Center for American Progress

Attaining Equitable Distribution of Effective Teachers in Public Schools

By Glenda L. Partee   April 2014

Center for American Progress

Attaining Equitable Distribution of Effective Teachers in Public Schools

By Glenda L. Partee   April 2014

Contents

Introduction and summary

Since Congress passed the No Child Left Behind Act of 2001, or NCLB, much has transpired in K-12 public education. NCLB, the most recent iteration of the Elementary and Secondary Education Act of 1965, or ESEA, sought to ensure that all children have the equal opportunity for a high-quality education, established criteria for highly qualified teachers, and required all students to be taught by "highly qualified" teachers by 2006. Criteria for a highly qualified teacher, or HQT, included a bachelor's degree, full state certification, and demonstrated competency in each core academic subject taught. For accountability purposes, the law required that states assess the extent to which all students have highly qualified teachers and develop plans to ensure that poor and minority students are not taught by inexperienced, unqualified, and/or out-of-field teachers at higher rates than other students.

Today, well more than a decade since the passage of NCLB, we know much more about the impact of high-quality teaching on student achievement. We also know that teacher characteristics once considered important indicators of teacher quality are only weakly related to their performance in the classroom. New measures of teacher effectiveness, determined by evidence of teacher practice and improvements in student achievement, are now available and provide strong markers for assessing teaching quality and the equitable distribution of the most capable teachers.

Current federal education policy reflects this new understanding and its accompanying changes. The Obama administration offered state flexibility, or waivers, from key provisions of NCLB in 2011.[1] Through waivers, the administration provided a structure for states to develop coherent systems to evaluate teacher effectiveness and put in place systems of support to improve teaching quality. Among the tradeoffs: School districts that did not meet their HQT targets were no longer required to develop HQT improvement plans, and state education agencies were exempt from their role in the implementation of these plans, including the requirement to provide technical assistance to local school districts.[2] To date, 42 states, the District of Columbia, and Puerto Rico have flexibility under ESEA.[3]

We are now at a junction where the current law focused on teacher-quality measures exists along with emerging new criteria, policies, and useful tools to help determine access to and equitable distribution of effective teachers. This is an opportunity to reset the old and align with the new. It is now possible to address concerns about teacher quality in broader, more creative ways that incorporate thoughtful approaches to prepare teachers and school leaders to successfully support learning for all students; hire and recruit the best future educators based on evidence of their performance; reward and retain the best teachers we have in place; create work environments capable of supporting and sustaining a well-prepared and effective teacher workforce; and address the structural causes of inequitable teacher distribution embedded in how we fund and staff our schools. It is time to jettison policies that act as barriers to staffing and compensating the most effective teachers for the most challenging schools and working assignments.

This report explores shifts in policy and practice at this juncture and explores a range of state policy levers that can be used to improve the overall quality of the educator workforce as a larger strategy to ensure that all students have access to effective teachers. Furthermore, this report addresses federal oversight of teacher-equity provisions in current education law and efforts to encourage states to build rigorous systems of educator evaluation and support. We include examples of promising models and strategies to ensure that poor students and students of color have strong and effective teachers and illustrate the potential for extra efforts and investments in schools in need of qualified and effective educators.

Our aim is to initiate a meaningful dialogue among critical stakeholders about what is possible within the current education framework, what is working, and approaches that should be expanded or discarded. Large-scale change in the effectiveness of educators will require a coordinated effort that involves policymakers at all levels to consciously raise the floor of expectations for all teachers, as well as ensure that disadvantaged students get not only their fair share of effective educators but also a larger share of those teachers in places where schools are low performing and low student achievement is evidenced.

Specifically, this report finds that:

- States and districts made great strides in the implementation of the HQT provisions of NCLB, and these criteria are now deeply embedded in school-staffing norms. But inequities persist across schools and districts based on measures of teacher quality and effectiveness.

- Many of the required state equity plans are out of date with respect to the old measures of teacher qualifications and do not reflect newer measures of teacher effectiveness. Still, many of the plans are rich with strategies to ensure equitable teacher distribution and improve teachers' overall effectiveness. With proper tweaking, these strategies can be applicable to the policy change of an effectiveness framework.

- Some local districts and schools are implementing changes to make hard-to-staff schools professional working environments where effective teachers—both novices and veterans—want to work.

The recommendations included in this report—specific to states, districts, schools, and the federal government—come from diverse sources and, in many cases, have been advanced over the years. They are restated here, however, because they are crucial and contribute to a framework of actions that must be continuously reinforced. Specifically, we recommend that states, districts, and schools take the following steps:

- Embrace a comprehensive and holistic view of strategic talent management to recruit, retain, compensate, and tenure effective teachers and school leaders.

- Develop and act on the information provided through strong data systems that link teacher characteristics and effectiveness data to student achievement and school success.

- Build capacity to facilitate equitable teacher distribution.

- Incorporate successful service in the most challenging schools with the neediest students as part of the pathway of an effective teacher toward master status.

- Establish and pilot model programs, such as teacher-residency programs, master-teacher corps of the most highly effective teachers, and strategic teams of motivated and effective teachers and leaders. Provide greater flexibility for local school leaders to hire the best candidates.

For the federal government, we recommend the following:

- Use the data from new state educator-evaluation systems as they become available to determine the equitable distribution of effective, experienced, and in-field teachers across schools based on factors of student race and ethnicity and poverty.

- Strengthen the comparability provision in ESEA Title I, Part A, to ensure schools that serve low-income students receive the same share of local and state dollars, before federal funds are added, as schools that serve higher-income students.

- Hold states accountable for reporting and acting on teacher-distribution inequities.

Finally, in a future reauthorization of ESEA, Congress must acknowledge the shift from a focus on attaining highly qualified status to a focus on teacher effectiveness. Equity provisions must ensure that poor students and students of color are not taught by inexperienced, ineffective, or out-of-field teachers at higher rates than other students. In a new ESEA, states must demonstrate that they are using strong systems of evaluation based on multiple measures, including student academic growth, to address inequities in order to maintain federal funding support.

It is time to get serious about eliminating achievement differences between poor children and children of color and their more affluent and white counterparts. Closing the achievement gap requires doing things differently, which means beginning at the root of the problem—the quality of available teachers. For the United States to maintain—indeed, some might say, regain—its competitive edge internationally, all of our young people, not just the most advantaged, must share a common core of knowledge in a range of subjects and have requisite skills for success in college and careers. To do this, their teachers must be equipped to support student learning to the highest levels of achievement.

Current state of disparities in access to effective teachers

We know that effective teachers improve student learning. But despite more than a decade of efforts to ensure equitable access to high-quality teachers, poor students and students of color are still less likely to have effective teachers than their white and more advantaged peers. Schools with large populations of poor children of color are more likely to be staffed with novice teachers or experienced teachers who are not rated "effective." (See Appendix A for definitions of terms related to qualified and effective teachers.)

An effective teacher, based on an individual teacher's influence on student academic growth, is successful with all students regardless of background and previous achievement.[4] An effective teacher raises all boats, with the strongest benefits accruing to students at the lowest achievement levels.[5] Most critical among these findings is that the impact on student learning of effective teachers is additive and cumulative over grade levels, with little evidence of compensatory effects. This means that students in classrooms of very effective teachers, after being taught by relatively ineffective teachers, make strong academic gains, but these gains are not always enough to offset previous ineffective instruction.[6] These findings speak to the importance of consistently having a well-prepared, effective teacher in every grade, subject, and year of a student's matriculation. Without this type of educational consistency, there is little or no hope of students catching up or overcoming the disadvantages of poor instruction.

There are near-unanimous findings that the best teachers—those capable of improving student achievement—are not equitably distributed across the spectrum of schools with concentrations of high- and low-poverty students and schools with high and low concentrations of students of color. Schools that serve disadvantaged students tend to get less than their fair share of the highest-performing teachers when compared to schools that serve more-advantaged students.[7] Not only is this a problem across schools, but it is also a problem within schools, where research documents within-school variation in the value added of teacher effectiveness that is at least as large as between-school variation.[8]

Inequitable access to effective teachers is not new

A 2006 report by education advocates Heather G. Peske and Kati Haycock discussed the extent to which students in high-poverty schools and schools with a high percentage of students of color were disproportionately assigned to teachers who were new to the profession and were more likely to be taught by out-of-field teachers—that is to say, teachers without a major or minor in the subject they teach. This was especially evident in high-poverty high schools, where one in three core academic classes were taught by out-of-field teachers, compared to one in five classes in low-poverty schools.[9]

A 2009 U.S. Department of Education report of state and local implementation of NCLB's teacher-quality provisions found that by the 2006-07 school year, when all teachers were to have highly qualified teacher status, traditionally disadvantaged schools had higher percentages of teachers who were not highly qualified than did other schools, with only 1 percent of teachers in low-poverty schools reported as not highly qualified, compared to 5 percent of teachers in high-poverty schools. Moreover, highly qualified teachers in high-poverty schools and schools with a high percentage of students of color were more likely to be new to the profession, and highly qualified teachers in high-poverty schools were less likely to have degrees in their fields of teaching than were highly qualified teachers in low-poverty schools.[10]

Disparities persist today

Newer, more authentic indicators of teacher effectiveness and quality suggest that inequitable access to strong teachers exists today. The most recent use of effectiveness indicators using value-added analyses—measures of a teacher's contribution to student learning that take into account a student's background characteristics and previous achievement level—to assess teacher effectiveness documents the existence of these troubling disparities.

A 2012 Education Trust—West study used student test scores to estimate the value added of thousands of teachers in the Los Angeles Unified School District over a three-year period.[11] The top 25 percent of teachers with the highest effectiveness scores were considered "high value-added" teachers, the bottom 25 percent of teachers were referred to as "low-value-added" teachers, and the rest were referred to as "average." Among the study's findings: A low-income student is more than twice as likely to have a low-value-added English language arts, or ELA,

teacher as a higher-income peer and 66 percent more likely to have a low-value-added math teacher. These patterns are even more pronounced with Latino and African American students, who are two to three times more likely—in math and ELA, respectively—to have bottom-quartile teachers than their white and Asian American peers. The authors of this study indicated that the difference in average teacher effectiveness between the top-poverty-quartile and bottom-poverty-quartile schools amounted to about 14 weeks of student learning in ELA and four weeks in math. Cumulated over the school life of a poor child, these differences represent huge challenges to their academic progress.

Another study that looked at 29 diverse school districts used value-added analysis to measure effective teaching in fourth through eighth grade over the 2008-09 to 2010-11 school years. On average, economically disadvantaged students—those eligible for free or reduced-price lunches—had less access to effective teaching than their more advantaged peers. The study also found that access to effective teaching for disadvantaged students did not change over its three-year period for either ELA or math.[12]

Regardless of how it is measured, teacher quality is not distributed equitably across schools and districts. Poor students and students of color are less likely to get well-qualified or high-value teachers than students from higher-income families or students who are white. States, school districts, and school administrators must constantly weigh the impact of their decisions on the balance of effective personnel resources available to and maintained in their schools.

Teacher experience and levels of effectiveness

Teacher characteristics such as educational attainment, certification status, and experience beyond the first few years are only weakly related to teacher performance.[13] Yet overall, there are higher percentages of beginning teachers in poor communities and those with higher concentrations of students of color than in communities with lower poverty rates and those with lower concentrations of students of color.[14]

According to Jane Hannaway of the National Center for Analysis of Longitudinal Data in Education Research, or CALDER, "Job experience relates only weakly to teacher effectiveness, as measured by student achievement gains, and the overlap between experienced and inexperienced teachers in effective-

ness is considerable. In fact, many rookie recruits outperform their veteran counterparts."[15] The impact of experience is strongest during the first few years of teaching but is marginal after that. "Experience matters, but more is not always better," says CALDER researcher Jennifer King Rice.[16] And although a novice teacher is less effective than a teacher with some experience, the greatest productivity manifests in the first few years of teaching, after which effectiveness declines, particularly among high school teachers.[17] Teachers with more than 20 years of experience are more effective than novice teachers but not significantly more effective than those with five years of experience.[18]

CALDER research also highlights the gains in productivity attributable to teacher experience in high- and low-poverty schools. A 2010 study using valued-added data from Florida and North Carolina found small differences in average teacher quality—such as experience, certification status, and educational attainment—between high-poverty and lower-poverty schools but significantly greater variation in effectiveness among teachers working in high-poverty schools.[19] Inexperienced teachers in high- and lower-poverty schools had comparable levels of effectiveness, with differences in the performance of experienced teachers representing the dominant source of the teacher quality gap in high- and lower-poverty schools. The researchers concluded that the payoff in effectiveness for years of experience is less in high-poverty schools. Rice notes that high-poverty schools are doubly disadvantaged by having higher proportions of inexperienced teachers, as well as experienced teachers who are less effective.

