



Smart, Skilled, and Striving

Transforming and Elevating the Teaching Profession

By Carmel Martin, Lisette Partelow, and Catherine Brown

November 2015

Center for American Progress



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Introduction and summary

“Imagine a school where teaching is considered to be a profession rather than a trade. The role of teachers in a child’s education—and in American culture—has fundamentally changed. Teaching differs from the old ‘show-and-tell’ practices as much as modern medical techniques differ from practices such as applying leeches and bloodletting.”

– Judith Taack Lanier, former dean, College of Education, Michigan State University¹

Lanier’s words, written in 1997, were prescient. Today, a decade and a half into the 21st century, this transformation is well underway, even if her vision has yet to be fully realized. The professional expectations for today’s teachers are undoubtedly high. They must work to prepare students for new economic realities, use new and innovative pedagogical techniques and technologies, adapt their instruction to meet students’ increasingly diverse needs, and adjust to recent policy reforms that directly affect their practice. These changes have reshaped teaching, making it a more difficult and demanding profession. At the same time, however, research is demonstrating the powerful effect that teachers can have on student learning² and illuminating the ways in which great teaching is more important than ever before.³

Unfortunately, the ways in which schools and school days are organized—and the ways in which school systems have been designed to train, support, and develop teachers—have not kept pace with the tectonic shifts in teachers’ daily realities, making it difficult for teachers to succeed in their profession. The public’s perception of teaching is equally out of date, preventing the full realization of Lanier’s vision to elevate the profession’s standing in American culture.

According to a Third Way study, 77 percent of voters and 82 percent of teachers said that if we do not change the perception of the teaching profession, schools will not be able to recruit high-achieving young people into the classroom.⁴ A modernized teacher workforce is critical when it comes to improving academic achievement, moving toward educational equity, and ensuring the health of the national

If we do not change the perception of the teaching profession, schools will not be able to recruit high-achieving young people into the classroom.

economy. In order to improve teaching and learning in the United States and keep up with changing demands on students, teachers, and schools, policymakers and education officials must make systemic changes to all aspects of the teaching profession: recruiting; training; developing; retaining; and supporting teachers with effective leaders and professional learning environments. Each of these pieces is interconnected and must be aligned in order for change to be effective.⁵

This work is possible. The remarkable growth of several nations from mediocre performance to the top of the list on international assessment results—including Finland, Canada, and Poland—has been widely attributed to their overhauls of their educational systems. These countries placed excellent teaching front and center—from recruiting, selecting, and educating teacher candidates to fundamentally redesigning the way schools operate and the way time is used to provide excellent ongoing training, significant autonomy, supportive working conditions, and opportunities to participate meaningfully in decisions that affect teachers’ practice once they are in the classroom.⁶ Some U.S. states and districts have undertaken similar efforts, but considerable change is still needed before these efforts can be considered systemic.

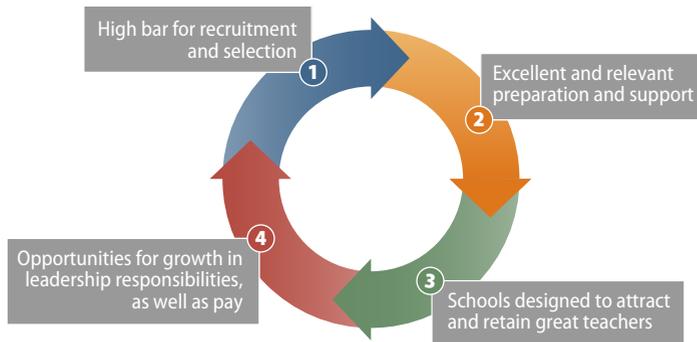
Systemic change is critical for the future of the U.S. teacher workforce and the nation’s students. No simple policy fix will be enough to move the system as a whole, especially since so many of the institutions responsible for educating, training, and setting policy for teachers operate in isolated silos that are often disconnected from teachers themselves. Rather, the nation must take a comprehensive approach to improve all parts of a teacher’s career—beginning with the selection of a college major and continuing through retirement.

This far-reaching agenda will affect not just how teachers are recruited and trained but also the fundamental ways in which schools are organized. These changes can set in motion a virtuous cycle by which better training and working conditions enhance the experience of being a teacher, attract more people into the profession, and elevate the status of teachers overall, thereby improving the profession.

What follows is a progressive vision and policy agenda to achieve these goals that would ultimately make changes to every stage of the teacher career continuum and modernize the system as a whole. It is a transformation that begins with recruitment and selection into teacher preparation programs and continues on to new teacher training and support, professional development, compensation, and opportunities for career advancement.

FIGURE 1

The virtuous cycle: Attracting and retaining great teachers



Each of the following changes is integral to this shift toward a respected, modernized, and elevated teacher workforce:

- **Ensure that teacher preparation programs select teacher candidates carefully and purposefully.** In order to cultivate the best teacher workforce possible, teacher preparation programs must address the lack of selectivity fueling the false perception that teaching is not a career that will challenge and reward top students. This change must be made in conjunction with efforts to recruit excellent teaching candidates from diverse backgrounds.
- **Require teacher preparation programs to improve coursework and offer higher-quality clinical training experiences.** Once admitted into a teacher preparation program, prospective teachers should receive a rigorous and comprehensive education that prepares them for the challenges they will face once in the classroom, including through high-quality clinical experiences. In addition, states should be required to collect and publish data on the effectiveness of their teacher preparation programs, which would then allow states to develop a system for shutting down programs that are not adequately preparing students for the challenges of the classroom.
- **Improve licensure exams to make them a more meaningful bar for entry into the teaching profession.** Licensure exams must be improved and refined to ensure that they are rigorous and rooted in the kind of skills and knowledge that teachers need to succeed in the classroom.

- **Raise teacher compensation to professional levels and differentiate pay according to effectiveness and leadership responsibilities.** In order to recruit excellent prospective teachers into the field, teachers' salary trajectories must be brought in line with those of other professionals, which means higher starting salaries; faster salary increases, especially for high-performing teachers; and the opportunity to earn more by taking on additional responsibilities.
- **Invest in new teachers by supporting their professional growth early on.** To improve the working conditions for beginning teachers, states should require districts to provide a more gradual on-ramp to a full-time teaching experience by offering high-quality induction programs, intensive coaching and mentoring, co-teaching models and experiences, teacher residency programs, and/or a reduced course load for beginning teachers.
- **Redesign school schedules to support improvements in teacher practice.** Following the models of high-performing nations, U.S. school districts should thoughtfully increase the amount of time teachers have available to improve their practice—time that could be spent observing highly effective teachers, collaborating and planning with colleagues, coaching, mentoring, and engaging in other forms of professional learning.
- **Improve professional development by aligning it to the needs of students and teachers.** To ensure teachers are getting the kind of professional development opportunities they deserve, districts should be required to demonstrate how they are shifting their professional development dollars toward models that are designed to meet teachers' personalized improvement needs, are aligned to high-quality evaluation systems, and are aimed at improving student learning outcomes.
- **Provide more opportunities for teachers to assume leadership roles.** Career ladders and compensation structures that reward effective teachers who take on additional responsibilities within their schools with higher pay would bring teaching in line with other careers, where high performers can expect increases in salary and responsibility. Leadership roles could include mentoring new or struggling teachers; planning or facilitating professional development; observing teachers and giving feedback; or working with school leaders to hire new teachers or make decisions related to curriculum, instruction, or resource allocation.

- **Reform tenure by setting a high bar for attaining it and streamlining due process.** In order to bring the tenure process in line with the needs of the ever-changing teaching profession, due process protections must be streamlined and the bar for achieving tenure must be raised by linking it to teacher performance and extending the timeline for attaining tenure status.
- **Ensure that school leaders receive training in how to support teachers.** Motivating teachers, driving instructional improvement schoolwide, providing objective and meaningful feedback, making thoughtful hiring decisions, creating a positive school culture focused on student learning, and supporting the development and advancement of their best teachers are all crucial aspects of school leaders' jobs. Principals and other administrators must receive training and support in how to carry out these roles effectively.

This report envisions a modernized teacher workforce made up of professionals who must compete for a spot in their preparation programs; work relentlessly to finish their clinical experiences with high marks; study late into the night to pass their licensure exams; and dedicate themselves fully to their craft so they can earn greater responsibilities, higher compensation, and tenured status. These changes, if brought to fruition, will establish a modernized and elevated teacher workforce. What's more, these changes have the potential to transform the profession's reputation and improve teaching and learning for millions of students across the United States.

Authors' note: This report guides the reader through a teacher's career trajectory, beginning at recruitment and selection and continuing throughout his or her career. Our mission is to provide policymakers and the public with a forward-thinking document that proposes how to elevate and modernize the teaching profession. In this report, we argue that elevating the teaching profession cannot be solved by one policy change; instead, changes must be made to every step of the teacher pipeline. For this reason, we have paired each section—representing each stage in a teacher's career—with its own recommendation(s).

Teaching: Transformational and transformed

Great teaching has always been extremely hard work, but the expectations for what constitutes great teaching have increased dramatically in recent years. Lessons and student work must now be much more than fun and engaging; they must also be standards based, data driven, and inclusive. Most importantly, they must produce results in the form of tangible learning gains.

Likewise, the stakes are much higher for today's students. A generation ago, young people could aspire to a comfortable middle-class life if they graduated from high school, and teachers were only expected to prepare a select minority of students for college. Today, postsecondary education and training are the minimum qualifications for most jobs,⁷ which means teachers are working to get all students ready for college and career by graduation. In this context, good teaching matters more than ever.

The more you know: The power of good teaching

“In a completely rational society, the best of us would be teachers and the rest of us would have to settle for something less.”

– Lee Iacocca, former president and CEO of Chrysler Corporation⁸

Iacocca is right: Good teaching matters. Teacher quality is the most important in-school factor related to a student's academic achievement;⁹ by some calculations, if every student in the country were taught by great teachers, all students would meet and exceed the goal of graduating from high school prepared for college and career.¹⁰

Disadvantaged students benefit the most when they have skilled teachers. In a longitudinal study of students in Tennessee, those who began the study struggling academically saw greater gains when they were assigned to effective teachers than their peers who were not. These gains were not made at the expense of stronger students; more advanced students also made good progress.¹¹

Similar research performed in Texas demonstrated that good teaching is especially important for low-income students. Extrapolating from the gains that low-income students made when taught by a good teacher, researchers estimated that poor students taught by effective teachers for five years in a row could perform as well as their more affluent peers.¹² While teachers should not be expected to overcome poverty alone, this research does illustrate the extent to which teaching can make a meaningful difference in student outcomes.

