (2016). *Through our eyes: Perspectives and reflections from Black teachers.* Washington, DC: The Education Trust.

137. Ingersoll, R. M., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research, 81*(2), 201–233.

138. Ingersoll, R. M., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research, 81*(2), 201–233.

139. Bednar, S., & Gicheva, D. (2017). Workplace support and diversity in the market for public school teachers. *Education Finance and Policy.* (Forthcoming).

140. Darling-Hammond, L., LaPointe, M., Meyerson, D., Orr, M. T., & Cohen, C. (2007). *Preparing school leaders for a changing world: Lessons from exemplary leadership development programs.* Stanford, CA: Stanford University, Stanford Educational Leadership Institute; National Policy Board for Educational Administration. (2015). *Professional standards for educational leaders 2015.* Reston, VA: National Policy Board for Educational Administration.

141. Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it.* Palo Alto, CA: Learning Policy Institute.

142. LaPointe, M., Davis, S., & Cohen, C. (2007). *School leadership study: Developing successful principals* (Case study series: Principal preparation at Delta State University—A bold strategy to improve practice). Stanford, CA: Stanford University, Stanford Educational Leadership Institute.

143. Delta State University. (2018). Master of education in educational administration and supervision. http://www.deltastate.edu/education-and-human-sciences/teacher-education-research-leadership/master-education-educational-administration-supervision/.

144. Jacob, R., Goddard, R., Kim, M., Miller, R., & Goddard, Y. (2015). Exploring the causal impact of the McREL Balanced Leadership Program on leadership, principal efficacy, instructional climate, educator turnover, and student achievement. *Educational Evaluation and Policy Analysis, 37*(3), 314–332.

145. Elementary and Secondary Education Act of 1965, Pub. L. No. 89–10, § 2101 (2015).

146. Southern Regional Education Board. (n.d.). About HSTW. https://www.sreb.org/about-hstw.

147. Consortium for Policy Research in Education. (2007). *High Schools That Work—A case study of implementation in three schools.* Philadelphia, PA: Consortium for Policy Research in Education. http://www.cpre.org/high-schools-work-case-study-implementation-three-schools

148. Maier, A., Daniel, J., Oakes, J., & Lam, L. (2017). *Community schools as an effective school improvement strategy: A review of the evidence.* Palo Alto, CA: Learning Policy Institute.

About the Author

Desiree Carver-Thomas is a Research and Policy Associate on LPI's Educator Quality Team. She is the lead author of *Teacher turnover: Why it matters and what we can do about it* and *Addressing California's growing teacher shortage: 2017 update*, and she is the co-author of *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Previously, she taught in New York City public schools.

LEARNING POLICY INSTITUTE

1530 Page Mill Road, Suite 200
Palo Alto, CA 94304
p: 650.332.9797

1301 Connecticut Avenue NW, Suite 500
Washington, DC 20036
p: 202.830.0079

@LPI_Learning | learningpolicyinstitute.org