The greatest churn of teachers—whether ineffective or effective—happens at schools with high concentrations of low-income students and students of color and at low-achieving schools.[20] This constant moving in and out of teachers contributes directly to the imbalance of inexperienced and ineffective teachers in these schools.

This is an area where school and district policies can make a large and positive impact. Typically, new teachers are assigned to more-challenging schools with greater numbers of disadvantaged children in their classrooms than teachers with more years of experience.[21] Novice teachers are also given challenging school assignments, such as multiple subjects, split grades, or out-of-field classes.[22] These actions pose obstacles to teacher retention, student achievement, and the development of cadres of potentially effective teachers at the schools that could benefit the most from their careful development.

Given these findings, solutions for closing the achievement gap between high- and lower-poverty schools may rest in raising the floor of teacher effectiveness at high-poverty schools by promoting the retention of the most effective teachers in those schools; inducing highly effective, experienced teachers in lower-poverty schools to move to high-poverty schools; and promoting an environment where all teachers can improve their skills over time.[23]

Reasons for inequitable access

There are an array of factors that contribute to the inequitable distribution of teachers in schools and districts. The reasons most cited for this troubling trend are high mobility and teacher turnover, assignment bias, retention challenges, insufficient compensation and funding, and misaligned policies and practices. Let's examine each in more detail.

High mobility and teacher turnover

Of the almost 3.4 million full- and part-time public school teachers who were teaching during the 2007-08 school year, 84.5 percent remained at the same school—"stayers"—7.6 percent moved to a different school—"movers"—and 8 percent left the profession—"leavers"—during the following year.[24] But high-poverty schools, especially those in urban communities, lose, on average, more than 20 percent of their faculties each year, allowing for the potential of an entire school staff change within a few years.[25] Within five years, the typical Chicago public school, for example, loses more than half of its teachers, with many schools turning over half of their teaching staff every three years. The 100 Chicago public schools with chronically high rates of turnover lose, on average, one-quarter or more of their teaching staff each year—rates clearly at odds with the national average. These are typically schools where most or all students are low income and the student body is predominantly made up of students of color.[26]

Some turnover is inevitable, even desirable, and can provide opportunities to replace ineffective teachers with higher-quality teachers.[27] Although this has potential benefits, there is a downside even if overall teacher effectiveness stays the same. High levels of turnover result in constant churning of new, inexperienced teachers—a massive challenge to the development of strong, stable faculties capable of working individually and collaboratively to improve stu-

dent achievement. Turnover has a disruptive effect, hurting staff cohesion and the shared sense of community in schools. It has negative effects on student achievement—effects that are larger in schools with more low-performing students and students of color.[28]

Bias in assignment of students to teachers at different levels of effectiveness

Beyond the issue of self-selection as higher-qualified and experienced teachers move into schools with fewer challenges and are replaced with a continuous stream of novices, there is the issue of bias in the assignment of students to teachers at different levels of effectiveness.[29]

As noted earlier, variation in teacher effectiveness is often as great within schools as it is between schools, with part of this within-school variation stemming from systemic sorting of teachers in classroom assignments. A study of the 2003-04 through 2010-11 school years in Miami-Dade County Public Schools, a large urban school district in Florida, looked at the relationship between teacher characteristics—including race, gender, experience, highest degree, college selectivity, and leadership positions—and class assignments. The authors found that less-experienced teachers, teachers of color, and female teachers were assigned classes with lower-achieving students at higher rates than were their more experienced, white, and male colleagues. Teachers who held leadership positions and those who attended more-competitive undergraduate institutions were also assigned higher-achieving students at higher rates. These patterns are found at both the elementary and middle and high school levels.[30]

Conditions that affect teacher retention and success

Conditions that affect the retention and success of teachers stem from a combination of financial, human, social, and cultural factors. They include the impact of peers and the degree of collaboration among teachers, the leadership provided by school administrators, and other working conditions. Although wages matter in the overall scheme of career choice, salary reportedly only modestly affects teachers' decisions to leave a school or the profession, while improved working conditions—such as less-challenging students, working closer to home,

and the pursuit of other jobs—largely drive teacher movement.[31] Factors that affect the retention of teachers of color are further compounded by the larger context of urban schools.

In addressing the higher rates of teacher turnover at high-poverty schools, researchers Sarah Almy and Melissa Tooley, both with The Education Trust, raise the question of whether teachers who leave these schools are rejecting the students or rejecting the dysfunctional context of the school. According to their analysis, the source of most teacher dissatisfaction related to working conditions is staff cohesion and school leadership. Therefore, according to Almy and Tooley, it is incumbent on all school districts to make all their schools places where good teachers want to work.[32]

The University of Chicago Consortium on Chicago School Research found that teachers stay in schools where the conditions support their potential to be effective. They stay in schools where leaders are supportive and inclusive of teachers; where they feel they have influence over their work environment; and where colleagues are collaborators, parents are perceived as partners, there are low rates of student misbehavior, and the learning climate for students is nondisruptive and safe.[33]

These findings reflect earlier work by Richard M. Ingersoll of the University of Pennsylvania, who related high levels of teacher turnover in high-poverty schools to job dissatisfaction due to inadequate support from administrations and barriers to effectiveness, such as excessive intrusions on teaching time, lack of classroom autonomy, student behavioral problems, and lack of faculty input into school decision making. Capping these conditions, teachers in these schools are often paid less than teachers in other schools. Ingersoll believes that these factors, more than the compensation gap between teachers in high-poverty and high-affluence schools, influence teacher-of-color turnover rates.[34] Building on Ingersoll's work, researcher Rob Connor found that African American teacher turnover and job satisfaction have significant relationships with the resources, disciplinary support, and decision-making power offered in a given school environment. He concluded that African American teacher turnover may be influenced more by the organizational conditions within a school than by school demographics.[35]

Effective teachers tend to seek out schools where faculties are in the top quartile of teaching quality.[36] Other research documents improvements in student performance when teachers are exposed to more-effective colleagues, with

effectiveness based on valued-added measures. The spillover from this association is strongest for less-experienced teachers and possibly reflects the value of peer learning within schools. In other words, effective teachers help improve the performance of their peers.[37]

Insufficient compensation and school funding

Educator compensation and school funding are controversial and weighty issues that are difficult to reform because they are complex and, as currently configured, deeply engrained in the educational enterprise. If appropriately designed and implemented, compensation systems are important tools to improve teacher effectiveness and retention and to channel effective teachers into high-demand subjects and high-poverty schools. Funding is the foundation of public education, and although funds can be used in nonproductive ways, money is a great determiner of what is affordable and a motivator for positive change in how we support and staff our most challenging schools.

Policy and practices contribute to the problem

Aside from the school-funding muddle that persists, a number of local and state policies and practices hamper efforts to get the best teachers to the schools and students that need them most. Some of these policies relate to human resource practices that are misaligned with school and student needs.[38] Take, for instance, the practice, cited earlier, of placing the most inexperienced teachers in the most challenging schools and work assignments. Other policies emanate from requirements in collective bargaining agreements, such as those that determine dismissals to reduce the workforce; the assignment of displaced teachers; and tenure without considering educator effectiveness. Still others, such as state salary-schedule determinations, hamper the implementation of performance-based or differentiated-salary approaches in local districts.

State policy levers

States have an arsenal of levers to shape the composition and quality of the educator workforce and build the pool of effective educators in high-poverty schools and schools with a high percentage of students of color.[39]

Delivering well-prepared teachers

The National Council on Teacher Quality, or NCTQ, concluded that states, overall, were not doing enough to ensure that teachers are prepared to be effective in the classroom and recommended an across-the-board need to establish high standards for admission into teacher-preparation programs, ensure that candidates have rigorous content knowledge of the subjects they will teach, provide high-quality clinical experiences for candidates, hold teacher-preparation institutions accountable for the quality of teachers they produce, and set a rigorous but flexible policy environment so that qualified candidates can enter teaching through alternative routes.[40]

Identifying effective teachers

Policies designed to identify effective teachers are based on the development of state data systems, the implementation of rigorous evaluation systems,[41] and the licensure advancement and tenure tied to effectiveness. Without high-quality evaluations, it is not possible to differentiate teachers based on performance level and make informed decisions about professional-learning needs, financial awards for demonstrated effectiveness, and career progression. State data systems make it possible to link teachers to individual student performance and are therefore strategic links through which to assess teacher effectiveness. Increasingly, states use assessments of teacher effectiveness to determine personnel decisions, such as compensation, award of tenure, licensure renewal and advancement, promotion,

assignments, and recognition for highly effective teachers.[42] As of fall 2013, only about half of the states had ambitious evaluation systems;[43] 18 states required tenure decisions to be informed by teacher-evaluation results, and only eight states used teacher evaluations to determine licensure advancement.[44]

Expanding the pool of effective teachers

Policies designed to expand the pool of effective teachers include alternative-route preparation and eligibility, alternative-route usage and providers, licensure reciprocity, and part-time teaching licenses.[45]

Retaining effective teachers and addressing the needs of low performers

Policies designed to retain effective teachers include requirements for induction programs for new teachers; high-quality professional development to support educator improvement; new pay scales, differentiated pay, and performance-based pay; and pension flexibility, sustainability, and neutrality—where pension wealth accumulates uniformly each year a teacher works. Typically, efforts are made to improve rather than dismiss low performers through professional development and training, improvement plans, and mentoring assistance.[46]

Removing ineffective teachers

Policies designed to remove ineffective teachers include dismissals for unsatisfactory evaluations and poor performance. Teachers also exit through workforce reductions or layoffs. NCTQ reported that workforce reductions are still too often based on factors other than teacher effectiveness. Currently, not even half of the 36 states with ambitious evaluation policies—14 states and the District of Columbia—require the use of evaluation findings to make staffing decisions when layoffs are required.[47]

Accountability for teacher effectiveness

"Quality Counts," *Education Week's* annual report on state-level efforts to improve public education, lists state requirements for formal evaluations, including tying teacher evaluation to student achievement and the ability of state data systems to link teachers to student-growth data, among other accountability indicators.[48] Also included are caps, or bans, on out-of-field teaching, and the requirement to directly notify parents when out-of-field teachers are employed in classrooms. Many of the above policies, including those designed to exit ineffective teachers and those related to performance-based layoffs, could also be considered accountability indicators. Additionally, the Center for Public Education, a national source of information about public education and an initiative of the National School Boards Association, identifies 13 states and the District of Columbia that require aggregate, school-level evaluation data to be publicly reported.[49]

Current federal policy on teacher distribution

Federal funds comprise only about 10 percent of public K-12 education funding.[50] The government leverages these funds in diverse ways to improve the academic achievement of disadvantaged students by improving the quality of the teacher workforce and helping eliminate many of the barriers to inequitable access that we discussed previously.

The federal government's chief vehicle for accomplishing this goal is the Elementary and Secondary Education Act, reauthorized as the No Child Left Behind Act of 2001, which, as noted earlier, established criteria for highly qualified teachers and required all students to be taught by highly qualified teachers by 2006. NCLB's equity provision was designed to ensure that students from low-income families and students of color were not taught at higher rates than other students by inexperienced, unqualified, or out-of-field teachers. By the end of the 2005-06 school year, no state had reached the required goal of having 100 percent highly qualified teachers.[51] With lack of progress apparent in May 2006, the Department of Education required "detailed written equity plans" that demonstrated a coherent approach to ensuring equitable distribution of teacher quality, with revised plans due July 7, 2006. Just 28 states submitted plans in response to this request, and only seven of them were determined to be acceptable.[52]

In a November 2006 report,[53] Stanford University's Susanna Loeb and Luke Miller offer an in-depth analysis of the history of the Department of Education's efforts to provide flexibility to states in administering ESEA's HQT provisions and the equitable-distribution requirements. They document a rocky start in reports of ESEA requirements to provide relatively standard teacher qualifications for states and districts that received federal education funds. The authors cite rampant instances of abuse of state flexibility in early ESEA implementation—primarily relating to noncompliance of data and reporting of equity plans—and track how and when the Department of Education was forced to switch to a more proactive oversight role.

Based on this submission time frame, The Education Trust published its August 2006 analysis of the teacher-equity plans, in which they recommended that the Department of Education reject the overwhelming majority of plans and require states to start over with clearer guidance.[54] According to The Education Trust, most states missed the mark. Whereas some focused on access of low-income students or students of color to unqualified or out-of-field teachers in core academic courses and others focused on whether these students had disproportionate access to inexperienced teachers, no state addressed all the possible areas of inequity at once, certainly not with coherent plans designed to remediate these inequalities. The Education Trust recommended that ESEA Title I and Title II state administrative funds be conditional on compliance with teacher-equity requirements based on clear timelines and that state data systems be improved to support the equity analysis.