Improving teacher quality also has real economic consequences for students. Using modeling to determine the impact that replacing teachers with very low value-added scores—that is to say, teachers who demonstrate low quantitative measures of effectiveness—with teachers whose performance is average, the researchers estimated that this change would lead to an additional \$50,000 in lifetime earnings per student. This works out to more than \$1.4 million in earnings per classroom.¹⁴ Given the enormous benefits that great teaching has for students, it's no wonder that policymakers at all levels have become increasingly focused on how to improve teaching and learning in today's schools.

“The economic effect of a good teacher: \$50,000 in lifetime earnings per student ... \$1.4 million per classroom.”¹³

Great expectations: Teachers' changing job description

As research has given us a greater understanding of the importance of high-quality teaching, teachers have begun to face higher expectations from their administrators, districts, and policymakers at the state and federal levels. Today, teachers are expected to provide their students with better instruction that meets an increasingly high bar for student performance. As a result, teachers' roles and responsibilities have expanded greatly without a corresponding change in their education, training, support, or pay.

With the release of the 1983 report “A Nation at Risk,” policymakers and the public began to worry about the quality of the national education system and the implications for future economic competitiveness.¹⁵ This led to several shifts in education policy that raised expectations for all students, including many who historically had been marginalized, such as African American and Latino students, English language learners, students from low-income families, and students with special needs.¹⁶ Integrating more students with disabilities into regular classrooms, expecting all students to graduate from high school ready for college and career,

and increasing the use of project-based learning and other teaching methods designed to foster 21st century and social-emotional skills represent just some of the policy changes that had a direct impact on teachers' job responsibilities.

Another recent major change to teachers' jobs involves the adoption of new, more rigorous standards in most states. Since the release of the Common Core State Standards, or CCSS, in 2010,¹⁷ 42 states and the District of Columbia have adopted and implemented them in both math and English language arts. The standards map out what students should know and be able to do in each grade in order to be ready for college and career by graduation.¹⁸ For most states, this has meant a shift toward higher standards. In 2010, the Fordham Institute rated state standards in place at the time on their clarity, specificity, content, and rigor and compared the ratings with the Common Core. The Fordham Institute found that the CCSS were clearer and more challenging than the standards of 37 states in English language arts and 39 states in math.¹⁹

Adoption of new, more difficult standards means a significant amount of work for teachers, particularly in the first years of implementation. New standards mean that states and districts need to develop new curricula aligned to the standards. In many cases, this means that teachers must familiarize themselves with these new materials; in other cases, it means teachers are responsible for developing new curricula on their own.²⁰

Depending on the level of district support and teachers' access to aligned curricular materials, the implementation of new standards may also require teachers to spend time outside their regular classroom hours studying the standards, mapping them out into units over the course of the year, breaking them into sequential objectives, and developing corresponding lessons and formative assessments.²¹ Ideally, this work will be done in collaboration with their colleagues.

Moving toward the Common Core also requires many teachers to make significant pedagogical shifts to implement the new standards with fidelity. For example, the Common Core calls for a greater emphasis on conceptual understanding in elementary math classrooms, more exposure to nonfiction texts in middle school English classrooms, and literacy across content areas in high school classrooms.²² One of the Common Core's most important shifts is that it requires students to become critical and analytical thinkers as well as problem solvers.²³ This kind of learning requires a markedly different instructional approach than standards that require mere memorization of facts or algorithms.

New standards and policies have also been accompanied by evolving research about effective practice. For example, the push to ensure that all students meet high standards has driven a focus on new methods for differentiating instruction—identifying students’ varied needs, learning abilities, and interests and using the information to plan lessons adapted to suit this variety. Differentiation is now widely expected of teachers, as demonstrated by its inclusion in many of the frameworks that states and districts use as the basis for their teacher evaluation systems.²⁴ But even the staunchest supporters of differentiation acknowledge that it requires significant additional planning time on the part of the teacher.²⁵

Likewise, small-group work, learning stations, technology integration, and project-based and inquiry-based learning are other examples of teaching techniques that are becoming the norm, but they too require careful and detailed teacher planning to implement. While these are positive developments for students, schools have implemented them while paying little attention to the implications for teachers. Further, systems have failed to make corresponding changes to school schedules or teacher supports that would make it possible for teachers to implement these strategies consistently and well.

“Many young people are struggling against significant headwinds which affect their social, emotional and academic progress. A traditional academic approach must also incorporate a thoughtful, thorough and effective strategy for addressing the behavioral health needs of our students.”

– Donald Evans, superintendent, Berkeley Unified School District²⁸

Demographic and economic change adds an additional layer to these demands. Today’s students are increasingly diverse, both in terms of race and ethnicity and in terms of income,²⁶ and more than one in eight receive special education services.²⁷ This increased diversity brings with it a vast array of student needs at the same time expectations for students’ educational achievement are increasing. The shift toward higher expectations for all students is the right thing to do to ensure

an equitable education system, a competitive economy, and a thriving democracy, but it also means that teachers must evolve their practice in order to best serve their students.

Economic changes have also made changes to the teaching profession. At one time, America had the highest college-going rates in the world,²⁹ and this contributed significantly to the nation's global economic leadership. But as the United States has slipped from the top of the list on many educational outcomes, it has had sobering implications for the country's economic competitiveness.³⁰ Researchers estimate that by 2020, for example, 65 percent of all newly created jobs will require postsecondary education.³¹ Those with only a high school diploma will find themselves not only with limited employment options but also with limited earnings potential, even as the wage premium for college-educated workers continues to increase.³² This is why teachers must now work harder than ever to prepare all students for college and career.

Together, economic, demographic, policy, and pedagogy changes mean that teaching is increasingly complex work. As a result, the teaching profession is in flux. While many individual teachers are making incredible efforts to adapt to this new landscape, they cannot be expected to do it alone. The systems designed to select, educate, train, and support teachers must also change in order to support their efforts to keep pace with new, higher expectations for their work.

Changing preparation, compensation, and working conditions to support a revitalized profession

“I think our work is incredibly complex and incredibly taxing and incredibly important. And those factors aren’t always recognized in what we see around us ...”

– Sean McComb, 2014 National Teacher of the Year³³

Too few people recognize teaching as the incredibly complex, incredibly taxing, and incredibly important work that it is. Despite all that is known about the importance and value of good teaching, teaching gets a bad rap. At its root, this is a perception issue. Perhaps teaching has been left off the list of high-status professions because of the pay³⁴ or because it has traditionally been a women’s job.³⁵ Whatever the reason, teachers must endure—in addition to the many challenges that they experience as part of their work—tired clichés and other rude remarks about their profession.³⁶ Changing this narrative, therefore, must be part of any proposal to elevate the teaching profession.

In high-performing countries, teachers are put on a pedestal. They are given the same level of status and respect as doctors and lawyers.³⁷ In many of these countries, elevating the status of teachers was intentional, planned, and recent,³⁸ so there is no reason why the same changes cannot be made in the United States. These changes made in other countries were not merely surface-level public relations efforts but rather the result of a systemic overhaul of policy and practice that substantively transformed the profession and served to uplift its standing in the eyes of the public.

Elevating the status of the teaching profession is a tall order, but other countries are already demonstrating that it can be done. Both high-performing countries and those deemed “big improvers” on the Programme for International Student Assessment, or PISA—an internationally comparative assessment of 15-year-olds—have made investing in their teacher workforce a national priority. Forty countries have made such improvements on PISA in recent years.³⁹ Despite the

common perception that dramatic improvement can only be accomplished in small, homogeneous countries such as Finland or Singapore, many high performers and big improvers are just as large and diverse as the United States.

Canada, for instance, has a higher proportion of immigrants than any other G-8 country, its residents speak 200 languages,⁴⁰ and its child poverty rate approaches that of the United States,⁴¹ yet it ranks 10th in the world in math. Large, diverse countries such as Brazil, Germany, and Indonesia have also posted significant gains in recent years, so the size and diversity of the United States should not prevent it from making these changes effectively. Despite its advantages—wealth, a historical head start on providing universal education, and a higher level of parental education—the United States’ scores have remained stagnant on PISA assessments.⁴² It now ranks 36th in the world in math, significantly below the Organisation for Economic Co-operation and Development average.⁴³

But this stagnation is neither permanent nor inevitable. With carefully crafted changes to the systems that shape the teaching profession, improvement is possible. These changes include making entry into the profession more rigorous and selective; increasing pay, particularly for those teachers who have demonstrated excellence; and restructuring schools to improve working and learning conditions, including giving teachers more opportunities to collaborate, improve their practice, and take on leadership roles within schools. Together, these policy changes will create a virtuous cycle, making the teaching profession more attractive to talented new entrants and increasing current teachers’ impact on student learning.

1. Preparing teachers for demanding and illustrious careers

Today's classroom is a much different place to work than it was a generation or even a decade ago. Yet the current system for selecting and training preservice teachers has not evolved and as such does not consistently produce teachers who are able to meet the realities of these increasing demands. This is unfortunate and frustrating for all stakeholders—parents, students, administrators, and teachers themselves. To raise the bar for entry into the profession, teacher preparation programs should focus on recruitment and improve the coursework and clinical experiences that students receive in teacher education. In conjunction, states should raise the requirements for licensure once preparation is complete.

Aiming high in admissions: Selecting teacher candidates purposefully

One of the ways high-performing countries have elevated the profession's status is by carefully selecting potential teachers. While being a great teacher requires much more than a high GPA or SAT score, these measures of academic ability are positively correlated with higher achievement outcomes for students.⁴⁴

High-performing nations and locales such as Ontario, Canada; Singapore; and South Korea take this into account by recruiting all of their teacher candidates from the top 30 percent—or even the top 5 percent—of high school graduates.⁴⁵ Other countries such as Finland take a different approach by using a more holistic selection process. This process allows for the selection of some students who were not as academically successful in high school but who show great promise as educators, while still admitting only 10 percent of the overall applicant pool into teacher preparation programs.⁴⁶ In both of these cases, high-performing countries are demonstrating that when teaching is seen as a profession that only a select few can enter, this sends parents and the public the message that teachers are smart and capable and that teaching is a difficult and intellectually challenging job—which, of course, it is.⁴⁷

According to the latest data, the average SAT scores and GPAs of U.S. teachers have been on the rise, but concerns remain that too few of them come from the top of their class compared with high-performing countries.⁴⁸ Not only are top U.S. students less likely to consider entering teacher preparation programs while in college, they are also more likely to drop out at every decision point on the path to becoming a career teacher. High school students who attend top-tier colleges are less likely to go into education in college; top college graduates are less likely to choose teaching; those top graduates who do become teachers are less likely to stay in the profession; and former teachers with top test scores are less likely to return to teaching after leaving.⁴⁹

But bringing top students into teaching is not the primary goal of increasing selectivity. Rather, its aim is to cultivate the best teacher workforce possible. For that to happen, top students need to consider teaching as a viable career option. At the same time, policymakers must proceed cautiously to ensure that cutoff scores are not set arbitrarily high; this could prevent talented individuals from entering the profession and have other unintended consequences, such as reducing the diversity of the teacher workforce.