The Department of Education's website has the "Revised State Plans for Highly Qualified Teachers" and the equity plans for the states, the District of Columbia, and Puerto Rico.[55] These revised plans were submitted in response to deficiencies described by peer reviewers. The majority of the revised HQT plans were submitted in late 2006 and have not been updated since. A few states have provided amendments, including Colorado in 2008 and 2012, Maryland in 2007, New Jersey in 2008, Texas in 2010, Vermont in 2011, Virginia in 2009, Wisconsin in 2009, and Wyoming in 2010.[56] Typically, the amendments were for minor changes, such as to update HQT data findings or to request to reinstitute High, Objective, Uniform State Standards of Evaluation, or HOUSSE, options for veteran teachers in high-need subjects for an extended period of time.

Most of the revised equity plans are dated 2006 or 2007, but some states submitted updated or revised equity plans: Arizona in 2009, Illinois in 2010, Kansas in 2009, Maine in 2011, Massachusetts in 2011, Michigan in 2009, Nebraska in 2011, and North Carolina in 2010.[57] Connecticut's equity plan is referenced on the Department of Education's website, but a more up-to-date plan for 2010 through 2011 is available elsewhere.[58] New Jersey's revised plan is not captured on the Department of Education's website,[59] and it is not clear if some states continued to update their plans but did not submit them to the Department of Education for review.

Components of HQT reporting requirements

The revised equity plans included six HQT reporting requirements articulated by the Department of Education. The first requirement was for a detailed analysis of the core academic subject classes in the state that were not taught by highly qualified teachers, with particular focus on schools that were not making adequate yearly progress under NCLB accountability mandates and whether these schools had more-acute needs than other schools in attracting highly qualified teachers. The analysis also had to identify the districts and schools where significant numbers of teachers did not meet HQT standards and examine whether there were particular hard-to-staff courses frequently taught by non-highly qualified teachers.

The second requirement focused on the HQT status in each local school district and the steps the state would take to ensure that each local district had plans in place to assist teachers who were not highly qualified to attain HQT status as quickly as possible.

The third requirement called for information on the technical assistance, programs, and services that the state would offer to assist local districts in successfully completing their HQT plans, particularly in schools where large groups of teachers were not highly qualified, as well as the resources the local districts would use to meet their HQT goals.

The fourth requirement included a description of how the state would work with local districts that failed to reach the 100 percent HQT goal by the end of the 2006-07 school year.

The fifth requirement pertained to an explanation of how and when the state would complete the HOUSSE process for teachers not new to the profession who were hired prior to the end of the 2005-06 school year and how the state would discontinue the use of HOUSSE procedures for teachers hired after the end of the 2005-06 school year.

The sixth and final requirement was that each state's written "equity plan" included a requirement to ensure that poor students or students of color were not taught by inexperienced, unqualified, or out-of-field teachers at higher rates than more-advantaged students.

Source: Contents of revised state plans and peer reviewer comments. See U.S. Department of Education, "Improving Teacher Quality State Grants: HQT Revised State Plans," available at http://www2.ed.gov/programs/teacherqual/hqtplans/index.html (last accessed March 2014).

Components of equity plans

In the summer of 2013, the Center for American Progress reviewed the available equity plans. Most states followed the Council of Chief State School Officers's, or CCSSO's, "Template for State Equity," which provides state strategies across the following eight key elements:

1. Data and reporting systems
2. Teacher preparation and certification
3. Out-of-field teaching
4. Recruitment and retention of experienced teachers
5. Professional development
6. Specialized knowledge or skills
7. Working conditions
8. Policy coherence

Some states have clearly defined equity plans, and others have plans that are folded into their larger HQT plans. In some cases, the equity plans were in appendices not available on the Department of Education's website. The reports are uneven, with some states addressing all eight elements and others reporting on selected elements. Almost all states included goals and strategies under data and reporting systems, recruitment and retention, and professional development. Out-of-field teaching, working conditions, and policy coherence were the least addressed categories, with few states addressing these focus areas or identifying specific actions and strategies.

Through data and reporting systems, states are able to track their progress to the 100 percent HQT goal and identify areas for priority focus. Many states continue to struggle with shortages and distribution of highly qualified teachers by level, such as elementary and middle school grades; subject field, such as special education, science, math, and English as a second language; and geography, such as rural, hard-to-staff urban areas, high-growth areas, and low-wealth areas.

The strategies outlined in the eight elements listed above comprise a range of proposed strategies—many of which have strong evidence bases and some that are at odds with the emerging research on effectiveness, such as support for teachers' continuing-education credits and advanced degrees being tied to salary bumps.[60] Although areas of unevenness exist, it is clear that states made great strides toward building an educator labor force based on NCLB's HQT indicators.

As current policy moves away from a sole focus on teacher qualifications to indicators of teacher effectiveness, many of the strategies described in the state equity plans, with proper tweaking, could be applicable to an effectiveness framework. The plans show the development of data systems that link various components of teacher quality, the range of potential policies and practices, and the strategies that can support the transition to effectiveness as the bar for teacher success across all classrooms. As a whole, these plans—though out of date and strongly focused on 100 percent HQT attainment—illustrate the available policy levers, potential tools, and state capacities for tackling weaknesses and gaps in the teacher pipeline that hinder the development of an effective educator workforce. However, in the absence of follow-up and monitoring on the part of the federal government, it is impossible to learn of states' strategies' success or the efficacy of plans designed to remedy these inequalities.

Some of the more recent plans foretell the policy change toward effectiveness and reflect the move to new educator-evaluation systems that name student-achievement-growth data a significant component of a balanced evaluation system. This is particularly evident for Race to the Top grantees that were able to get a head start on other states in the development of new educator evaluations with supporting data systems. Theoretically, these states have a better handle than most on where the effective teachers are and, therefore, should be able to use incentives in more-targeted ways to recruit and retain effective educators. The North Carolina 2010 equity plan, for example, includes a section on performance-based teacher and principal evaluation as the basis for informed decisions to ensure that the most capable educators are distributed equitably to the students and schools most in need.[61]

Let's examine more closely each of the selected strategies listed above and explore how each would fit within an effectiveness framework. State examples in specific categories can be found in Appendix B.

Data and reporting systems

Any effort to monitor and ensure equity hinges on the quality and availability of data and a system that links numerous sources of teacher, student, and school data. In this component, states discuss the teacher data and reporting systems needed to identify and correct inequities in the distribution of quality teachers in high-poverty, high-minority schools and low-poverty, low-minority schools. Typically, these systems collect basic reporting information on teacher qualifications, availability, assignments, performance in the classroom, and distribution in the state, including by teacher content area. Increasingly, states recognize the need for more refined and comprehensive data through links to other sources of teacher information, including certification, teacher preparation, professional development, and student-performance databases, as well as the need to create tools that provide public access to teacher-quality data. Under an effectiveness framework, data systems must link to teacher-evaluation results to identify areas of imbalance of effective educators by district, school, content area taught, and source of teacher preparation.

Teacher preparation and certification

States describe a number of strategies for getting high-quality teachers into the pipeline, including establishing scholarship programs and loan-forgiveness programs linked to teaching commitments in areas with shortages and hard-to-staff schools. Some even include strategies for growing the pool of future teachers through programs designed to recruit middle grade and high school students to prepare for teaching in high-need schools and through expanding and supporting Future Educators Association programs. Some states seek stronger accountability for teacher-preparation programs, including development of rigorous, clinically based components and ties to their graduates' success in district classrooms as measured by student-achievement data. Other states encourage programs at teacher-preparation institutions that are designed to take out-of-field teachers and place them in schools with a high percentage of students of color in low-income areas or to prepare already certified teachers for high-need content areas.

Many states focus on providing induction programs as a strategy to support new teachers and restructure teacher assignments to create a cadre of master and mentor teachers that can support induction efforts. States also propose the expansion of alternative routes to certification programs for aspiring teachers and principals who agree to teach in high-poverty, high-minority, and/or low-performing schools.

A number of states incorporate the federal Troops to Teachers program into their teacher-preparation strategy. Troops to Teachers provides financial assistance to qualified Armed Forces veterans who pursue certification through an alternative route and agree to teach three years in a high-poverty school district.[62] Priority is given to candidates who pursue certification in hard-to-staff subjects. Other states look to replicate successful district-university partnerships focused on teacher preparation for high-poverty urban areas with high populations of students of color as a way to increase the number of highly qualified new teachers. These are typically the result of participation in the federal Teacher Quality Partnership grant program.[63]

States combine these and other strategies to build a pipeline of prospective teachers for high-poverty, low-performing schools. The key is to marry these efforts, with a focus on providing the best candidates—those with strong academic credentials—with the highest-quality preparation experiences to support their effectiveness in the classroom and as they develop throughout their career.

Out-of-field teaching

Strategies are designed to reduce the incidence of out-of-field teaching in high-poverty and low-performing schools that have critical shortages. Two strategies are to shorten the time it takes to become certified and to establish highly qualified teacher reciprocity with other states. Delaware, for example, designates priority status for teachers in the state's Alternative Routes to Certification Program. Other state strategies include encouraging currently certified teachers to become certified in other content areas and providing scholarships and/or reimbursement for undergraduate and graduate coursework to obtain certification in areas with critical need.

Hawaii has an Alternative Route to Licensure in Special Education Program that allows teachers qualified in one subject area to become licensed in another through a one-year program. Hawaii also offers relocation incentives to mainland teacher recruits and local recruits moving from one island to another to fill the need for highly qualified teachers. Retention incentives are paid to all licensed or highly qualified teachers in specific hard-to-fill schools. Use of distance education is used in places such as Hawaii and Alaska to offer courses taught by highly qualified teachers in schools that might otherwise have to use out-of-field teachers.[64]

Recruitment and retention of experienced teachers

The goal is to build a critical mass of qualified, experienced teachers willing and prepared to work in hard-to-staff schools. Under an effectiveness framework, the focus would be on building a critical mass of effective and highly effective teachers.

Higher salaries, loan forgiveness, and teacher scholarships are common methods of recruiting and retaining effective teachers in schools with a high percentage of students of color and schools in low-income neighborhoods. Other strategies include payment for attending courses that improve teacher effectiveness in specific hard-to-staff subject areas. These are good strategies as long as courses can be directly linked to improvements in effectiveness. Many states have partnered with online organizations and organizations such as Teach for America to recruit newly qualified and prospective teachers for high-need schools. It is essential that partner organizations have a documented track record of providing effective teachers. (see state examples in Appendix B)

Professional development

The primary focus of professional development is to increase the number of highly qualified teachers in districts and high-need subject areas. States rely on higher-education institutions to provide continuing education or education-service units to increase the number of teachers with HQT credentials. Some encourage districts to support college courses for teachers' salary-schedule advancements to incentivize them to add additional certifications or licensures in areas of need to minimize out-of-field teaching. Others support programs that place master teachers and coaches in schools to train experienced and inexperienced teachers. Under an effectiveness focus, professional-development efforts could be refocused to support improvements in teaching directly tied to increased student achievement. (see examples in Appendix B)

Specialized knowledge or skills

These strategies are designed to ensure that teachers have the specialized skills they need to be effective with the populations of students typically served in high-poverty, low-performing schools—including students with disabilities, Native American students, English language learners, and other students considered at risk. Among strategies used are new certification requirements for teachers responsible for instructing high-need groups, English language learners, and special-needs students. These new certification requirements include cultural competence, as well as training programs to ensure differentiated instruction for diverse learners.

New Jersey's teacher and school-leader standards, for example, include the knowledge and skills needed to meet the needs of diverse student populations. These standards are the foundation of New Jersey's program-approval process for teacher- and school-leader-education programs and licensure assessment. The New Jersey Department of Education developed a model urban-education program to prepare teachers to work in high-need districts. New Jersey's alternative route offers targeted preparation in the areas of English as a second language/bilingual education and special education, assuring that alternative-route teachers have the knowledge and skills they need to teach diverse student populations. New Jersey's online virtual academy offers tutorials for teachers who have English language learners in their classes but have little previous experience with or training on how to teach these students effectively. To address the issue of attrition

among special-education teachers, the New Jersey Department of Education targets new teachers in high-poverty districts with high student mobility, providing training and support beyond district-sponsored induction programs.[65]

Working conditions

The goal is to improve the conditions in hard-to-staff schools that contribute to excessively high rates of teacher turnover. These goals, under an effectiveness framework, should continue to focus on the retention of highly effective teachers and school leaders and the elimination of conditions that work against their success.

Most states conduct surveys of working conditions in schools to evaluate the unique needs of administrators and teachers in high-poverty, high-minority, and low-performing schools. States use these data to work in collaboration with local districts and educator unions to develop and implement policies to effectively improve conditions in hard-to-staff schools. A range of strategies are employed to improve working conditions, including improving school leadership through special training and professional-development opportunities for schools generally and for those in "school-improvement status" specifically—schools that do not meet state student-proficiency targets for two consecutive years. This provides new school-leader induction programs and ongoing mentoring support for new educational administrators, requires structured mentoring programs for teachers who hold initial licenses, and reduces funding disparities between districts and salary disparities across districts. (see examples in Appendix B)

Policy coherence

The goal is to improve internal processes and revise state policies that may inadvertently contribute to local staffing inequities. This is an opportunity to weave together multiple policies, practices, and tools into a comprehensive approach of support for states' equity goals. As presented, these are often laundry lists of policies and strategies currently available in a given state that may or may not fold together to represent a coherent whole.

States cite efforts that can be aligned, such as using their data systems to monitor the impact of policies on educator recruitment, preparation, highly qualified status, licensure, assignment, and retention; improve educator effectiveness through

enhancements in teacher- and administrator-preparation programs; create new career ladders with attendant licensure endorsements for new teacher roles, such as mentors, instructional coaches, and instructional team leaders; enhance policies on teacher induction to support and retain highly qualified and effective teachers; provide targeted assistance to underperforming schools; and implement statutory changes and the funding necessary to provide incentives for effective teachers to teach in high-need schools.

States have presented a number of promising approaches, but in the absence of monitored outcomes, it is impossible to determine the extent to which these approaches are connected or the quality and actual impacts of these efforts. A five-year study supported by the federal government is underway[66] to document teacher-distribution changes over time and the policies districts are implementing to promote the equitable distribution of effective teachers. The results of this study should provide this critical information.

Waivers to NCLB requirements

Without a reauthorized ESEA to reflect policies, research, and practices that have evolved since 2001, the Obama administration propelled change in 2011 by offering flexibility, or waivers, from key provisions of NCLB. Among the reforms to obtain a waiver, states and their local school districts had to develop, adopt, pilot, and implement teacher and principal evaluation and support systems designed to inform personnel decisions and, most importantly, support instructional improvement. These new evaluation systems were to differentiate poor performers from high performers.[67]

In exchange for putting these new systems in place, requirements regarding HQT-improvement plans were waived. The waiver did not, however, exempt states from the ESEA requirement to ensure that poor children and children of color were not taught by inexperienced, unqualified, or out-of-field teachers at higher rates than other children.

In August 2013, early waiver grantees—state education agencies that began to implement ESEA flexibility in the 2012-13 school year and were thus referred to as Window 1 and Window 2 applicants—received draft guidance for waiver renewal from the federal government that effectiveness data derived from their new teacher and principal evaluation and support systems would serve to

measure teacher quality and determine whether a teacher is unqualified, thus reframing HQT requirements in terms of evaluations' effectiveness results.[68] The draft guidance indicated that, as part of its request for renewal of ESEA flexibility, a state education agency must describe how it will transition to ensuring that poor students and students of color are not taught at higher rates than other children by inexperienced, ineffective, or out-of-field teachers and must provide an assurance that it will submit a comprehensive equity plan that meets the requirements by October 2015.[69]

Since that time, the Department of Education has changed its plans for waiver renewal. Instead, issues of equitable distribution of effective teachers will be addressed outside of the ESEA flexibility process, through what the Department of Education has termed a "new 50-state strategy," as it expects all states to move forward with their efforts to support high-quality professional development and increase equitable access to effective educators for all students.[70]

Taking stock within a transitional phase

Where waivers gave relief to states and districts on HQT reporting, their efforts are now directed at building and implementing meaningful systems of evaluation and support for teachers—a move that, if implemented well, will target and help improve the weakest teachers; identify the strongest; and better inform personnel decisions, including strategies for building and retaining strong faculties in schools that need consistent, high-quality teaching and leadership.

This move begins to address the missing link in establishing equitable access— the lack of good measures, other than the HQT input measures, for determining teacher effectiveness and the lack of ways to determine which teachers need improvement and how best to help them improve. The hope is that with rigorous evaluation and support systems in place, states and districts will be better poised to finally address the equity provision with meaningful and successful results. The next challenge will be to refine these evaluation systems so that they can accurately inform the needs of teachers and schools. The issue should no longer be equitable distribution of a pool of qualified teachers but instead access to effective teaching that will ensure achievement at high academic standards for all students. States must be held accountable for these results, and this should be the focus of future federal government monitoring efforts.

But we are not yet there. Evaluation systems have not been fully implemented in most states, and those that are farthest along in the process are experiencing their own challenges. Chief among these is a lack of ability to differentiate between educators' performance, which has resulted in a vast majority of educators being rated as effective or higher.[71] Also, in some states and districts, there are wide differences by area or school in overall educator ratings.

These new systems will not be without initial glitches, and many of the recent findings can be attributed to problems of uneven implementation, including missing evaluation measures and components, shifts in policy, use of new assessments, and a lack of resolve in setting high standards for evaluations and promoting meaningful feedback. Although new evaluation systems have developed, the parallel cultural shift in their use and benefit to school leaders and teachers have not been totally embraced and are still very much in progress. These systems will have limited value until they are accepted as fair, consistent, and valid and until they can distinguish between which teachers are floundering and need help, those who are average and need specific support to improve, and those who are truly in charge of their game and can become resources to others. The ultimate test will be whether the new systems result in improved instruction in schools and achievement for students.

At the moment, few places have collected data on all of their teachers through new evaluation systems. Most of these data are not publicly available, but there are some exceptions. Louisiana and North Carolina have made public teacher-evaluation data available that is broken down by school for all the districts in their states, but they have not presented data about individual teachers.[72] Ohio has released individual teacher data to the press.[73] In addition, some individual districts, such as Los Angeles[74] and New York City,[75] have also done so.

It should be noted that the federal flexibility guidance, while replacing the term "unqualified" with "ineffective," retained the existing equity-provision indicators "inexperienced" and "out-of-field." These indicators remain consistent throughout the transition phase.[76]

Equitable-access strategies in state waiver plans

The Department of Education did not specifically require states to address the equity requirement in their waiver applications, and as a result, few states outlined plans for ensuring students have access to effective teachers. In a

review of the Window 1 waiver states—Colorado, Florida, Georgia, Indiana, Kentucky, Massachusetts, Minnesota, New Jersey, New Mexico, Oklahoma, and Tennessee—The Education Trust voiced concern that states were not focusing their data systems to inform and monitor local-district distribution of educators in an equitable fashion or encourage districts to take actions to remedy imbalances.[77]

Among state applications that touched on elements of the equity provision are the following points:

- Colorado planned to monitor and analyze data related to the distribution of effective educators, but its waiver plan did not provide a clear strategy for promoting equitable access.

- Florida planned to prohibit inequitable distribution of temporarily certified teachers, out-of-field teachers, and teachers determined to be in need of improvement.

- Indiana allowed districts to choose to use funds from state performance pay grants to incentivize highly effective teachers to teach high-need students.

- Georgia's plan only addressed equitable access as it related to the state's Race to the Top plan and did not address the issue of equitable access for all districts and schools in the state.

- Kentucky planned to provide districts with access to data to inform the equitable distribution of effective educators. Districts that failed to meet highly qualified teacher requirements, had too many teachers identified as ineffective, and failed to meet the state's "annual measurable objectives" for consecutive years could be identified for "teacher quality improvement status."

- In Minnesota, schools identified as "priority"—the 5 percent most persistently low-performing Title I schools—were required to review the quality of all staff, retaining only those staff members who were determined to be effective and preventing ineffective teachers from transferring into these schools.

- New Jersey indicated that districts would be required to report evaluation data to the state but indicated no clear plan for equitable access.

A CAP review of Window 2 states—Arizona, Arkansas, Connecticut, Delaware, the District of Columbia, Idaho, Kansas, Louisiana, Maryland, Michigan, Mississippi, Missouri, Nevada, New York, North Carolina, Ohio, Oregon, Rhode Island, South Carolina, South Dakota, Utah, Virginia, Washington, and Wisconsin—found limited reference to the equitable distribution of effective teachers.[78]

Among the states that referenced this requirement are the following points:

• Arizona developed a "Sample Fast Fact Sheet"—a one-page snapshot of principal-, teacher-, and student-performance data that local districts could use to review the equitable distribution of effective teachers and leaders in their schools.[79]

• Ohio indicated that by the 2013-14 school year, local districts with qualifying evaluation systems may use both HQT and effectiveness ratings to determine the equitable distribution of teachers. By the 2014-15 school year, all districts must use effectiveness ratings to determine the equitable distribution of teachers, as these will replace highly qualified teachers on the Ohio Local Report Card.[80]

• Rhode Island plans to use its data-management system to monitor the distribution of highly effective, effective, developing, and ineffective educators and will use these data to hold local districts accountable for achieving an equitable distribution across schools and to ensure that highly effective educators are represented at struggling schools. The state also indicated that every human resource decision—inclusive of certification, selection, tenure, professional development, support for individual educators and groups of educators, placement, promotion, compensation, and retention—whether made by a local district or the state education agency, will be based on evidence of the respective teacher's or principal's impact on student growth and academic achievement along with other measures of professional practice and responsibility. Additionally, Rhode Island stated in its Race to the Top and waiver applications its commitment to the idea that no child in the state "will be taught by a teacher who has been rated ineffective for two consecutive years."[81]

Promising models and strategies

Improving the quality and effectiveness of the educator workforce is a large task. Ensuring that students of color and low-income students get their fair share of effective teachers—and preferably highly effective teachers, since these are the teachers with the proven skills to move the gauge of achievement during the multiple years of instruction that these students often need—is a more challenging task. As evidenced from the strategies that states cite in their equity plans, there is no shortage of ideas. Also, there are extensive resources available to states and districts, such as the online resources developed by the National Comprehensive Center for Teacher Quality and the Center on Great Teachers and Leaders at the American Institutes for Research to aid school and other educational leaders in retaining effective teachers, particularly in hard-to-staff schools, with the goal of improving teacher distribution. It is important that behind the many policy levers at the disposal of states and districts is the will to implement the more-difficult, creative, and game-changing actions that can make a difference in the lives of students.

Below are examples of models and strategies planned or in current use in schools and districts that show what is possible with the will and commitment to change the status quo of ineffective policies and practices that often hamstring improvements in our public schools and in the educator workforce available to our neediest students.

Erecting formal structures of support

It is important that schools have formal structures to ensure a steady stream of skills and supports from more-effective to less-effective teachers, to build the overall instructional capacity of the entire faculty, and to allow strong leadership to create and sustain conditions for optimum teaching and learning.

Some school districts are working to build these supporting structures in high-poverty, low-performing schools.[82] Examples include schools and districts that

are implementing TAP: The System for Teacher and Student Advancement, a comprehensive school reform approach that provides opportunities for career advancement, professional growth, instructionally focused accountability, and competitive compensation for educators. TAP currently operates in many schools and districts across the country and impacts more than 200,000 students and 20,000 teachers.[83]

Another example is North Carolina's Charlotte-Mecklenburg Schools' strategic staffing initiative launched in the 2008-09 school year under former Superintendent Peter Gorman.[84] To address low student performance in roughly one-third of the district's 165 schools, the district's leadership analyzed the characteristics and practices in these schools as the starting point to develop a set of actions for breaking the cycle of low performance and to accelerate the pace of improvement.[85] The following five tenets drove development of the initiative:

1. A great leader is needed with a proven track record of success in increasing student achievement, since great teachers will not go to a challenging school without a great leader as principal.

2. There is strength and support in numbers; a team needs to go to the school so that individuals do not have to shoulder challenging assignments alone.

3. Staff members who are not supportive and disruptive of reform must be removed from the school.

4. Principals need the time and authority to reform a school.

5. Since all job assignments are not equal in difficulty, compensation should be varied to match responsibilities.[86]

The result of implementing this initiative based on these five tenets was that low-performing schools that served large numbers of low-income students were staffed with the most-talented leaders, who were given priority access to district resources, the ability to select their own teams of the most promising educators, and the ability to transfer out up to five low-performing teachers based on student-growth measures. Principals and other administrative members of the strategic staffing team received a 10 percent pay supplement; teachers received a $10,000 recruitment bonus and $5,000 in the second and third years of the initiative. All participants were expected to make a three-year commitment to their schools.[87] The initiative relied on

what was termed a "pull" strategy to entice teachers and staff by their own choice to change schools, instead of on a "push" strategy to forcibly move teachers.[88]

The initiative illustrates a turnaround strategy to improve low-performing schools under No Child Left Behind's accountability provisions. A 2010 case study of the Charlotte-Mecklenburg district's strategic staffing initiative indicated that strategies such as this cannot exist separately from a district-wide school support and accountability framework based on the ability to measure student growth and school performance and to identify what is and is not working.[89]

Another model is the Turnaround Teacher Teams, or T3, Initiative, originally a partnership between Teach Plus—the focus of which is on creating leadership opportunities for teachers—and the Boston Public Schools. Teachers designed T3 to address a gap in current school-turnaround efforts—ensuring that students in the lowest chronically underperforming schools are assigned experienced, effective teachers with track records of success in urban settings.[90] T3 organizes cohorts of highly effective and experienced teachers, supports them in becoming turnaround specialists with the help of an embedded T3 coach, and places them in teams in the schools where they are most needed.