The overall lack of selectivity in preparation programs has sent the wrong message to young people who might consider teaching careers. A Third Way poll of high-achieving undergraduate students across all majors showed that they believe education is one of the easiest majors, that the prestige of the teaching profession is in decline, and that teaching is not a career for smart students.⁵⁰ When pitted against their peers internationally, U.S. teachers score much lower on a “status index” than teachers in some high-performing nations such as China, Singapore, the Netherlands, and South Korea.⁵¹

Teacher preparation programs in the United States are partly to blame for the teaching profession’s image problem. While the teaching profession is extremely difficult and demanding, schools of education have the opposite reputation. Too many are not selective or purposeful about the students they admit, which is compounded by the fact that they often fail to provide rigorous academic coursework or meaningful clinical experiences for students.

A teacher’s academic ability matters as well. Research shows that strong students are more likely to become effective teachers.⁵² Despite this research and the rigorous and complex demands of the job, teacher preparation programs are not highly

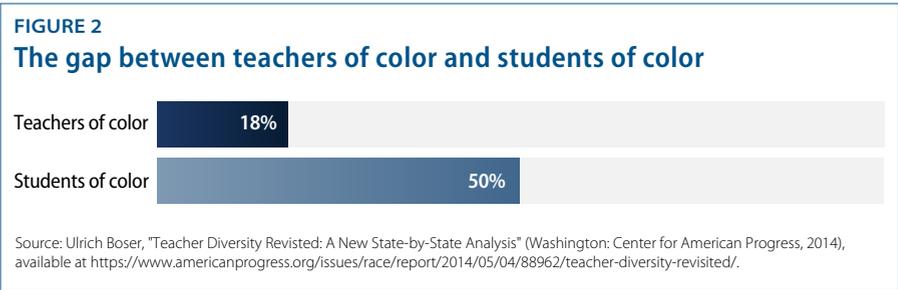
selective and not nearly as discerning as medical or law schools: Two-thirds of teacher preparation programs accept more candidates than they reject, and one-quarter accept almost everyone who applies.⁵³

Increasingly, states have begun to recognize the importance of selecting students with strong academic credentials into teacher preparation programs. Sixteen states now require their teacher preparation programs to have Council for the Accreditation of Educator Preparation, or CAEP, accreditation, which requires a 3.0 GPA for each cohort. However, 26 states still have no GPA requirements for teacher candidates, which allow their programs to enroll any and all applicants.⁵⁴

When it comes to selectivity, test scores and grades are not everything. There are other skills and traits associated with teacher effectiveness. One of the most researched is grit, defined as “perseverance and passion for long-term goals.”⁵⁵ A 2009 study showed that teachers with high levels of grit were more effective in the classroom and more likely to remain in the profession long term.⁵⁶ Other traits that are associated with increased teacher effectiveness are optimism,⁵⁷ self-efficacy,⁵⁸ and leadership orientation.⁵⁹ In Germany, teachers must prove their abilities in traditional academic skills as well as demonstrate other traits closely associated with skilled teaching. To move forward with their training, German teacher candidates must pass a difficult assessment before they are able to start a two-year teaching apprenticeship. At the end of this apprenticeship experience, another rigorous assessment measures their applied skills through classroom observations.⁶⁰ Despite this emerging research and the best practices of places such as Germany, only a select few teacher preparation institutions and alternative certification programs in the United States are working to find candidates with the traits and skills correlated with great teaching as part of their candidate selection process.

Cultural competency is another critical skill that teachers need in order to work effectively with all students.⁶¹ Many teacher candidates will be teaching students from socio-economic, racial, and cultural backgrounds different from their own. Currently, more than half of public school students are students of color and more than half are low income, while the majority of public school teachers are white, female, and from middle-class backgrounds.⁶² Although this so-called demographic divide between teachers and their students is expected to grow, most preparation programs do not actively seek to select students who can demonstrate cultural competency in communicating and working across lines of difference.

Similarly, too little attention is paid to the recruitment of teacher candidates from diverse backgrounds who have personal experiences that may help them relate to their students and hold high expectations for them. Many teacher preparation programs fail to purposefully recruit people of color, men, and students from low-income backgrounds. This is especially concerning since, if done carelessly, raising selectivity may disproportionately eliminate students of color from the teacher candidate pipeline.⁶³ This is why it is imperative that schools make targeted outreach efforts and are thoughtful about how they increase entrance and other requirements.



To address the shortcomings of the current teacher candidate selection system, we propose the following:

Improve the selectivity of teacher preparation programs

Entrance requirements serve an important role in drawing teachers from a stronger and more diverse cohort of students, as well as encouraging teacher preparation programs to start actively recruiting and selecting cohorts. As discussed above, teacher preparation programs should be required to set a cohort GPA requirement of 3.0 for each incoming class of teacher candidates. This allows for some flexibility for candidates who may bring especially valuable experiences or skills to their teaching but who would not be eligible under a strict cutoff score. In addition to academic achievement, teacher preparation programs should also assess, and later teach, cultural competency and noncognitive skills and characteristics—such as grit, perseverance, and communication skills—that have been shown to influence teacher effectiveness. Programs should continue to research and refine the criteria that predict classroom performance.

Although states such as Delaware and Rhode Island are leading the way in making entry into teacher preparation more selective, it's too soon to evaluate the results of this shift in the United States. For the time being, other countries can provide valuable proof points for the impact of similar policies. Top-performing countries—including Finland, Germany, Korea, and Singapore—have all seen results in part because they have made selectivity a priority in their teacher preparation programs.⁶⁴

Require a pretest for students to enter teacher preparation programs

It is unfair to admit students to teacher preparation programs, charge them tuition for coursework, and have them take on debt in order to complete their degrees if they are not going to be able to pass a meaningful licensure exam and obtain certification. Entrance into teacher preparation programs should be treated more like entrance into graduate programs, where an exam—such as the GRE, MCAT, or LSAT—screens students' ability to complete the coursework and clinical preparation necessary to be effective in the classroom. Many preparation programs already do this by requiring candidates to take the Praxis Core or a similar assessment before beginning their teaching coursework, but this practice is far from universal, and the assessments used are not typically designed to be predictive of future classroom performance.

Require teacher preparation programs to demonstrate that they are recruiting excellent and diverse candidates

Teacher preparation programs should actively recruit talented students from diverse backgrounds—including students of color, low-income students, and men—to bridge the demographic divide between the teacher workforce and the student population. Through their program approval process, states should require teacher preparation programs to report on the qualifications and diversity of their applicants, as well as to demonstrate how their recruitment efforts are informed by the needs of local districts.

The state of New York, after enacting a series of reforms intended to recruit, train, and retain an improved teacher workforce, found that an increasing share of newly hired teachers was scoring in the top third of the SAT distribution—44 percent vs. 33 percent prior to the reforms—while at the same time the percentage of teachers of color was also increasing, going from 16 percent to 24 percent.⁶⁵ New York's example serves as a proof point that it is possible to accomplish the goal of increasing the diversity of the teacher workforce while also raising selectivity.

Provide increased loan forgiveness and other financial assistance to encourage low-income students to enter the teaching profession

For high-achieving students who are first-generation college students or who come from low-income backgrounds, debt and other financial concerns present a barrier to entering lower-paid professions such as teaching. Providing substantial financial assistance for top students who choose teaching could level the playing field with other more lucrative professions and help persuade top students to consider teaching as a viable option.

Curriculum at the core: Improving teacher preparation coursework and clinical training

Once admitted to preparation programs, prospective teachers deserve excellent training. Unfortunately, while there are some excellent teacher preparation programs, prospective teachers do not always receive the kind of training that they need to be successful in the classroom. In the 2013 National Council on Teacher Quality, or NCTQ, review of more than 1,100 teacher preparation programs, most got only middling grades.⁶⁶ This problem is not news: In 2006, the former president of Teachers College at Columbia University wrote that “a majority of teacher education graduates are prepared in university-based programs that suffer from low admission and graduation standards.”⁶⁷

The most common criticism of teacher preparation programs is that they lack rigor. Empirical evidence supports the perception that education is an “Easy A” major. A 2014 NCTQ report showed that prospective teachers in higher education were 50 percent more likely to graduate with honors than undergraduates in other majors.⁶⁸ Similarly, an earlier study of grading standards at three large universities showed that education majors had significantly higher GPAs than students in other majors.⁶⁹

To become more rigorous, teacher preparation programs should align their instruction with the Common Core State Standards, ensure that coursework is coherent and criterion referenced, and lay out a consistent vision of teaching and learning for students that is continually reinforced throughout students’ time in the program.⁷⁰ Another quality marker for teacher education is whether programs provide all teachers—regardless of specialty—with training in how to meet the

needs of diverse students, including students with disabilities, English language learners, and students from diverse cultural and economic backgrounds, since all of today's teachers can expect to have these students in their classrooms.⁷¹

As part of their training, U.S. teachers also need a combination of deep subject matter understanding, pedagogical knowledge, and content-specific teaching methods in addition to the training and instruction to build the skills needed to work with students and families from diverse backgrounds.⁷² This means that aspiring math teachers should not only find themselves in a series of unconnected math courses and education courses but should also be exposed to best practices specific to math instruction for the grades they will be certified to teach. Research shows that this type of coherence improves teachers' effectiveness and that when teachers are exposed to, participate in, and have a chance to practice teaching methods—rather than just reading or hearing about them—they are more likely to implement such practices during their clinical training and later as a teacher of record.⁷³ In rural and remote areas or in very small teacher preparation programs, this type of training can be provided online or through technology to ensure that all teachers have the expertise they need to lead their classrooms effectively.