The cohort approach responded to feedback from teachers who said they were willing to take on the additional challenge of working in high-need schools but wanted to do so with a cadre of experienced colleagues at their sides. This approach contrasts with efforts in states to incentivize individual teachers with financial rewards.[91] T3 is currently partnered with eight chronically low-performing schools in Boston and two schools in Fall River, Massachusetts.[92] Research on the first cohort of T3 Boston schools showed substantial student-achievement improvement in third to eighth grades, with the percent of students earning advanced or proficient status on the Massachusetts state exams increasing by 12.8 percentage points in English language arts and 16.5 percentage points in math over two years.[93] Data for the Fall River and Memphis districts were not available.

Radically transforming staffing models

The North Carolina-based public policy firm Public Impact maintains that efforts to provide the majority of students with excellent teachers cannot happen in a timely manner under the traditional one-teacher-one classroom model. Instead, radical changes in the way our schools are staffed are key to dramatically increas-

ing students' access to excellent teaching. The organization advocates extending the reach of effective teachers through the redesign of jobs and the use of technology in new ways. Models, which can be either in person or remote, include multiclassroom-leadership with school-based or remote instructional teams reporting to an excellent teacher; specialization, with excellent teachers specializing in high-priority subjects and roles; class-size changes, where excellent teachers teach larger classes by choice and within limits; and time-technology swaps, where digital instruction replaces enough top-teacher time that they can teach more students.[94] These approaches open up new career opportunities—large-class teachers, blended-learning teachers, specialized teachers, teacher leaders, team teachers, and professional tutors[95]—create clear accountability and authority for teachers, and reward teachers by paying them more for achieving excellence both alone and in teams. The efficiencies derived from the new staffing models make it possible to raise salaries while keeping schools within current budgets.

Public Impact identifies a number of sites that are prototyping elements of the extension models. These include school-innovation zones within large urban school districts to support gap-closing reforms in high-need schools through strategic redesign, such as in the Charlotte-Mecklenburg Schools and the Metropolitan Nashville Public Schools; charter management organizations and a charter authorizer that are building new school designs; and the Clark County School District in Nevada, which is working to launch new career-advancement opportunities for teachers who extend their reach, paying them more through reallocated dollars.[96]

Other approaches

Numerous other innovative efforts exist that help schools and districts achieve a more equitable balance of effective teachers. Urban Teacher Residency United, or UTRU, for example, represents a national nonprofit approach to recruiting, preparing, and retaining capable teachers for urban schools.[97] UTRU cites residencies in numerous cities that meet the organization's strict requirements for selectivity in recruitment, the selection of experienced mentors to provide residents with one-on-one mentoring, a residency year of classroom apprenticeship in an urban public school, and master's-level coursework designed to inform the apprenticeship experience. The program also features a cohort-peer group to provide ongoing support and collaborative learning, along with a postresidency of assistance and job placement, during the resident's three-year teaching commitment after completion of the one-year residency.[98]

The STEM Master Teacher Corps is another model promoted by the Obama administration[99] as a way to get some of the strongest science, technology, engineering, and mathematics, or STEM, teachers in high-need schools. States and school districts can apply this concept to any subject area. The concept of a master teacher corps can be part of a system of career ladders used to develop, leverage, and compensate highly effective teachers for additional responsibilities, including supporting the development of other teachers toward higher levels of effectiveness.

All of the models and strategies discussed in this section illustrate the importance of hiring flexibility at the school level to capture the best teachers for the job. These strategies illustrate the importance of hiring teams of experienced colleagues, the importance of differentiating teacher responsibilities to maximize teachers' individual assets, and the importance of providing teachers with ongoing support from the most highly effective teachers. Creating corps of these highly effective teachers—whose job is to model and support high-quality instruction at schools—and rewarding them accordingly enriches career options and opportunities for effective teachers.

Recommendations

Most of the recommendations listed below are not new; researchers, advocates, and national organizations have cited them previously. The recommendations are restated here because they are important and contribute to a framework of actions that are specific to the school, district, and federal levels and must be continuously reinforced.

For states and districts

Embrace strategic talent management. States and districts must embrace a comprehensive and holistic view of strategic talent management in order to recruit, tenure, retain, and properly compensate effective teachers and school leaders. All human resource programs, policies, and systems must be calibrated to this approach whether they deal with new hires or seasoned educators.[100] Policies and practices that do not support this outcome must be jettisoned.

Develop and use strong data-collection systems. States and districts must develop and act on the information provided through strong data systems that link teacher characteristics and effectiveness data to student achievement and school success. Much of these data will come from newly implemented systems of teacher evaluation. This involves the capacity to track the churn of teacher movements within and across districts, as well as teachers who exit the profession. This information should be used to pinpoint areas of high turnover in order to make appropriate decisions to retain high-value teachers and replace movers with high potential, well-prepared placements.

Build equitable distribution capacity through compensation and support. States and districts must establish comprehensive compensation systems to ensure that the most effective teachers are paid the most money, including annual pay increases that are based on increases in student performance; salaries that are reflective of areas of subject shortage or need; and that the toughest, most challenging

schools have the highest-paid and most-effective teachers. There should be efforts to minimize the proportion of teachers with little or no experience in schools with large numbers of students of color and high-poverty student enrollments. To the extent that larger shares of novice teachers exist, extra supports should be provided to these new teachers to offset the impact of their inexperience. Moreover, successful service in the most challenging schools with the neediest students should be part of the pathway of an effective teacher toward coveted master status.

Establish and pilot model programs to help relieve inequitable distribution. Among the various approaches employed by states and districts could be teacher-residency programs to attract and train the most capable entering teachers, master-teacher corps of the most highly effective teachers to lead and guide teaching improvements, and strategic teams of motivated and effective teachers and leaders to turn around low-performing schools. States and district should also provide greater flexibility for local school leaders to hire the best candidates for jobs.

Districts must address structural inequities. Districts are best positioned to address the structural inequities that often result in high-poverty schools within the same district that receive less funding than their low-poverty counterparts. Addressing this funding imbalance will give high-poverty schools the financial capital to attract and retain effective teachers and purchase needed strategic supports and resources.

For the federal government

Use the resulting data from new state education-evaluation systems as they become available. This can help determine the equitable distribution of effective, experienced, and in-field teachers across schools based on factors of student race and ethnicity and poverty. Students of color and low-income students should not be taught at higher rates than students in low-poverty and low-minority schools by teachers with evaluation ratings in a state's two lowest rating categories. Highly qualified teacher requirements should remain for first-year teachers who will not have evaluation results.

Make sure schools that serve low-income students are not shortchanged. Strengthen the comparability provision in Title I to ensure schools that serve low-income students receive the same share of local and state dollars as schools that serve higher-income students before federal funds are added.

Hold states accountable for reporting and acting on teacher-distribution disparities. The Department of Education must continuously monitor state equity plans and use these plans as the basis for enforcing equity provisions. The Department of Education's proposed new "50-state strategy"[101] to monitor state teacher-distribution efforts should provide strong guidance to states, come with technical assistance and support, and provide the oversight necessary to ensure that low-income students and students of color are not disproportionally taught by ineffective teachers but instead have truly effective teachers throughout their education careers.

Renew the Elementary and Secondary Education Act. In a future reauthorization of ESEA, it is incumbent on Congress to acknowledge the changes in the waiver language from a focus on attaining highly qualified status to a focus on teacher effectiveness. Furthermore, equity provisions must ensure that poor students and students of color are not taught at higher rates by inexperienced, ineffective, or out-of-field teachers than other students.

Conclusion

Currently, the United States is moving toward higher standards of learning[102] and, at the same time, assessing the caliber of its teaching force in some of the most rigorous ways in decades. Since 2009, more than 35 states have made policy changes through legislation or regulation to overhaul teacher-evaluation systems, including implementing new teacher observation tools and incorporating measures of student achievement into the assessment of teacher effectiveness.[103]

States and districts have done much to implement standards of quality in the teaching profession. But the reigning federal policy that teachers should have postsecondary majors in their teaching areas and that they should have certification based on state requirements is only a floor of expectations. That teachers must be effective in improving student achievement is a higher challenge. Business-as-usual policies and practices that focus on ensuring that students have equitable access to teachers with these basic qualifications will not directly meet this challenge. Neither will aspirational plans to ensure equitable access to the most effective teachers that are not fulfilled.

Research and evidence from practices in the past show that temerity in the policy realm, marginal changes, and a failure to commit to a full-court press of resources and strategies to strengthen the teacher pipeline and significantly change the conditions of teaching will not result in the outcomes we seek. Large-scale change in the effectiveness of educators will require a massive, coordinated plan—something akin to a Marshall Plan for education—to consciously raise the floor of expectations for all teachers while also ensuring that disadvantaged students get not only their fair and equitable share of effective educators but also an even larger share in areas where schools are low performing and low student achievement is evidenced.

We know enough from the research about the ways to manage the churn of effective and ineffective novice and veteran teachers into and out of our most challenged schools. The real test is in creating school faculties with the right balance of teachers of proven effectiveness and promising novices and, through the right

leadership, reducing turnover, stopping the churn of novice and veteran teachers, and creating a stable learning community of effective teachers and leaders in our high-poverty, high-minority schools.

Attaining equitable distribution of the strongest, most effective teachers will require nimble measures and sound policies of inducements, rewards, and support. This will require being armed with the right tools and data to make the most-informed judgments about the placement, responsibilities, and compensation for those educators. Heavy-handed solutions such as forced teacher transfers will only result in alienation and backlash among the very people who are critical to achieving this goal. Instead, successful work in challenging school environments must become part of the pathway by which an effective teacher becomes an acclaimed master teacher, with appropriate compensation in recognition of this status. Teachers en route to the highest levels of achievement in their profession must embrace this badge of honor, and policymakers must fashion appropriate levels of recognition for all to see and aspire toward. This will involve not only policy changes but also a cultural shift in the way policymakers—and teachers themselves—view the teaching profession.

About the author

Glenda L. Partee is the Associate Director for Teacher Quality at the Center for American Progress. Her work focuses on improvements in human capital systems in our public schools. Prior to joining CAP, she was an independent education consultant who advised and wrote for local and state school systems, education associations, foundations, and nonprofit organizations on diverse issues. From 2005 to 2009, Partee served in a number of capacities at the District of Columbia Office of the State Superintendent of Education, including as director of policy, research, and analysis and as assistant superintendent for postsecondary education and workforce readiness. Previously, she was co-director of the American Youth Policy Forum and held positions at the Council of Chief State School Officers and the National Association for Equal Opportunity in Higher Education. She was a member of the New York City Urban Teacher Corps and taught in schools in New York City and St. Croix, U.S. Virgin Islands.

Acknowledgements

Appendix A: Definitions of teacher-quality and effectiveness terms

Value-added, or growth, estimate of teacher effectiveness. This measure aims to capture the extent to which each teacher contributes to student-achievement growth from one year to the next, as measured by the standardized tests students take.

High quality. This term encompasses many aspects of what makes teachers good at what they do. It can describe inputs, such as teacher qualifications, degrees, or experiences; practices, such as types of instruction used with students; or outputs, such as student or school performance.[104]

Highly qualified teacher, or HQT. As defined in the federal No Child Left Behind Act, a highly qualified teacher is fully certified by the state, holds a bachelor's degree, and demonstrates content-area expertise in the subject or subjects he or she teaches.

Effective teacher/highly effective teachers. These terms refer to teachers' ratings from an evaluation system, most of which combine some proportion of scores from observations of instruction, growth scores on achievement assessments from students in teachers' classes, and possibly other measures that contribute to student outcomes or school performance. The federal Race to the Top competition defines an effective teacher as one whose students achieve acceptable rates—such as at least one grade level in an academic year—of student growth.[105]

Highly effective. This term refers to a teacher's contribution to student outcomes or school performance, as determined by scores on student tests or other measures of student, teacher, or school performance.[106]

- Researchers have defined a highly effective teacher as a teacher whose average student gain on test scores is in the top 25 percent.[107]
- The Race to the Top application defines "highly effective" teachers as teachers whose students achieve high rates—such as one-and-a-half grade levels in an academic year—of student growth.[108]

Certification status. Certification, or licensing, status is a measure of teacher qualification that combines aspects of knowledge related to teaching and learning and about subject matter. The meaning varies across states because of differences in licensing requirements.[109] There is controversy and limited solid evidence around the relationship of certification and certification types on student outcomes. Although certification is designed to assure a minimal standard for the teaching profession, the lack of rigor in most state licensure systems undercuts its value as an indicator of teacher effectiveness and sets up an additional barrier to entry to the profession for future teachers—for example, for noneducation graduates and mid-career professionals.

Out-of-field teaching. This term refers to teachers who possess neither certification nor an academic major in the subjects they teach. Out-of-field teaching is used as an equity indicator because understanding of content knowledge is critical to teachers' jobs.