Research on the preparation of teachers for urban settings shows that many programs fail to train candidates to teach students from diverse backgrounds.⁷⁴ Instead, many teacher candidates are placed in schools with high proportions of low-income students and students of color without the types of support and training that would help them become successful in these settings. While some preparation programs—both traditional and alternative—take care to design training that leads to well-prepared teachers, many others turn out graduates without the skills or competencies to teach in high-needs or hard-to-staff schools.⁷⁵

Elementary education programs have also been criticized for their lack of careful attention to reading instruction. Many are failing to provide students with concrete, research-based strategies for effectively teaching reading,⁷⁷ even though learning to read is critical to future success in school.⁷⁸ Moreover, given the Common Core's heavy emphasis on literacy across the content areas for all grades, more and more experts are calling for secondary school teachers in social studies, science, and other core subjects to be able to address students' literacy needs.⁷⁹

“My teacher prep program focused on the theoretical and not enough on the practical day-to-day essentials of excellent teaching. Prep programs must move toward learning by doing, not just seeing or reading about what it takes to be a truly effective teacher.”

– Nick Profeta, 10th grade English teacher, Brooklyn, New York⁷⁶

It’s not just what is taught that makes for excellent teacher preparation; it is also how it is taught. Effective teacher preparation programs should be aligned with expectations for student learning⁸⁰ and prepare candidates to think like teachers: to use a clear understanding of how children learn to make instructional choices; reason critically about common teaching problems; break down and then build upon concepts in order to create manageable lesson objectives and logical instructional sequencing; and analyze student learning data in order to adjust instruction.⁸¹

Unfortunately, there is not yet enough information available to determine whether education programs are accomplishing these goals. Little data are currently available about which, if any, U.S. teacher preparation programs are graduating ready, capable novice teachers who eventually go on to become effective teachers—and how such programs are accomplishing this.⁸²

Teacher preparation programs rarely know if their graduates become effective teachers—or become teachers at all, for that matter. For reasons that are not entirely understood, according to an internal analysis, only 38 percent of teacher preparation program graduates had taught or were teaching in a public school one year after their graduation.⁸³ Few teacher preparation programs track their graduates who do go into teaching to find out if their training prepared them adequately. According to a 2013 NCTQ report, just 10 states have linked teacher effectiveness ratings to teacher preparation programs, and in most places, such efforts are just beginning.⁸⁴

Teachers also enter the profession through alternative preparation programs. While there are some very high-performing alternative certification programs, such as Teach For America, most alternative preparation programs—which prepared 20 percent of all new teachers from 2009 to 2010⁸⁵—do not fare any better

than average traditional programs. The training and coaching in these alternative programs tend to be weak, and the programs fail to ensure that candidates are proficient in their subject matter. Further, more than half of alternative programs suffer from admissions standards similarly inadequate as those of traditional teacher preparation programs.⁸⁶

By contrast, in high-performing countries, expectations for prospective teachers match the level of rigor at which they are expected to teach. In both Singapore and Shanghai, China, teacher preparation programs were overhauled to increase pedagogical knowledge and ensure that all teachers—including elementary teachers—have deep content knowledge in one subject area in addition to preparation in any other subject area they may teach.⁸⁷

Teacher preparation in the United States also falls short in the area of clinical training, which is one of the most important experiences for prospective teachers. The learning curve for new teachers is steep, and a good clinical experience can prepare teacher candidates to effectively lead classrooms on their own.⁸⁸ Although research has shown the importance of clinical training, the length of such training still varies widely, so much so that some teacher preparation programs offer almost no clinical experience. In the most intensive U.S. programs, teacher candidates receive up to 600 hours in clinical training,⁸⁹ but 30 percent of students in teacher preparation programs spend 11 weeks or less—shorter than one semester—doing any kind of practice teaching.⁹⁰

While it is not always the case in America, places such as Singapore and Germany take creating a high-quality clinical experience very seriously. In Singapore, for example, teacher candidates begin observing and assisting in classrooms very early in their preparation experience and receive significant counseling, coaching, and support during their clinical experience.⁹¹ In Germany, teachers have a formal apprenticeship experience lasting two full years, including at least 25 opportunities for observation and feedback.⁹²

Preparation programs that offer clinical experiences that put teachers in the classroom early,⁹³ give teachers the opportunity to practice discrete skills, and provide them with detailed, specific feedback are the most effective.⁹⁴ Some American schools of education, such as the University of Michigan's program,⁹⁵ have made this kind of early clinical preparation a priority. Unfortunately, most U.S. schools of education take minimal steps to ensure the quality of their students' clinical experiences. Only 12 percent of American teacher preparation programs take an

active role in selecting the mentor teachers who will help train teacher candidates; the rest scramble to find any clinical placement available,⁹⁶ despite research that suggests that the quality of a candidate's student teaching experience is even more important than the length of his or her training.⁹⁷

To bring the skills and knowledge of preparation program graduates in line with the expectations of professional teaching practice and to increase the transparency of programs' outcomes, we propose the following:

Collect and publish data on the effectiveness of teacher preparation programs

A pending federal regulation requires states to create systems to evaluate the quality of teacher preparation programs, make the data publicly available, and reward applicants who attend effective institutions with federal Teacher Education Assistance for College and Higher Education, or TEACH, Grants. The reporting requirements include data on outcome measures such as retention rates, passage rates for licensure and certification exams, placement rates, and surveys of employers, as well as more qualitative information about the program, such as the quality of clinical training.⁹⁸ These data are invaluable and would be even more helpful if states were to publicly report outcome data by teacher preparation program on their websites in a clear and organized format. The data could also be disseminated to all teacher candidates to inform application decisions and be used to close down persistently underperforming schools of education.

Publishing these data would benefit school districts and teacher candidates by aligning teacher preparation with the needs of schools. Districts would be able to target their recruitment efforts toward programs that had a track record of producing effective teachers. For teacher candidates, the information would help them decide which program to attend for training and which grade and subject area would be the most likely to have job openings.

Louisiana was at the forefront of publishing these types of data and putting them to use. After linking teacher effectiveness data with information about their preparation, schools of education were able to make a number of data-informed changes to improve teacher candidates' classroom performance. For example, data showed that teachers who attended a particular state institution had students who struggled on the writing portion of their English language arts assessments. As a result, the institution increased the amount of writing instruction in introductory English classes to increase teachers' content knowledge. The institution also reviewed its entire teacher preparation curriculum and decided it needed to increase the

amount of time that faculty members spent observing student teachers in order to improve graduates' performance in the classroom.⁹⁹ Taken together, these adjustments resulted in positive changes for both teacher candidates and students.

Improve the content of teacher preparation programs so that they better prepare candidates for the challenges of teaching

The purpose of teacher preparation programs is to prepare students to teach, which means that they need to be firmly embedded in the work of preparing teachers to lead classrooms and effectively help students learn. This work includes providing teachers with a solid basis in content, pedagogy, and the cognitive science of learning. Teacher candidates should also receive intensive training, including through observation and work inside schools, to help them understand how to meet the needs of diverse learners; manage a classroom and address behavioral issues; design engaging and effective lessons; and use data to improve and adjust instruction. Done the right way, teacher preparation will be an extremely rigorous process that builds confident, able teachers who are prepared to take on greater responsibility in the classroom. Leading teacher education programs and groups such as Deans for Impact, an organization that works to improve student learning outcomes by transforming teacher preparation,¹⁰⁰ are already paving the way on this type of work and will undoubtedly continue to drive change in the field.

Provide teacher pathways with high-quality clinical experiences, including residency models

State standards for teacher training programs in institutions of higher education should require at least one year of high-quality clinical experience that is research based and intentionally designed to help teacher candidates develop the habits, skills, and mindsets of effective teachers. Ideally, this training will equip new teachers with the skills and tools to teach effectively during their first year in the classroom. Other innovative options are residency programs that allow candidates to enter teaching through classroom-based, extended clinical experiences or to reimagine the first years of teaching entirely so that all teachers gradually increase their responsibility for the classroom over time as they gain the skills they need to lead a classroom effectively. This model is in line with the career trajectories of most other professions. As the field of education and the profession of teaching are constantly evolving, clinical training programs should be designed to respond to data about their graduates' performance in the classroom and improve and adjust accordingly.

Set a high bar for program approval and continuation; close down low-performing programs

States should use the rating system developed with the data gathered related to the effectiveness of teacher education programs to determine whether a program is succeeding at adequately preparing new teachers. These data should inform decisions about program approval and continuation. Each state should develop a system for closing low-performing programs and schools. States should also use the data to determine whether prospective teaching students will be eligible for scholarships, particularly those scholarship programs meant to incentivize top students to consider teaching careers. Lastly, states should require teacher preparation programs seeking approval to open new programs to survey their feeder districts, conduct a needs assessment, and then demonstrate that the new program being proposed addresses labor market demand. After Massachusetts implemented a similar new program approval process, the state prevented 60 to 80 new programs that did not meet local needs from opening in existing teacher preparation schools.¹⁰¹

2. Licensure as a lever: Lifting the standards for entry into the teaching profession

Historically, teacher preparation programs in the United States have churned out too many graduates in some areas while not training enough teachers in others, contributing to a mismatch between supply and demand. More recently, teacher preparation programs have failed to respond quickly enough to drastic enrollment declines in several states, leading to concerns about teacher shortages.¹⁰²

Although untangling the nature and extent of teacher shortages is complicated and shifting in real time,¹⁰³ what is relatively clear is that the market has not been functioning properly. Some states graduate four times the elementary teachers needed.¹⁰⁴ At the same time, many districts struggle to find teachers in shortage areas, such as mathematics, science, and special education, as well as teachers trained to work with students who are English language learners.¹⁰⁵ In contrast, high-performing countries tend to pay careful attention to matching teacher supply with demand as a way to prevent shortages while keeping salaries competitive.¹⁰⁶ Licensure can be a key lever for making this shift.