Appendix B: Examples of state strategies in revised equity plans[110]

Data systems

Increasingly, states are recognizing the need for more refined and comprehensive data through links to other sources of teacher information, including certification, teacher preparation, professional development, and student-performance databases, as well as the need to create tools that provide public access to teacher-quality data:

- In its amended plan, Colorado discussed the need to build a more cohesive approach to improving teacher quality. The state legislature called for a Quality Teachers Commission to examine the existing gap in teacher quality statewide and to make recommendations for creating a teacher identifier to link diverse human resource data with student data—including longitudinal-growth data—teacher-preparation data, professional-development data, and other datasets.

- Delaware presented a plan to expand its basic analyses and reporting to include teacher-turnover rates and teacher quality and experience as a function of class type. This is in addition to data collection, analysis, and reporting mechanisms on the out-of-field teaching rate for the state, districts, and schools; percentages of classes taught by an experienced highly qualified teacher in the school by subject, grade, and student characteristics; information about teacher vacancies by grade and subject area; and reasons for leaving teaching and transferring between jobs.

- Data and reporting system strategies discussed in the 2009 Illinois Revised Teacher Equity Plan included implementing new longitudinal-data systems that interface with the teacher-certification-information system; linking teachers to student learning and preparation programs, and determining effectiveness of teacher-preparation programs, induction and mentoring; and professional development tied to student learning, as well as principal mentoring.

- The Michigan Department of Education's "Teacher Certification Verification" website[111] provides public access to the teaching qualifications of Michigan teachers. Local districts use this website to verify the certification status of teachers to assist in their appropriate assignment. These data systems make it possible to conduct audits of teacher assignments against teacher qualifications. Local districts are notified of identified discrepancies and directed to take corrective action.

Teacher preparation

- Connecticut's 2010-11 school year plan includes developing a system of approval and oversight of preparation programs that takes into account their graduates' performance in the classroom, as determined by indicators such as teacher evaluations and student-achievement data; graduates' retention, turnover, and dismissal rates in their schools; graduates' preparation for work in high-need districts; preparation programs' recruitment efforts among top-tier university students; and structured feedback from school districts on the readiness and effectiveness of program graduates.[112] Connecticut also plans to build long-term capacity to support new teachers in high-poverty districts through its beginning-teacher induction program. The strategy is to expand training of mentors and assessors to include additional competencies to serve as master mentors and teacher leaders in the areas of mathematics, science, special education, and elementary education. Districts are encouraged to restructure teaching assignments and to provide release time for teachers to serve as master mentors and teacher coaches. Connecticut also brings in experienced and successful teachers to serve as teachers in residence alongside teachers in high-need schools, helping them become highly effective.

  Another Connecticut strategy is to promote and approve urban teaching programs aimed at improving the knowledge and skills of teachers who work with students from high-poverty, low-performing schools. Other strategies to build a pipeline of capable and diverse teachers include establishing articulation agreements between community colleges and teacher-preparation programs offered at Connecticut's four-year colleges and universities—leading to state teacher certification—and supporting paraprofessionals to become certi-

fied teachers in urban districts. In addition to expanding alternative routes to certification, an alternative-route program was designed to attract and prepare teachers who currently hold an active teaching certificate to provide special education in urban areas.[113]

- Delaware offers the Alternative Routes to Certification Program, which allows individuals with college degrees in selected secondary school subjects to be hired by public schools and complete certification requirements during the first year of teaching through a one-year, state-approved program of classes accompanied by intensive, school-based mentoring and supervision.

- The Illinois revised plan includes support to programs designed to recruit middle school and high school students to teach in high-need schools; teacher scholarships and loan programs in which recipients must teach for five years in a hard-to-staff school or a shortage area; initiatives to recruit nontraditional students into teacher-preparation programs who come from high-need school communities and will remain in local communities to teach for a minimum of five years after completing programs; formal arrangements that enable high-need districts to recruit and hire qualified international teachers; and continued promotion of high-quality alternative-route programs, such as Teach for America and the Academy for Urban School Leadership.

- The Massachusetts revised state plan includes promotion of alternative routes to state licensure and alternative-preparation programs; practice-based and residency models; extended induction support; tuition support to qualified students to enter a certification program in a field with demonstrated teacher shortages; financial assistance for paraprofessionals who wish to become licensed as full-time teachers; and expansion of the number of high-quality pathways for potential-educator programs, including attracting mid-career candidates into teaching.

- New Jersey's licensure reforms have increased the rigor of educator preparation while providing new flexibility for entry into the profession. New Jersey has done this through a new performance-based approval process for teacher-preparation providers and expanded alternative-route options.

Recruitment and retention of experienced teachers

- Connecticut continues its Teachers Mortgage Assistance Program, which is available to highly qualified teachers who are employed by, and purchase a first-time home as their primary residence in, a priority school district—an urban district with large concentrations of low-income students and students of color.

- To attract candidates with good academic backgrounds, Delaware state legislation allows candidates who have undergraduate degrees with a 3.75 grade-point average or higher to qualify for an extra year's credit on the state salary scale.

- Maine hopes to encourage more teachers to stay or move to smaller, rural, higher-poverty schools by making salaries in small rural communities more competitive with the state's more affluent districts. The legislated teacher-salary minimum of $30,000—up from $15,000—is now the required base. This increase in allocation enables rural and island communities to attract and retain highly qualified teachers. In addition, the raise in minimum teacher salary leads to subsequent increases in experienced teachers' salaries due to the resulting upward pressure in local contracted salary schedules, and hopefully, will lead to greater retention of highly qualified, experienced teachers in all schools. The Massachusetts plan includes implementing new mentoring and training programs; reforming personnel policies for teachers and school leaders, from training to induction to retention; developing specialized corps of turnaround teacher and leaders teams; providing incentives, including differential pay and signing bonuses, for teachers in high-need subject areas; expanding leadership opportunities for experienced, high-performing teachers and incorporating these new teacher-leader positions into the state's revised performance-based licensure system and career ladder with the creation of teacher-leader licenses; continuing the aMAzing Teachers Campaign to recruit outstanding educators into 35 of the state's lowest-performing schools;[114] and expanding statewide recruitment in high-need subject areas and schools. Additionally, Massachusetts will continue to promote National Board for Professional Teaching Standards certification as a means of meeting one of the requirements for the state's professional teaching license and will provide application subsidy funds.

- The North Carolina Teacher Corps is a recruitment and training program based on the Teach for America model that is designed to prepare North Carolina graduates to teach in low-performing schools not served by Teach for America.

- In addition to federal programs such as Troops to Teachers and state grant incentives, Oklahoma created a Minority Teacher Recruitment Center under the Oklahoma State Regents for Higher Education to recruit, retain, and place minority teachers in state public schools.

Some states rehire retired teachers with expertise in certain subjects. Arkansas, Florida, Kentucky, Louisiana, Maryland, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia have policies that allow retired teachers to return to the classroom without losing retirement benefits. Connecticut has a similar program that allows retired teachers to be re-employed without being subject to an earnings limit if they teach in a subject shortage area.[115]

Professional development

- Connecticut recruits experienced, urban teachers to participate in teacher-leadership academies for elementary, special education, science, and mathematics to build their capacity to mentor new teachers and implement research-based practices in the classroom.[116]

- Indiana focuses professional development and training on mathematics and science teaching. The state universities have developed a mathematics initiative at their schools of education, and the Indiana Department of Education has designed a math and science partnership program that trains qualified teachers already teaching in other subject areas to teach math and science.

- Among Massachusetts's strategies are improvements in district teacher-evaluation models and the state's licensure system. The state is creating a professional-development delivery system that includes free online modules and videos available through a digital library, statewide and regional meetings to launch new products and services, regional networks to build leadership capacity at the district and school levels, intensive professional-development institutes, regional training to support the use of tools and resources, and job-embedded professional development through professional-learning communities.

- Maine offers scholarships to pay teachers the necessary fees to apply for and attain a National Board Certificate. Legislation passed in 2007 to pay teachers working under a valid National Board Certificate an additional $3,000 per year as long as it is kept valid and they continue to teach under it. It should be noted that researchers have not found evidence that the National Board for Professional Teaching Standards, or NBPTS, certification process itself does anything to increase teacher effectiveness.[117]

Working conditions

- Delaware reports examining funding and methods to provide additional teachers to reduce class size in low-performing and high-poverty schools.

- In Iowa, improving working conditions translates into support for school administrators. The Iowa Leadership Academy aims to produce effective leaders with the expectation that more qualified teachers will elect to teach in high-poverty, high-minority buildings if they work under positive leadership. The state will use data concerning the leadership behaviors of effective superintendents and student-achievement gains. In addition to support, Iowa also focuses on equalized funding of districts and increased teacher salaries.

- Kansas plans to provide in-depth, rigorous induction and mentoring programs for all new teachers in high-poverty and high-need schools, strengthen leadership-preparation programs and leadership in low-performing schools, and encourage districts to explore and implement merit pay that awards effective teachers for improving student achievement.

- Massachusetts has developed specific initiatives designed to improve conditions in hard-to-staff schools, including implementing Mass TeLLS, a survey designed to measure teacher and administrator perception of school climate, conditions, and culture, including leadership, empowerment, facilities and resources, professional development, and time use. Based on survey results, district administrators and union leaders identified at least one issue to remedy. Other initiatives include implementing a new superintendent induction program beginning with Level 3 and Level 4 districts on a scale from 1 to 5, with 5 being the lowest performing; continuing the National Institute for School Leadership Initiative to address the shortage of effective instructional

leaders in high-need districts; and continuing the Urban Superintendents Program that brings together superintendents monthly to share ideas, concerns, and solutions to a variety of issues that arise.

• Michigan encourages local districts to explore and implement merit pay or pay-for-performance systems that award effective teachers for improving student achievement.

• Since 2002, North Carolina has surveyed all school-based licensed educators about teaching conditions. The survey covers issues of time, leadership, empowerment, professional development, facilities and resources, and induction and provides every public school with its own data to use as a tool to improve student-learning conditions. The statewide data and accompanying research findings are used to shape state policies, which have led to new 21st century standards, evaluations, and support for school leaders and teachers. Of particular note: The North Carolina State Board of Education enacted policies to optimize working conditions for new teachers. Policies encouraged course assignment in the area of licensure; assignment of a mentor early in the school year who was also in the licensure area and in close proximity; an orientation that includes state, district, and school expectations; a limited number of preparations; and no extracurricular assignments unless requested in writing by the beginning teacher.

Endnotes

1 U.S. Department of Education, *ESEA Flexibility: Frequently Asked Questions* (2011).

2 U.S. Department of Education, *ESEA Flexibility* (2012).

3 U.S. Department of Education, "ESEA Flexibility," available at http://www2.ed.gov/policy/elsec/guid/esea-flexibility/index.html (last accessed March 2014).

4 Teacher-effectiveness research raises questions about the usefulness of school practices, such as student homogeneous or ability grouping, that assume teacher performance is disadvantaged by the presence of mixed-ability groups of students. Research supports the contrary and puts the responsibility for student achievement squarely on the shoulders of teacher effectiveness, rather than on the diversity or lack of diversity in the classroom of learners. See S. Paul Wright, Sandra P. Horn, and William L. Sanders, "Teacher and Classroom Context Effects on Student Achievement: Implications for Teacher Evaluation," *Journal of Personnel Evaluation in Education* (11) (1997): 57–67, available at http://www.sas.com/govedu/edu/teacher_eval.pdf.

5 Tim Sass and others, "Value Added of Teachers in High-Poverty Schools and Lower-Poverty Schools." Working Paper 52 (National Center for Analysis of Longitudinal Data in Education Research, 2010), available at http://www.caldercenter.org/UploadedPDF/1001469-calder-working-paper-52.pdf; William L. Sanders and June C. Rivers, "Cumulative and Residual Effects of Teachers on Future Student Academic Achievement" (Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center, 1996), available at http://www.cgp.upenn.edu/pdf/Sanders_Rivers-TVASS_teacher%20effects.pdf.

6 Sanders and Rivers, "Cumulative and Residual Effects of Teachers on Future Student Academic Achievement."

7 An Institute for Education Sciences study on teacher distribution in 10 districts found that, on average, low-income students had unequal access to the highest-performing teachers based on value-added measures at the middle school level but not at the elementary school level. See National Center for Education Evaluation and Regional Assistance, "Do Low-Income Students Have Equal Access to the Highest-Performing Teachers?" (2011), available at http://ies.ed.gov/ncee/pubs/20114016/pdf/20114016.pdf. Sanders and Rivers found a disproportionate number of black students assigned to the most ineffective teachers. See ibid. See also Charles T. Clotfelter, Helen F. Ladd, and Jacob L. Vigdor, "Teacher Credentials and Student Achievement in High School: A Cross-Subject Analysis with Student Fixed Effects," *Journal of Human Resources* 45 (3) (2010): 3655–3681, available at http://jhr.uwpress.org/content/45/3/655.refs.