After completing their educational requirements, teachers must obtain and maintain a license according to the laws and regulations of their state. Many professions with licensure requirements make entry into the profession truly rigorous. In these fields, professional associations have taken it upon themselves to increase the standards and selectivity that apply to their members. For example, law school graduates taking the bar exam often put in grueling hours of study to ensure that they pass and will be allowed to practice law. To achieve professional licensure in accounting or architecture, students must sit through several rounds of tests in order to attain a license. Becoming a medical doctor requires a five-day test that takes more than 40 hours to complete and includes a performance-based component where candidates must assess standardized patients.¹⁰⁷

Teacher licensure tests, on the other hand, are much easier to pass. Although states have the ability to set passing scores for these tests, across the country the passing scores, on average, are set at about 15 percentage points below the mean score of all test takers.¹⁰⁸ This is equivalent to about a high school level of difficulty.¹⁰⁹

The Praxis II, created by the Educational Testing Service, is the most commonly used licensure test. Since states set the passing scores, however, what counts as passing can differ dramatically even on the same assessment. For example, on one Praxis exam that has a possible score range of 100 to 200, Alabama set a passing score of 145, while Iowa set the score at 167.¹¹⁰ To put that difference into context, the average performance range—defined as the range of scaled scores earned by the middle 50 percent of the examinees—is 168 to 182; both state’s cut scores were well below the median score of 176.¹¹¹

On some level, cut scores on licensure exams are beside the point because there is another, much larger issue: licensure tests’ validity. Until very recently, teacher licensure exams were mostly multiple choice tests that did not typically assess deep content knowledge or pedagogical skill and that did not require real-life application of candidates’ knowledge and skills.¹¹²

To increase the relevancy and rigor of teacher licensure exams, we propose the following:

Improve licensure exams to make them a meaningful bar for entry into the teaching profession

States should overhaul their licensure exams so that they more accurately assess the skills and knowledge needed to become a successful teacher. A few states—along with some of the companies that develop educator licensure assessments—have already begun this work. New licensure exams, such as edTPA and the Educational Testing Service’s Praxis Performance Assessment for Teachers, assess teaching competency rather than just rote memorization of facts and strategies, requiring new teachers to demonstrate their skills and knowledge in a classroom in order to pass.¹¹³ As these tests are improved and refined, passage should indicate new teachers’ readiness to teach effectively.

3. Working hard for the money: Improving and increasing teacher compensation

“By investing in teachers, we signify to society at large that teachers are actually valued, and we transform who goes into teaching. Offer a competitive salary, and it becomes a more attractive profession to talented people.”

*—Zeke Vanderhoek, founder and principal of The Equity Project,
a charter school that pays teachers \$125,000 per year¹¹⁴*

Teachers in high-performing countries tend to enjoy elevated professional status in part because of their competitive salaries. The strategy employed by high-performing countries of keeping salaries competitive in order to maintain the elite status of the teaching profession is intentional. International education research shows a positive correlation between teacher pay and student performance on math assessments, with the hypothesis for this finding being that high teacher pay helps attract people with better math skills into teaching.¹¹⁵ For example, in Singapore, the government keeps close tabs on the compensation of other professions and makes sure teacher salaries keep pace.¹¹⁶ And the United Kingdom just enacted a series of reforms, including substantial increases to teacher compensation, to successfully close its teacher shortage.¹¹⁷

There are many ways to slice the U.S. teacher salary data, but no matter how they are dissected, they tell the same story: Teachers are underpaid. The average starting teacher salary in the United States is \$36,141 annually,¹¹⁸ and the average teacher salary is just \$56,383 per year.¹¹⁹ To put these numbers in context, when teacher salaries are calculated as a percentage of gross domestic product, or GDP, per capita, those of U.S. teachers are far lower than those of high-performing countries such as Germany, Korea, the Netherlands, and Singapore.¹²⁰ According to the Organisation for Economic Co-operation and Development, teacher salaries in the United States are only 60 percent of those of other U.S. workers with college degrees.¹²¹ This is a considerably lower ratio than in many other developed countries, including higher performers such as Finland, Germany, Korea, the Netherlands, New Zealand, and Poland.¹²² Further, the pay of teachers relative to other educated professionals in the United States has declined over time.¹²³

FIGURE 3
Median professional salaries



Source: Bureau of Labor Statistics, "Occupational Outlook Handbook," available at <http://www.bls.gov/ooh/> (last accessed September 2015).

While the analyses described above use average teacher salaries to show that teachers are underpaid, teachers' salary trajectory is also problematic. In a study of 113 large school districts, researchers found that it can take an average of nearly 25 years for teachers to earn a yearly salary of \$75,000.¹²⁴ A Center for American Progress analysis found that mid-career teachers struggle to afford a home and pay for basic necessities, especially if they live in high-cost locales; that many take on second jobs to support their families; and that those who are the family breadwinners often qualify for a number of means-tested assistance programs as a result of their low salaries.¹²⁵

The current compensation system also fails to reward teachers based on performance. Almost all districts reward teachers based on only two criteria: years of experience and degree attainment. School districts spend \$14.8 billion each year on raises for teachers who earn master's degrees,¹²⁶ even though research shows that advanced degrees in their current form have little impact on student achievement except in the areas of math and science.¹²⁷ This may be because advanced degrees provided by U.S. teacher preparation programs have many of the same weaknesses as these programs' undergraduate degree programs.

Basing salaries solely on experience is similarly flawed: While there is a strong body of research suggesting that teachers improve significantly during the first several years of teaching, most teachers plateau in effectiveness sometime around their fifth year.¹²⁸ If teachers' salaries were to accelerate faster—in line with teachers' increasing skills—mid-career teaching salaries would be more in line with those of other professionals.

Teacher compensation is also flawed because of the prevalence of rigid salary schedules based only on degrees and years of service. Teachers are only compensated based on their effectiveness in 10 percent of all districts across the country, and very few schools offer teachers opportunities to take on leadership roles without leaving the classroom.¹²⁹

Failing to reward excellent teachers comes with a cost. The salary schedules used by most districts hurt their ability to retain highly effective teachers and to recruit high-achieving college graduates, who tend to choose jobs based on salaries and opportunities to advance.¹³⁰ In a Third Way poll of current college students, 89 percent of respondents stated that “salary for those established in the career” was an important factor when thinking about a job after college graduation.¹³¹ Given the low pay and slow pace of teacher salary growth, it is little wonder that many college students are not considering teaching careers.¹³²

To bring teachers’ salary trajectories in line with those of other professionals, we propose the following:

Raise compensation to professional levels and differentiate based on effectiveness and leadership roles

States should conduct an annual comprehensive analysis of teacher compensation as compared with other professionals in the region and then report on the percentage of districts that are: providing competitive starting and mid-career salaries to substantial proportions of teachers in the districts; offering compensation systems that are differentiated by roles, responsibilities, and effectiveness that are based on a high-quality evaluation system; and providing substantial salary incentives for highly effective teachers teaching in schools serving students from low-income households.

Districts as diverse as Baltimore, Maryland; Denver, Colorado; Pittsburgh, Pennsylvania; and Hillsborough County, Florida, are radically rethinking compensation by raising salaries, accelerating the time it takes to earn top salaries and rewarding teachers for exemplary performance and assuming leadership roles. For example, in the District of Columbia Public Schools, or DCPS, high-performing teachers who teach in high-needs schools can earn more than \$125,000 in fewer than 10 years on the job. Although a common argument against compensation reform is that it is too costly, and therefore not feasible, districts such as DCPS are proving that is not the case.¹³³

Districts must find creative ways to offset the cost to districts of transitioning to new compensation structures and of developing and improving teacher evaluation systems so that they truly identify excellence. Such teacher evaluation systems should include multiple measures—and reliably distinguish among levels—of teacher effectiveness. Lastly, districts and states that have modernized compensation systems to provide teachers with the potential to earn six-figure salaries should publicize this fact and use it as a tool to recruit excellent teachers, both locally and nationally.

4. Redesigning schools to improve teacher working conditions

Few jobs expect freshly minted graduates to take on the same responsibilities as veteran professionals on day one, but that is exactly what is expected of teachers. Once they leave preparation and enter the workforce, far too many teachers find themselves struggling to find their footing as they try to figure out lessons and instructional materials, pedagogical techniques, classroom management strategies, and effective and informative assessment designs all at the same time. This is not a fair way to start out in any profession, and it's especially worrisome in teaching, where it means that students taught by first-year teachers often lose valuable instructional time as their teachers work their way up the learning curve.

It is also far too common for teachers to find themselves in schools that are neither successful nor supportive and to be expected to make up for systemic problems that surround them singlehandedly. Teachers do not teach in a vacuum. Just like other professionals, they are affected by their working conditions, and unfortunately, many struggle in today's teaching context. Especially in high-poverty and high-needs schools, teachers often work within systems that do not provide them with support, training, collaborative time, or opportunities for earned autonomy, which are necessary conditions for great teaching. In this type of environment, it can be difficult for even the most talented and driven teachers to succeed—and in turn, for their students to learn. It's time for teachers' working conditions to vastly improve.

Beyond beginner's luck: Investing in new teachers to support professional growth

Teachers' coursework, clinical requirements, and licensure tests currently leave them unprepared for their first year in the classroom. Teachers have reported this themselves: 6 in 10 new teachers say that their teacher preparation program did not prepare them to handle the day-to-day stress of teaching or to manage their classroom effectively.¹³⁴

Teaching can be an overwhelming and a physically and emotionally exhausting experience for first-year teachers. Unlike in other professions where new hires work under close supervision and are given responsibilities that increase incrementally over time, new teachers are expected to take on the same responsibilities as veterans. In a recent Huffington Post article, a new teacher said that being a first-year teacher felt like being “required to juggle plates, bowling pins, butcher’s knives, and axes all day long while walking along a tightrope in midair.”¹³⁵

While some teachers do excel in their first year, their lack of preparation also means that, on average, novice teachers are less effective than their more experienced peers.¹³⁶ This is extremely problematic given the nation’s current achievement gaps, since in many places low-income students and students of color are more likely to be taught by less experienced, less effective first-year teachers.¹³⁷

Teachers are most likely to leave the profession during or after their first year.¹³⁹ New research shows that when enough teachers quit, it sets in motion a ripple effect. High turnover at a school has a measurable effect on school-wide achievement levels, particularly in schools that are low performing or that have a high percentage of students of color. The ripple effects are so strong that even the achievement scores of students in classrooms with more experienced teachers who do not quit are negatively affected.¹⁴⁰

There are ways to introduce new teachers to the profession that do not involve such a traumatic experience and can encourage retention. For example, high-performing Ontario, Canada, set up the New Teacher Induction Program, or NTIP, which provides all new teachers with orientation, mentoring, professional development, and performance appraisals by school principals, among other supports to smooth the transition into teaching.¹⁴¹ And in Switzerland, teachers participate in a two-year induction program that includes mentorship, coursework—some mandatory and some voluntary—and optional consultations with local departments of education. Novice teachers in Switzerland also have the option of reducing their teaching load by up to 50 percent.¹⁴²

These types of programs can have a big impact: High-quality mentoring and induction programs that provide needed support can reduce the likelihood that teachers leave the profession and also have positive effects for the entire school. In one study, teachers were half as likely to quit the profession at the end of their first year if they participated in a structured induction program that included

“My second year of teaching felt like the biggest gift: the chance to undo all the mistakes of my first year.”

– Shanna Peebles,
2015 National Teacher
of the Year¹³⁸

common planning time with grade-level peers, a reduced course load, a seminar course for new teachers, and assistance from a classroom aide.¹⁴³ There is evidence to suggest that even small increases in support for new teachers still make a big difference in retention.¹⁴⁴

To improve working conditions for beginning teachers, we propose the following:

Provide a more gradual on-ramp to teaching

Districts should provide a more gradual on-ramp to teaching through high-quality induction programs, intensive coaching and mentoring, co-teaching models, residency, and/or reduced course loads for first-year teachers. For example, TNTTP, which works with a number of districts and charter management organizations across the country, recently overhauled its new teacher supports. TNTTP evaluated its coaching model and found that new teachers who received year-long coaching—as opposed to coaching for only part of the year—received consistently higher observation scores than those who did not.¹⁴⁵ Over the course of that first year, the performance gap between the two groups of teachers only widened.

Residency programs housed within schools that allow candidates to enter teaching through classroom-based, year-long, high-quality clinical experiences are another option for improving entry into the profession. The federal government currently makes a roughly \$100,000 investment in each new doctor entering medical residency, largely through Medicare, which amounts to \$13 billion annually.¹⁴⁶ On the other hand, the federal government spends a tiny fraction of that amount on residencies for teachers in just a handful of available residency programs.¹⁴⁷

Early research indicates that teacher residency programs could substantially increase teacher diversity, retention, and effectiveness over time.¹⁴⁸ To increase the number of residency programs for teachers, states should require successful residency completion before a new teacher can take on classrooms of his or her own. These programs could be built into the postsecondary degree program or be run by school districts as part of the induction process. Boston, Denver, and the Aspire charter school network—which runs 38 schools in California and Memphis, Tennessee—are just some of the districts and charter management organizations already experimenting with the residency approach, with promising results for both teacher retention and classroom effectiveness.¹⁴⁹ Residency programs help new teachers transition more effectively into the profession, while

also providing effective senior teachers a role as master teachers, allowing them to leverage their experience to support new teachers—similar to the attending physician in a medical setting.

The teacher time crunch: Redesigning school schedules to support improved teacher practice

Like jobs in many other professions and industries, the job of a teacher has evolved over time. However, the way in which teachers' time is allocated has not. Teachers still spend the majority of their time in front of students; at the same time, their work away from students has grown in this era of new standards, data-driven instruction, and aligned curricula and assessments. As Ryan Fuller, a former rocket scientist turned teacher, describes it:

Teaching is actually two jobs. The first job is the one that teachers are familiar with; people who have not taught can pretend it doesn't exist. The tasks involved in this first job include lesson planning, grading, calling parents, writing emails, filling out paperwork, going to meetings, attending training, tutoring, and occasionally sponsoring a club or coaching a sport. The time allotted to teachers for this work is usually one hour per workday. But these tasks alone could easily fill a traditional 40-hour work week.

The second job is the teaching part of teaching, which would more aptly be called the performance. Every day, a teacher takes the stage to conduct a symphony of human development. A teacher must simultaneously explain the content correctly, make the material interesting, ensure that students are staying on task and understanding the material, and be ready to deal with the curve balls that will be thrown at her every 15 seconds—without flinching—for five hours.¹⁵⁰

Today's teachers are expected to have creative, student-centered, standards-aligned, and objective-driven lessons for every part of the day—lessons that require students to think deeply, problem solve, engage actively with content, and collaborate. Furthermore, lessons need to be differentiated for students with special needs and students at different academic levels and include formative assessments, which must be graded or logged and then used to inform the next day's instruction.¹⁵¹

Often, schools have a host of additional requirements beyond this list. To plan and prepare all of this, and to do it well, requires an intense investment of time. For this reason, teachers are more likely to work at home during the week and on Sundays than other professionals.¹⁵² To meet these expectations, high-performing teachers often work 10- to 13-hour days;¹⁵³ even the average teacher reports that he or she works about 10 hours beyond what is contractually obligated each week.¹⁵⁴

In some places, the time needed to create an excellent lesson is factored into the school day. Teachers in Japan, for example, over the course of a few weeks regularly set aside 10 to 15 hours for group meetings to plan just one lesson—a practice called lesson study.¹⁵⁵ Singapore acknowledged the trade-off between quality and quantity explicitly with its “Teach Less, Learn More” initiative, which encouraged teachers to improve the level of critical thinking, engagement and interaction, project-based learning, and differentiation in their classrooms. To accomplish that goal, it provided teachers with more time for professional development.¹⁵⁶

Unless collaboration is integrated into the system to make it feasible to meet the high bar set for teachers and classroom outcomes, even the most dedicated teachers will have trouble keeping up. With the time pressure, workloads, and the emotional and other demands of the job, it is not surprising that teaching is identified as a “high stress profession.” All these factors put teachers at greater risk for burnout.¹⁵⁷ In fact, in a recent survey conducted by the American Federation of Teachers, three-quarters of respondents reported that they often felt that their work was stressful; the most-cited everyday stressor for teachers was work-related “time pressure.”¹⁵⁸

Most high-performing countries organize teachers’ time differently than the United States. The most commonly cited data show that, on average, full-time teachers in the United States work a total of 45 hours per week, with 27 of those hours dedicated to instructional time, or actual teaching,¹⁶⁰ though some researchers have recently expressed concern about the self-reported nature of these figures.¹⁶¹ Finnish teachers, by contrast, teach a total of 21 hours each week, Korean teachers teach 19 hours per week, and teachers in Singapore teach 17 hours per week.¹⁶² Taken as a whole, U.S. teachers’ time commitments allow for very little time during the day for them to complete their other professional responsibilities or to perfect their craft in a collaborative environment.

“Collaboration isn’t a word du jour; it’s a necessary part of teaching.”

– Heather Wolpert-Gawron, middle school teacher¹⁵⁹

FIGURE 4
Teachers' instructional time

Hours of teaching per week

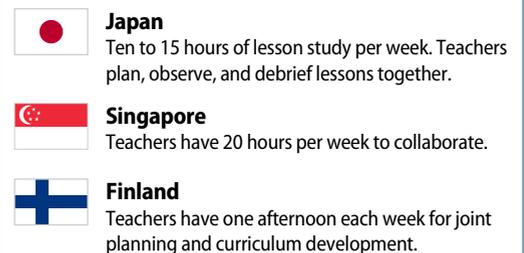


Sources: OECD, "TALIS 2013 Results" (2014), available at http://www.istruzione.it/allegati/2014/OCSE_TALIS_Rapporto_Internazionale_EN.pdf; OECD, "TALIS 2013 Results: Table 6.12" (2014), available at <http://dx.doi.org/10.1787/888933046798>; OECD, "Country Note: United States" (2013), <http://www.oecd.org/pisa/keyfindings/PISA-2012-results-US.pdf>.

Teachers in high-performing nations use their nonteaching time for collaboration and planning, which in turn improves their effectiveness.¹⁶³ Perhaps the most well-known example of this is Japan's lesson study effort discussed above. In addition to Japan, several other high-performing countries also prioritize time for planning and professional learning. In Singapore, for example, teachers have 20 hours per week scheduled to work with colleagues and observe other teachers. Among other activities, teachers in Singapore participate in what is termed action research—identifying and solving shared problems through discussion and classroom experimentation. In Finnish schools, teachers have one afternoon each week specifically for joint planning and curriculum development. The Canadian province of Ontario has focused on decreasing teacher workloads to allow for more time for teacher development and collaboration.¹⁶⁴ With this additional time, teachers in high-performing nations also play greater leadership roles in policy and decision making—from creating curricula and assessments to developing school budgets.¹⁶⁵

Lessons learned from high-performing nations show that effective education systems are purposeful when it comes to teacher time. These countries structure the day so that teachers are constantly improving, learning from one another, and benefiting from the axiom that “two heads are better than one.”¹⁶⁶ To make this type of collaboration a reality across the United States, we propose the following:

FIGURE 5
Teacher collaboration time by country



Source: Linda Darling-Hammond, Ruth Chung Wei, and Alethea Andree, "How High-Achieving Countries Develop Great Teachers" (Stanford, CA: Stranford Center for Opportunity Policy in Education, 2010), available at <https://edpolicy.stanford.edu/sites/default/files/publications/how-high-achieving-countries-develop-great-teachers.pdf>.

Reduce teaching time and increase time for planning and collaboration

The time provided for teachers to develop their practice should be significant and meaningful, not an afterthought. Teachers could use additional time to observe excellent teachers and be observed and receive feedback, as well as for collaborative planning, coaching, mentoring, lesson study, and action research. They could also use time for other teacher-led and initiated forms of professional development and collaboration in accordance with district needs and priorities. Similar to other professional development spending, reallocating teachers' time to allow for more professional learning and collaboration must be done thoughtfully and with students' learning needs in mind to avoid the pitfall of creating an expensive, ineffective reform.