8 Sass and others, "Value Added of Teachers in High-Poverty Schools and Lower-Poverty Schools."

9 Heather G. Peske and Kati Haycock, "Teaching Inequality: How Poor and Minority Students Are Shortchanged on Teacher Quality" (Washington: The Education Trust, 2006), available at http://www.edtrust.org/sites/edtrust.org/files/publications/files/TQReportJune2006.pdf.

10 U.S. Department of Education, *State and Local Implementation of the No Child Left Behind Act, Volume VIII--Teacher Quality Under NCLB: Final Report* (2009), available at http://www2.ed.gov/rschstat/eval/teaching/nclb-final/index.html.

11 Carrie Hahnel and Orville Jackson, "Learning Denied: The Case for Equitable Access to Effective Teaching in California's Largest School District" (Oakland, CA: The Education Trust—West, 2012), available at http://www.edtrust.org/west/publication/learning-denied-the-case-for-equitable-access-to-effective-teaching-in-california%E2%80%99s.

12 Eric Isenberg and others, "Access to Effective Teaching for Disadvantaged Students: Executive Summary" (Washington: U.S. Department of Education, 2013), available at http://www.mathematica-mpr.com/publications/pdfs/education/effective_teaching_disadvantaged_students.pdf.

13 Douglas Harris and Tim R. Sass, "Teacher Training, Teacher Quality, and Student Achievement." Working Paper 3 (Urban Institute, 2007), available at http://heartland.org/sites/default/files/1001059_teacher_training.pdf; Clotfelter, Ladd, and Vigdor, "Teacher Credentials and Student Achievement in High School"; Sass and others, "Value Added of Teachers in High-Poverty Schools and Lower-Poverty Schools."

14 These findings are based on data from the 2009–2010 Civil Rights Data Collection, or CRDC; the 2009 Small Area Income and Poverty Estimates, or SAIPE; and the 2010 U.S. Census to form a nationally representative data source of 6,569 school districts. See Douglas Gagnon and Marybeth J. Mattingly, "Beginning Teachers Are More Common in Rural, High-Poverty, and Racially Diverse Schools" (Durham, NH: Carsey Institute, 2012), available at http://carseyinstitute.unh.edu/sites/carseyinstitute.unh.edu/files/publications/IB-Gagnon-Mattingly-Beginning-Teachers.pdf.

15 Jane Hannaway, "If We Put Students First, Bad Teachers Are First to Go" (Washington: Urban Institute, 2010), available at http://www.urban.org/publications/901372.html.

16 Jennifer King Rice, "The Impact of Teacher Experience: Examining the Evidence and Policy Implications" (Washington: National Center for Analysis of Longitudinal Data in Education Research, 2010), available at http://www.caldercenter.org/UploadedPDF/1001455-impact-teacher-experience.pdf.

17 Ibid.

18 Helen F. Ladd, "Value-Added Modeling of Teacher Credentials: Policy Implications," Presentation at the second annual CALDER research conference, August 2010, available at http://www.caldercenter.org/upload/Sunny_Ladd_presentation.pdf.

19 Sass and others, "Value Added of Teachers in High-Poverty Schools and Lower-Poverty Schools."

20 Eric Hanushek and Steven Rivkin, "Constrained Job Matching: Does Teacher Job Search Harm Disadvantaged Urban Schools?" Working Paper 15817 (National Bureau of Economic Research, 2010), available at http://www.nctq.org/docs/Hanushek_and_Rivkin_Paper%283%29.pdf; Donald J. Boyd and others, "Who Leaves? Teacher Attrition and Student Achievement." Working Paper 23 (National Center for Analysis of Longitudinal Data in Education Research, 2009), available at http://www.caldercenter.org/UploadedPDF/1001270_teacher_attrition.pdf; Li Feng and Tim Sass, "Teacher Quality and Teacher Mobility." Working Paper 57 (National Center for Analysis of Longitudinal Data in Education Research, 2011), available at http://www.caldercenter.org/upload/CALDERWorkPaper_57.pdf.

21 Li Feng, "Hire Today, Gone Tomorrow: New Teacher Classroom Assignments and Teacher Mobility" *Education Finance and Policy* 5 (3) (2010): 287–316, available at http://econpapers.repec.org/article/tpredfpol/v_3a5_3ay_3a2010_3ai_3a3_3ap_3a278-316.htm.

22 Morgaen L. Donaldson and Susan Moore Johnson, "The Price of Misassignment: The Role of Teaching Assignments in Teach For America Teachers' Exit From Low-Income Schools and the Teaching Profession," *Educational Evaluation and Policy Analysis* 32 (2) (2010): 299–323, available at http://blogs.edweek.org/edweek/teacherbeat/Donaldson_Johnson.EEPA.pdf.

23 Sass and others, "Value Added of Teachers in High-Poverty Schools and Lower-Poverty Schools."

24 National Center for Education Statistics, *Teacher Attrition and Mobility: Results from the 2008-09 Teacher Follow-up Survey* (U.S. Department of Education, 2010), available at http://nces.ed.gov/pubs2010/2010353.pdf.

25 Richard M. Ingersoll, "Why Do High-Poverty Schools Have Difficulty Staffing Their Classrooms with Qualified Teachers?" (Washington: Center for American Progress, 2004), available at http://www.americanprogress.org/issues/education/news/2004/11/19/1205/why-do-high-poverty-schools-have-difficulty-staffing-their-classrooms-with-qualified-teachers/.

26 Consortium on Chicago School Research, "The Schools Teachers Leave: Teacher Mobility in Chicago Public Schools" (2009), available at http://ccsr.uchicago.edu/sites/default/files/publications/CCSR_Teacher_Mobility.pdf.

27 A study of teacher quality and attrition found that not all turnover is negative. In the district studied, the author found that schools were not losing the best teachers from tested subjects and grades in schools where school leaders are held accountable. The author concluded that while there are costs associated with turnover, it can serve as an important matching function between workers and employers. See William Kyle Ingle, "Teacher quality and attrition in a US school district," *Journal of Educational Administration* 47 (5) (2009): 557–585, available at http://www.emeraldinsight.com/journals.htm?issn=0957-8234&volume=47&issue=5&articleid=1812289&show=html.

28 Matthew Ronfeldt, Susanna Loeb, and James Wycoff, "How Teacher Turnover Harms Student Achievement," *American Educational Research Journal* 50 (2013): 4–36, available at http://aer.sagepub.com/content/50/1/4.full.

29 Heather R. Jordan, Robert L. Mendro, and Dash Weerasinghe, "Teacher Effects on Longitudinal Student Achievement: A Report on Research in Progress" (Dallas, TX: Dallas Public Schools, 1997), available at http://dallasisd.schoolwires.net/cms/lib/TX01001475/Centricity/Shared/evalacct/research/articles/Jordan-Teacher-Effects-on-Longitudinal-Student-Achievement-1997.pdf.

30 Demetra Kalogrides, Susanna Loeb, and Tara Béteille, "Systematic Sorting: Teacher Characteristics and Class Assignments," *Sociology of Education* 86 (2) (2013): 103–123, available at http://www.asanet.org/journals/soe/Apr13SOEFeature.pdf.

31 Eric A. Hanushek and Steven G. Rivkin, "Pay, Working Conditions, and Teacher Quality," *Future of Children* 17 (1) (2007): 69–86.

32 Sarah Almy and Melissa Tooley, "Building and Sustaining Talent: Creating Conditions in High-Poverty Schools That Support Effective Teaching and Learning" (Washington: The Education Trust, 2013), available at http://www.edtrust.org/sites/edtrust.org/files/Building_and_Sustaining_Talent.pdf.

33 Consortium on Chicago School Research, "The Schools Teachers Leave."

34 Ingersoll, "Why Do High-Poverty Schools Have Difficulty Staffing Their Classrooms with Qualified Teachers?"

35 Rob Connor, "Examining Teacher Turnover: Past and Present" (Philadelphia, PA: University of Pennsylvania, 2011), available at http://repository.upenn.edu/dissertations/AAI3497955.

36 Feng and Sass, "Teacher Quality and Teacher Mobility."

37 C. Kirabo Jackson and Elias Bruegmann, "Teaching Students and Teaching Each Other: The Importance of Peer Learning for Teachers." Working Paper 15202 (National Bureau of Economic Research, 2009), available at http://www.nber.org/papers/w15202.

38 Richard M. Ingersoll, "Out-of-Field Teaching, Educational Inequality, and the Organization of Schools: An Exploratory Analysis" (Seattle, WA: Center for the Study of Teaching and Policy, 2002), available at http://www.cpre.org/sites/default/files/researchreport/796_outoffield-ri-01-2002.pdf; Jessica Levin and Meredith Quinn, "Missed Opportunities: How We Keep High-Quality Teachers Out of Urban Classrooms" (Brooklyn, NY: The New Teacher Project, 2013), available at http://tntp.org/assets/documents/MissedOpportunities.pdf; Victoria Van Cleef, "Missed Opportunities, 10 Years Later," TNTP Blog, November 18, 2013, available at http://tntp.org/blog/post/missed-opportunities-10-years-later.

39 The National Council on Teacher Quality and *Education Week's* "Quality Counts" track annual or biennial changes in state policies that drive teacher quality. The Data Quality Campaign reports annually on states' data capacity to support teacher effectiveness and accountability for student learning. The Center for Public Education published a recent overview of state teacher- and principal-evaluation policies and provides a database for comparisons across states on specific evaluation components. See, for example, National Council on Teacher Quality, "2013 State Teacher Policy Yearbook: National Summary" (2014), available at http://www.nctq.org/dmsStage/2013_State_Teacher_Policy_Yearbook_National_Summary_NCTQ_Report; *Education Week*, "Quality Counts 2013: State Report Cards," available at http://www.edweek.org/ew/qc/2013/state_report_cards.html?intc=EW-QC13-LFTNAV (last accessed March 2014); Data Quality Campaign, "State Progress," available at http://dataqualitycampaign.com/your-states-progress (last accessed March 2014); Jim Hull, "Trends in Teacher Evaluation: How states are measuring teacher performance" (Alexandria, VA: Center for Public Education, 2013), available at http://www.centerforpubliceducation.org/Main-Menu/Evaluating-performance/Trends-in-Teacher-Evaluation-At-A-Glance/Trends-in-Teacher-Evaluation-Full-Report-PDF.pdf.

40 Kathryn M. Doherty and Sandi Jacobs, "State of the States 2013: Connect the Dots: Using evaluations of teacher effectiveness to inform policy and practice" (Washington: National Council on Teacher Quality, 2013).

41 Policy changes that support the identification of effective teachers, as reported in NCTQ's 2013 State Teacher Policy Yearbook, relate to standards for teacher evaluations, including requirements for annual evaluations for all teachers; that teacher evaluations include objective evidence of student learning; that teacher evaluations are significantly informed by student-achievement growth; and that student-achievement growth is the preponderant criterion in teacher evaluations.

42 Hull, "Trends in Teacher Evaluation: How states are measuring teacher performance."

43 In states where student growth carries explicit weight, growth measures include standardized tests, and there are explicit policies for nontested subjects and grades. See Doherty and Jacobs, "State of the States 2013."

44 Ibid.

45 National Council on Teacher Quality, "2013 State Teacher Policy Year Book: National Summary."

46 Ibid.

47 Ibid.

48 Quality Counts, "State Report Cards."

49 Hull, "Trends in Teacher Evaluation: How states are measuring teacher performance."

50 U.S. Department of Education, "The Federal Role in Education," available at http://www2.ed.gov/about/overview/fed/role.html?src=ln (last accessed March 2014).

51 Susanna Loeb and Luke Miller, "A federal foray into teacher certification: Assessing the Highly qualified teacher' provision of NCLB" (Stanford, CA: Center for Education Policy Analysis, 2006), available at http://cepa.stanford.edu/content/federal-foray-teacher-certification-assessing-highly-qualified-teacher-provision-nclb#sthash.zauwzucj.ePHJEzuC.dpuf.

52 Ibid.

53 Ibid.

54 The Education Trust, "Missing the Mark: States' Teacher Equity Plans Fall Short" (2006), available at http://www.edtrust.org/dc/publication/missing-the-mark-states%E2%80%99-teacher-equity-plans-fall-short.

55 U.S. Department of Education, "Highly Qualified Teachers Revised State Plans," available at http://www2.ed.gov/programs/teacherqual/hqtplans/index.html (last accessed March 2014).

56 Ibid.

57 Ibid.

58 Connecticut State Department of Education, "Connecticut's Teacher Equity Plan: 2010-11" (2013), available at http://www.sde.ct.gov/sde/lib/sde/pdf/arra/CT_Equity_Plan.pdf.

59 New Jersey State Department of Education, "New Jersey's Teacher Equity Plan" (2009), available at http://www.state.nj.us/education/educators/license/nclb/equity.pdf.

60 Marcus Winters, "Measuring Teacher Effectiveness Credentials Unrelated to Student Achievement" (New York: Manhattan Institute for Policy Research, 2011), available at http://www.manhattan-institute.org/html/ib_10.htm. See also Raegen Miller and Marguerite Roza, "The Sheepskin Effect and Student Achievement: De-emphasizing the Role of Master's Degrees in Teacher Compensation" (Washington: Center for American Progress, 2012), available at http://www.americanprogress.org/issues/education/report/2012/07/17/11934/the-sheepskin-effect-and-student-achievement/.

61 North Carolina Department of Public Instruction, "North Carolina's Equity Plan for Highly Qualified Teachers" (2010), available at http://www.ncpublicschools.org/docs/federalprograms/titleII/a/2010-equity-plan.pdf.

62 Troops to Teachers, "About the Program: Overview," available at http://troopstoteachers.net/AbouttheProgram/Overview.aspx (last accessed March 2014).

63 U.S. Department of Education, "Teacher Quality Partnership Grant Program," available at https://www2.ed.gov/programs/tqpartnership/index.html?exp=0 (last accessed March 2014).

64 State of Hawaii, "Highly Qualified Teacher Equity Plan" (2007); Alaska Department of Education, "Alaska Revised State Title II Plan Incorporating Revisions from the July Peer Review" (2006).

65 New Jersey Department of Education, "New Jersey's Plan for Meeting the Highly Qualified Goal" (2006), available at http://www2.ed.gov/programs/teacherqual/hqtplans/index.html?exp=0.

66 The U.S. Department of Education has contracted an $8 million five-year study of the distribution of effective teaching with Mathematica Policy Research, Inc., and the American Institutes for Research to determine the extent to which disadvantaged students are taught by less-effective teachers than their nondisadvantaged peers within districts and how this has changed over time, the policies districts are implementing that could promote an equitable distribution of effective teachers, and the relationship between district policies and the distribution of effective teachers. The study will document distribution changes across the 2008-09 through 2012-13 school years. See Evaluation Studies of the National Center for Education Evaluation and Regional Assistance, "Study of the Distribution of Effective Teaching," available at http://ies.ed.gov/ncee/projects/evaluation/tq_distribution.asp (last accessed September 2013).

67 U.S. Department of Education, *ESEA Flexibility: Frequently Asked Questions*; U.S. Department of Education, *ESEA Flexibility: Guidance for Renewal Process for Windows 1 and 2 States* (2013).

68 U.S. Department of Education, *ESEA Flexibility: Guidance for Renewal Process for Windows 1 and 2 States*.

69 Ibid.

70 Letter from Deborah S. Delisle to chief state school officers, November 14, 2013.

71 For example, recent evaluation results in Michigan resulted in 98 percent of teachers being rated as "effective" or better; in Florida, 97 percent were rated "effective" or "highly effective"; and in Tennessee, 98 percent were deemed "at expectations." See Jenny Anderson, "Curious Grade for Teachers: Nearly All Pass," *The New York Times*, March 30, 2013, available at http://www.nytimes.com/2013/03/31/education/curious-grade-for-teachers-nearly-all-pass.html?pagewanted=1&_r=3&ref=nyregion&.

72 Louisiana Department of Education, "Compass Final Report 2012-2013," available at http://www.louisianabelieves.com/teaching/compass/compass-final-report-2012-2013 (last accessed March 2014); Public Schools of North Carolina, "Educator Effectiveness Model: Educator Effectiveness Data," available at http://www.dpi.state.nc.us/effectiveness-model/data/ (last accessed March 2014).

73 Molly Bloom, "Grading the Teachers: Search Value-Added Grades For 4,200 Ohio Teachers," StateImpact, June 16, 2013, available at http://stateimpact.npr.org/ohio/2013/06/16/grading-the-teachers-search-value-added-grades-for-4200-ohio-teachers/.

74 *Los Angeles Times*, "Grading the Teachers: Value-Added Analysis," available at http://www.latimes.com/local/teachers-investigation/ (last accessed March 2014).

75 *The Wall Street Journal*, "Grading the Teachers," available at http://projects.wsj.com/nyc-teachers/ (last accessed March 2014).

76 U.S. Department of Education, *ESEA Flexibility: Guidance for Renewal Process for Windows 1 and 2 States*.

77 The Education Trust, "ESEA Flexibility Plan/NCLB Waiver State Fact Sheets," available at http://www.edtrust.org/node/3126 (last accessed March 2014).

78 Jeremy Ayers and Isabel Owen, "No Child Left Behind Waivers: Promising Ideas from Second Round Applications" (Washington: Center for American Progress, 2012), available at http://www.americanprogress.org/wp-content/uploads/issues/2012/07/pdf/nochildwaivers.pdf.

79 State of Arizona, "ESEA Flexibility Request" (2012), available at http://www2.ed.gov/policy/eseaflex/approved-requests/az.pdf.

80 State of Ohio, "Ohio ESEA Flexibility Request" (2012), available at https://www2.ed.gov/policy/eseaflex/oh.pdf.

81 State of Rhode Island, "Rhode Island Flexibility Request" (2012), available at http://www2.ed.gov/policy/elsec/guid/esea-flexibility/map/ri.html.

82 Almy and Tooley, "Building and Sustaining Talent: Creating Conditions in High-Poverty Schools That Support Effective Teaching and Learning."

83 TAP, "Resources for Prospective States and Districts," available at http://tapsystem.org/resources/resources.taf?page=pts (last accessed August 2013).

84 Charlotte-Mecklenburg Schools, "CMS announces more Strategic Staffing moves," January 26, 2011, available at http://www.cms.k12.nc.us/News/Pages/CMSannouncesmoreStrategicStaffingmoves.aspx; Jonathan Travers and Barbara Christiansen, "Strategic Staffing for Successful Schools: Breaking the Cycle of Failure in Charlotte-Mecklenburg Schools" (Washington: The Aspen Institute, 2010), available at http://www.aspeninstitute.org/sites/default/files/content/docs/ED_Case_Study_Strategic_Staffing.pdf.

85 Ibid.

86 Ibid.

87 Travers and Christiansen, "Strategic Staffing for Successful Schools."

88 Ibid.

89 Ibid.

90 Stephen Sawchuk, "Teacher-Leader Corps Helps Turn Around Schools," *Education Week*, April 20, 2011, available at http://www.teachplus.org/uploads/Documents/1319053966_EdWeek_StevenSawchuck-20110418TeacherLeaderCorpsHelpsTurnAround-Schools%202.pdf.

91 Ibid.

92 Teach Plus, "Programs," available at http://www.teachplus.org/page/t3-8.html (last accessed March 2014).

93 T3, "Closing the Gap: Progress Over Two Years in T3 Schools," available at http://www.teachplus.org/uploads/Documents/1355156579_T3ClosingtheGap.pdf (last accessed March 2014).

94 OpportunityCulture.org, "Redesigning Schools to Extend Excellent Teachers' Reach," available at http://opportunityculture.org/reach/#table (last accessed March 2014).

95 Public Impact, "Summary of Teacher Career Paths" (2012), available at http://opportunityculture.org/wp-content/uploads/2012/05/Summary_of_Teacher_Career_Paths-Public_Impact.pdf.

96 OpportunityCulture.org, "Participating Sites," available at http://opportunityculture.org/our-initiative/participating-sites/ (last accessed March 2014).

97 Urban Teacher Residency United, "The UTRU Network," available at http://www.utrunited.org/the-network (last accessed March 2014).

98 Urban Teacher Residency United, "The Urban Teacher Residency Model," available at http://www.utrunited.org/the-residency-model (last accessed March 2014).

99 The White House, "President Obama Announces Plans for a New, National Corps to Recognize and Reward Leading Educators in Science, Technology, Engineering, and Math," Press release, July 17, 2012, available at http://www.whitehouse.gov/the-press-office/2012/07/17/president-obama-announces-plans-new-national-corps-recognize-and-reward-.

100 Allan Odden, "Getting the Best People into the Toughest Jobs: Changes in Talent Management in Education" (Washington: Center for American Progress, 2013), available at http://www.americanprogress.org/issues/education/report/2013/04/04/58474/getting-the-best-people-into-the-toughest-jobs/.

101 Michelle McNeil, "Scrutiny Rises on Placement of Best Teachers," *Education Week*, February 18, 2014, available at http://www.edweek.org/ew/articles/2014/02/19/21equity_ep.h33.html. See also Letter from Disele to chief state school officers.

102 Forty-five states and the District of Columbia have adopted the Common Core State Standards. This state-led effort has established a single set of clear educational standards for kindergarten through 12th grade in English language arts and mathematics that states voluntarily adopt. The standards are designed to ensure that students who graduate from high school are prepared to enter credit-bearing entry courses in two- or four-year college programs or to enter the workforce. See Common Core State Standards Initiative, "Standards in Your State," available at http://www.corestandards.org/standards-in-your-state/ (last accessed March 2014); Common Core State Standards Initiative, "Frequently Asked Questions," available at http://www.corestandards.org/resources/frequently-asked-questions (last accessed May 2013).

103 Laura Bornfreund, "Map Provides Context for Reforms of Teacher Evaluation Systems," New America Foundation, May 21, 2013, available at http://earlyed.newamerica.net/blogposts/2013/map_provides_context_for_reforms_of_teacher_evaluation_systems-84424.

104 Jane G. Coggshall, "Communication Framework for Measuring Teacher Quality and Effectiveness" (Washington: National Comprehensive Center for Teacher Quality, 2007), available at http://files.eric.ed.gov/fulltext/ED543771.pdf.

105 U.S. Department of Education, *Race to the Top Program Executive Summary* (2009), available at http://www.macae.org/Forms_and_Docs/executive-summary.pdf.

106 Coggshall, "Communication Framework for Measuring Teacher Quality and Effectiveness."

107 Center for Public Education, "Teacher quality and student achievement: Research review," November 1, 2005, available at http://www.centerforpubliceducation.org/Main-Menu/Staffingstudents/Teacher-quality-and-student-achievement-At-a-glance/Teacher-quality-and-student-achievement-Research-review.html.

108 U.S. Department of Education, *Race to the Top Program Executive Summary*.

109 Linda Darling-Hammond, "Teacher Quality and Student Achievement: A Review of State Policy Evidence" (Seattle, WA: Center for the Study of Teaching and Policy, 1999), available at http://www.politicalscience.uncc.edu/godwink/PPOL8687/WK11March%2029%20Teachers-Darling-Hammond%20Review%20essay%20on%20teacher%20quality%20and%20outcomes.pdf.

110 Each of the plans referenced in this section is available on the Department of Education's website. See U.S. Department of Education, "Improving Teacher Quality State Grants: HQT Revised State Plans," available at http://www2.ed.gov/programs/teacherqual/hqtplans/index.html?exp=0 (last accessed March 2014).

111 Michigan Department of Education, "About Teacher Certification," available at https://www.michigan.gov/mde/0,1607,7-140-6530_5683_14795---,00.html (last accessed March 2014).

112 Connecticut is one of seven states selected to participate in the Network for Transforming Educator Preparation, a two-year pilot program supported by the Council of Chief State School Officers. Connecticut will concentrate on strengthening the educator-preparation-program approval process to ensure that all program completers are "learner-ready" and equipped with the knowledge, skills, and dispositions needed to prepare all students for success in college or careers. The state will also focus on developing a system for the collection and analysis of data to inform improvements to the preparation of educators for the workforce. See Connecticut State Department of Education, "Connecticut Recognized for Efforts to Transform Educator Preparation," Press release, October 23, 2013, available at http://www.sde.ct.gov/sde/lib/sde/pdf/pressroom/connecticut_recognized_for_efforts_to_transform_educator_preparation.pdf; Connecticut State Department of Education, "Connecticut's Teacher Equity Plan: 2010-11."

113 Ibid.

114 This is the state's initiative to recruit talented teams of educators to the lowest-performing schools to improve student achievement. These teams include current teachers who have already begun to lead the schools' transformations, as well as outstanding, experienced teachers who are new to the schools. Above all, they are excellent teachers with a track record of success who are willing to devote their skills, energy, and expertise to students and schools with the greatest need for improvement. See Massachusetts Department of Elementary and Secondary Education, "Amazing Educators," available at www.amazingteachers.org (last accessed March 2014).

115 Connecticut State Department of Education, "Connecticut's Teacher Equity Plan: 2010-11."

116 Ibid.

117 Dan Goldhaber and Emily Anthony, "Can Teacher Quality Be Effectively Assessed? National Board Certification as a Signal of Effective Teaching" (Washington: Urban Institute, 2005), available at http://www.urban.org/UploadedPDF/411271_teacher_quality.pdf.

The Center for American Progress is a nonpartisan research and educational institute dedicated to promoting a strong, just, and free America that ensures opportunity for all. We believe that Americans are bound together by a common commitment to these values and we aspire to ensure that our national policies reflect these values. We work to find progressive and pragmatic solutions to significant domestic and international problems and develop policy proposals that foster a government that is "of the people, by the people, and for the people."

Center for American Progress