One of the clearest demonstrations of the effectiveness of collaborative time here in the United States is the effort of Orchard Gardens K-8 Pilot School in Boston, Massachusetts. With the help of a federal School Improvement Grant, or SIG, the school expanded its day in order to incorporate highly structured teacher team meetings dedicated to the planning and sharing of best practices. Orchard Gardens also expanded learning time for students. After making these changes, the school posted some of the highest growth rates in Massachusetts, and—while it was only one of several changes made as part of a larger turnaround effort—the principal cited the extra planning time for teachers as a key driver of the school's impressive results.¹⁶⁷ Schools in locations as diverse as Houston, Texas;¹⁶⁸ Cincinnati, Ohio; and Union City, New Jersey, have also credited the time they provide teachers to collaborate for their success.¹⁶⁹ Many high-performing charter school networks, including KIPP and Success Academies, attribute their success to the time they give teachers to work together.¹⁷⁰

The learning profession: Providing teachers with opportunities to develop their practice

Current professional development opportunities are too often sporadic, disconnected from teachers' and students' needs, divorced from content, and ineffective at changing teachers' practice in the long term.¹⁷¹ Professional development is also expensive: The 50 largest U.S. school districts currently spend \$18,000 per teacher per year on professional development.¹⁷² Across the United States, all districts spend \$18 billion annually.¹⁷³ The dearth of effective professional development options for teachers is particularly problematic given that the profession is one

that requires lifelong learning: New teachers need time to hone their craft, while experienced, effective teachers are frequently asked to change the grade or subject area that they teach; implement new curricula, standards, or instructional methods; and use new technology.¹⁷⁴

This learning, however, requires time that U.S. teachers are very rarely afforded. On average, U.S. teachers receive fewer than 16 hours of professional development per year, almost all of it in the form of short one-off workshops, though this number does vary significantly between states and districts.¹⁷⁵ This partially explains the finding that less than one-quarter of teachers say that they have changed their instruction as a result of professional development.¹⁷⁶ Predictably, this type of professional development has no discernible effect on student learning.¹⁷⁷

Research shows that teachers typically need about 50 hours of professional development on a given topic or practice in order to improve their skills enough to influence student learning. Some professional development programs that invest significant time in training teachers—30 to 100 hours total—are shown to significantly improve student academic growth. These programs typically allow teachers time to experiment with new ideas in their classroom, reflect with peers, and adjust accordingly, while one-off professional development trainings leave teachers with no opportunities for feedback if they want to try something new.¹⁷⁸

The reason so much time is needed for teachers to master a new skill or technique is that they first have to learn about it, then plan lessons that incorporate it, and then try it out. This last step is the most difficult and the most time consuming, as it can take up to 20 tries for teachers to master new skills.¹⁷⁹ Research shows that teachers do not fully incorporate their new skill into their practice until after they are able to implement the skill successfully. Otherwise, they stop trying and revert back to their old ways. This means that teachers need encouragement to continue adjusting their practice in order to stick with a new way of teaching.¹⁸⁰

However, even some so-called gold standard professional development interventions such as those described above have demonstrated little impact on student learning.¹⁸¹ New research raises serious questions about whether any amount or combination of commonly used professional development strategies actually helps improve teacher practice and student learning.¹⁸²

Most states now require regular teacher performance evaluations, which, when done well, can be an important source of professional development. Like traditional professional development, however, these evaluations are too often performed in a cursory manner and with little follow-up; as a result, school leaders miss out on the opportunity to provide teachers with useful and actionable feedback and support. In one survey of teachers, only one in four teachers reported that their principal's most recent evaluation was useful and effective. Most said that their evaluation was either "just a formality" or "not particularly helpful" for improving their teaching practice.¹⁸³ When teachers are isolated from their colleagues and lack a shared, clear understanding of what constitutes good teaching, each teacher ends up developing her or his own practice behind a closed classroom door.¹⁸⁴

What does elite training look like?

Other fields excel at providing ongoing training to professionals,¹⁸¹ and the education sector can and should do better. For example, the "performance revolution" that has transformed how top professional athletes train—by isolating discrete skills, identifying weaknesses, and engaging in focused training for incremental gains—has shifted elite players' mindsets from a "you either have it or you don't" understanding of talent to one in which even pro athletes and other star performers admit they can benefit from coaching. This change has created some of the best athletes of all time; similar changes have also had a huge impact on how the business world operates.¹⁸² Many of these changes have yet to reach the teaching profession, largely due to the perception that good teachers are born with intrinsic characteristics that determine their effectiveness.¹⁸³

Some states have made significant improvements to their professional development and evaluation systems that have the potential to create positive changes in the type and quality of training and coaching teachers receive. Massachusetts, for example, has developed an evaluation system that is fully integrated with its professional development system, which asks teachers to set their own goals and then provides individualized professional development opportunities aligned to

teachers' specific needs.¹⁸⁸ But many other states have made little progress on this front. To improve professional development systems so that they work for teachers, we propose the following:

Improve professional development by aligning it to the needs of students and teachers

Teachers need high-quality, personalized professional development opportunities that provide them with new knowledge, guide them through improving their classroom skills, and give them clear feedback on their performance. Districts should shift to more individualized and responsive models and should provide evidence that teachers are involved at all levels of the process, from selecting topics for professional development to training and coaching their peers. Districts should also ensure that their evaluation systems are aligned and integrated with professional development, so that teachers can receive regular feedback about what skills they may need to work on and have opportunities to seek out training to improve.

The Teacher Advancement Program, or TAP, is an example of a system many districts have used to align their teacher evaluation systems with professional development offerings. Used in several states and hundreds of school districts, TAP employs regular observations by experienced, effective teachers to guide teachers' professional learning. In districts where the program has been faithfully implemented, there is compelling evidence of its effects. In Louisiana, Ascension Parish brought in TAP for its eight lowest-performing schools, which had received grades of "D" or "F" from the state based on student achievement. While there is still work to do, today five of the schools have made substantial progress, receiving grades of "B" or "C" from the state.¹⁸⁹

Leaning in: Giving ambitious teachers more opportunities for professional growth

Under current compensation systems, the vast majority of teachers earn raises for only two reasons: an additional year of experience or an advanced degree. To earn more responsibility and a higher salary, teachers' historically have had to leave the classroom and become administrators, which may be a good fit and worthy goal for some but may not be the best use of other teachers' skills and expertise. These limited options make teaching less appealing to young, motivated professionals who envision themselves changing jobs and earning increasing responsibility—and higher salaries—as they move forward in their careers.

Young teachers say that they are less interested than previous generations in an unstaged career, or a career in which they can expect to be part of the same organization and have the same work responsibilities over the course of their working years.¹⁹⁰ Instead they want to receive frequent feedback on their teaching and be evaluated fairly; they also want to be rewarded for proving their effectiveness.¹⁹¹ They expect their career to provide them with both variety and new challenges.¹⁹²

Ambitious teachers should not have to leave the classroom in order to advance their careers if they prefer to continue teaching or are especially talented at working in the classroom. With this in mind, some districts are developing career ladders, which give teachers opportunities to advance while staying in the classroom. As teachers demonstrate higher levels of effectiveness, they are eligible for more leadership roles based on their interest and expertise. These roles combine advanced responsibility with increased compensation and recognition. Other countries and locales, including Australia; England; Ireland; Ontario, Canada; and Wales, have experimented with this approach as well, both to increase the attractiveness of the teaching profession and to better meet schools' and students' needs.¹⁹³

Career ladders can include a wide range of roles, including: master educators who develop and lead professional development and learning; peer evaluators who assess other teachers' effectiveness and provide coaching; and demonstration teachers, who open their classrooms to teachers in training. Career ladders can also provide classroom teachers with a say in decision making that has typically been left to administrators and district offices, such as curriculum and assessment design, hiring and evaluation of teachers, and the content of teachers' professional development.¹⁹⁴

Done well, career ladders can have an impact beyond just retaining an individual teacher. In well-designed career ladder systems, districts can use the knowledge and expertise of highly effective teachers to leverage instructional improvement for other teachers. For example, YES Prep in Houston, Texas, has implemented a "teacher continuum" that aligns teachers' compensation and career progression to their classroom performance.¹⁹⁵ YES Prep's students outpace their Houston Public Schools peers in several subjects, and the school has received frequent awards and accolades.¹⁹⁶ While career ladders are certainly not the only best practice being implemented at YES Prep, the program has been used as an



exemplar for other districts developing their own career ladder systems. Although districts are beginning to do this work, it is still far from the norm, leading many young teachers to become frustrated and to leave the profession at higher rates than older teachers.¹⁹⁷

To create systems that would provide accomplished teachers with chances to share their skills and lead their peers, we propose the following:

Give effective teachers leadership opportunities

In order to retain effective teachers in the classroom and make teaching a profession where ambitious, talented people want to spend their careers, districts must develop career ladders and compensation systems that reward effective teachers who are willing to take on additional responsibilities. Districts should experiment with, and evaluate, new and innovative ways for teachers to lead within their schools and districts.

In districts that are already implementing career ladders such as the District of Columbia Public Schools and Denver Public Schools, results indicate that they are successfully increasing student achievement, along with the ability of teachers to receive feedback from their peers.¹⁹⁸ But the benefits of career ladders extend far beyond individual teachers who take advantage of leadership roles; they also make it possible for schools to redesign themselves around professional learning, providing natural opportunities for job-embedded professional development and other services that grow and improve a school's teaching practice.

Tenure 2.0: Revamping tenure to meet the needs of a changing profession

Tenure for K-12 teachers became commonplace starting in the 1920s, a time when teachers—who were mostly women—were significantly underpaid, often hired and fired for political reasons or at the whim of changing leadership, and dismissed for getting married or pregnant.¹⁹⁹ At the time, tenure was badly needed to improve teachers' working conditions and to protect them from discrimination.

Despite stronger laws that now protect all employees against discrimination,²⁰⁰ protections for teachers have continued to expand. This has in turn made it more onerous and expensive for school and district administrators to dismiss tenured teachers.²⁰¹

In the past five years, however, the tenure landscape has begun to change. While in 2009 no states awarded tenure based on objective evidence of teacher effectiveness, by 2013, 19 states required that student performance be factored into tenure decisions.²⁰² The time it takes to obtain tenure is also changing. While the most common timeline has long been three years, both states and districts are experimenting with requiring longer service in order to get tenure or even doing away with tenure altogether.²⁰³ Similarly, several states and districts have revised their due process provisions in order to streamline the dismissal process and reduce costs for all parties.²⁰⁴

To raise the bar for obtaining tenure and streamline due process protections, we propose the following:

Reform tenure by setting a high bar for attaining it and streamlining due process

The bar for achieving tenure needs to be raised by linking it to performance and extending the tenure timeline. These changes should be made in tandem with an overhaul of the teacher compensation system, whereby increased salaries would offset any reduction in teacher job security as the result of tenure reforms. In recent years, several districts and states have undertaken some type of tenure reform. At least 14 states and 40 districts are now requiring a probationary period of at least four years,²⁰⁵ and 22 states have enacted changes requiring that tenure decisions be based in part on teachers' effectiveness.²⁰⁶ New Jersey and New Haven, Connecticut, are examples of locales that have worked successfully with unions to streamline due process proceedings, benefiting both teachers and administrators.²⁰⁷ These reforms not only provide the impetus for teachers, schools, and districts to invest in the training and development of new teachers, but they also save both time and money, while indicating to the public that tenured teachers have earned their status.

Administrators for a new era: Training school leaders to support teachers' development and recognize their achievements

After teacher quality, school leadership is the second-most important in-school factor affecting student achievement, and the positive effects of excellent school leaders are largest in the highest-need schools.²⁰⁸ Research shows that school environment and teacher working conditions are the real drivers behind teachers choosing to stay or leave the profession. What matter most to teachers—and what

convince them to stay in their jobs—are their school’s culture, their principal’s leadership, and their relationships with colleagues.²⁰⁹ School leaders are influential in creating positive working conditions in in each of these domains.

To create a school environment that improves teacher effectiveness and encourages effective teachers to stay, school leaders need to prioritize their role as instructional leaders and make time to give teachers frequent, meaningful, and timely feedback on their performance.²¹⁰ Unfortunately, teachers often do not get this type of leadership. While most teachers rate their principal’s overall performance highly,²¹¹ they also report that their latest evaluations were not that helpful or were “just a formality,”²¹² saying that they do not trust their principal not to “play favorites” in performance-based pay decisions.²¹³

Principals are also failing to take advantage of some of the easiest and least costly ways to retain high-performing teachers. In one survey of the highest-performing teachers, dubbed “the Irreplaceables,” less than half reported that their school leader had “encouraged them to stay” at their current school, informed them that they were “high performing,” or told them about leadership opportunities available to them based on their performance. As a result, these teachers felt that their additional efforts and outstanding performance went unnoticed, and they left their school just as often as lower-performing teachers.²¹⁴

In ways both big and small, too many U.S. principals are also missing out on opportunities to creatively empower teachers and invest them in their work. To create a pipeline of principals that structure schools so they are supportive environments in which teachers can improve and grow, we propose the following:

Train school leaders to elevate their teachers

Principals have an important role to play in making the teaching profession a desirable place for talented teachers to thrive. Good principals know this instinctively and work hard to develop staff, recognize exceptional teachers, and prioritize the instructional leadership aspect of their role, all things that a good manager would do in any industry. But principal quality varies greatly; principals need better training and support to become effective leaders able to moti-

FIGURE 7
What could principal support look like?

Ms. Harper, I enjoyed observing your class today. Great job with the fishbowl exercise! I'm looking forward to debriefing. I'd also like to talk about your plans for next year! We have some opportunities for leadership that would be perfect for you.
- Principal Hayes

vate teachers, drive instructional improvement in their schools, provide objective and meaningful evaluation and feedback, make informed hiring decisions, and support the development and advancement of their best teachers.

Many cities and districts, recognizing the need to improve principal quality, have partnered with schools of education to improve training for principal candidates. Some have set up their own training academies or alternative certification programs for principals. Early results have been promising, indicating that these programs limit principal turnover and improve student performance.²¹⁵ Both of these factors, in turn, are associated with improved retention of effective teachers.²¹⁶

Conclusion

The policy recommendations included in this report are designed with a clear vision of the future in mind—a future in which teachers are members of an elite, highly respected, and well-compensated profession. In this not too distant future—if our recommendations are implemented—it is understood that a teaching career is intellectually demanding, presents many and evolving challenges and opportunities, and that teachers are experts who are well prepared to meet these demands because of their rigorous initial training and ongoing learning. In this foreseeable future, teaching is a profession to which many aspire because it is one that offers opportunities for continuous learning and improvement in a supportive and trusting professional environment.

Students would benefit most from an elevated teaching profession; they would have the chance to learn from teachers who have been well trained and are well supported by the school systems in which they teach. Improving teaching and learning in schools, especially those that serve low-income students, is critical to achieve the American dream of opportunity for all.

About the authors

Carmel Martin is the Executive Vice President for Policy at the Center for American Progress. She manages policy across issue areas and is a key member of CAP's Executive team. Before joining the Center, Martin was the assistant secretary for planning, evaluation, and policy development at the Department of Education. In this position, she led the department's policy and budget development activities and served as a senior advisor to Secretary of Education Arne Duncan.

Martin has appeared on PBS, NBC, CNN, and Fox. She has been cited in publications including *The New York Times* and *The Washington Post*. She was also named one of the five women who shape education policy by the *National Journal* in 2014 and has testified as an expert witness in front of legislative committees.

She is a graduate of the University of Texas School of Law and holds a master's degree in public affairs from the Lyndon B. Johnson School of Public Affairs.

Catherine Brown is the Vice President of Education Policy at the Center. Previously, Brown served as the vice president of policy at Teach for America and as a senior consultant for Leadership for Educational Equity. Prior to her role at Teach for America, Brown served as senior education policy advisor for the House Committee on Education and Labor—now the Committee on Education and the Workforce—where she advised Chairman George Miller (D-CA). In 2008, Brown served as the domestic policy advisor for Democratic presidential candidate Hillary Clinton.

Earlier in her career, Brown directed Teach for America's Early Childhood Education Initiative. She received her bachelor's degree from Smith College and holds a master's in public policy from the John F. Kennedy School of Government at Harvard University.

Lisette Partelow is the Director of Teacher Policy at the Center. Her previous experience includes teaching first grade in Washington, D.C., working as a senior legislative assistant for Rep. Dave Loebsack (D-IA), and working as a policy and advocacy associate at the Alliance for Excellent Education. She has also worked at the U.S. House of Representatives Committee on Education and Labor and the American Institutes for Research.

Partelow has a master's degree in public affairs from Princeton University and a master's degree in elementary education from George Mason University. She received a bachelor's degree from Connecticut College.

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Endnotes

- 1 Judith Taack Lanier, "Redefining the Role of Teacher: It's a Multifaceted Profession," *EduTopia*, July 1, 1997, available at <http://www.edutopia.org/redefining-role-teacher>.
- 2 Bryan C. Hassel and Emily Ayscue Hassel, "Opportunity at the Top: How America's Best Teachers Could Close the Gaps, Raise the Bar, and Keep Our Nation Great" (Chapel Hill, NC: Public Impact, 2010), available at http://www.opportunityculture.org/images/stories/opportunity_at_the_top-public_impact.pdf; William L. Sanders and June Rivers, "Cumulative and Residual Effects of Teachers on Future Student Academic Achievement (Research progress report)" (Knoxville, TN: University of Tennessee's Value-Added Assessment Center, 1996), available at http://www.cgp.upenn.edu/pdf/Sanders_Rivers-TVASS_teacher%20effects.pdf; Steven G. Rivkin, Eric A. Hanushek, and John F. Kain, "Teachers, Schools, and Academic Achievement," *Econometrica* 73 (2) (2005): 417–458, available at <http://www.econ.ucsb.edu/~jon/Econ230C/HanushekRivkin.pdf>.
- 3 Byron G. Auguste, Bryan Hancock, and Martha Labois-sière, "The Economic Cost of the U.S. Education Gap" (New York: McKinsey & Company, 2009), available at http://www.mckinsey.com/insights/social_sector/the_economic_cost_of_the_us_education_gap; George P. Shultz and Eric A. Hanushek, "Education Is the Key to a Healthy Economy," *The Wall Street Journal*, April 30, 2012, available at <http://www.wsj.com/articles/SB10001424052702303513404577356422025164482>.
- 4 Lanae Erickson Hatalsky, Tamara Hiler, and Stephenie Johnson, "What Americans Want from Democrats on Education" (Washington: Third Way, 2014), available at <http://www.thirdway.org/report/what-americans-want-from-democrats-on-education>.
- 5 Linda Darling-Hammond and Robert Rothman, "Lessons Learned from Finland, Ontario, and Singapore." In Linda Darling-Hammond and Robert Rothman, eds., *Teacher and Leader Effectiveness in High-Performing Education Systems* (Washington and Stanford, CA: Alliance for Excellent Education and Stanford Center for Opportunity Policy in Education, 2011), pp. 1–11.
- 6 The Editorial Board, "Why Other Countries Teach Better," *The New York Times*, December 18, 2013, available at <http://www.nytimes.com/2013/12/18/opinion/why-students-do-better-overseas.html?pagewanted=all>; Vivien Stewart, "Raising Teacher Quality Around the World," *The Effective Educator* 68 (4) (2010/2011): 16–20, available at <http://www.ascd.org/publications/educational-leadership/dec10/vol68/num04/Raising-Teacher-Quality-Around-the-World.aspx>; Amanda Ripley, *The Smartest Kids in the World: And How They Got That Way* (New York: Simon & Schuster Inc., 2013).
- 7 Anthony Carnevale, Nicole Smith, and Jeff Strohl, "Too many college grads? Or too few?," PBS Newshour, February 21, 2014, available at <http://www.pbs.org/newshour/making-sense/many-college-grads/>.
- 8 Chief Editor, "29 Incredible Lee Iacocca Quotes," National Latino Council on Alcohol and Tobacco Prevention, November 19, 2014, available at <http://nlcatp.org/29-incredible-lee-iacocca-quotes/>.
- 9 Eric A. Hanushek, John F. Kain, and Steven G. Rivkin, "Teachers, Schools, and Academic Achievement." Working Paper 6691 (National Bureau of Economic Research, 1998), available at http://www.cgp.upenn.edu/pdf/Hanushek_NBER.PDF.
- 10 Hassel and Hassel, "Opportunity at the Top."
- 11 Sanders and Rivers, "Cumulative and Residual Effects of Teachers on Future Student Academic Achievement (Research progress report)."
- 12 Rivkin, Hanushek, and Kain, "Teachers, Schools, and Academic Achievement."
- 13 Ibid.
- 14 Raj Chetty, John Friedman, and Jonah E. Rockoff, "Measuring the Impact of Teachers II: Teacher Value-Added and Student Outcomes in Adulthood." Working Paper 19424 (National Bureau of Economic Research, 2013), available at <http://www.nber.org/papers/w19424>.
- 15 National Commission on Excellence in Education, *A Nation at Risk: The Imperative For Educational Reform* (U.S. Department of Education, 1983), available at <http://www2.ed.gov/pubs/NatAtRisk/index.html>.
- 16 Atlas, "No Child Left Behind," available at <http://feb.newamerica.net/background-analysis/no-child-left-behind-overview> (last accessed May 2015).
- 17 Common Core State Standards Initiative, "Development Process," available at <http://www.corestandards.org/about-the-standards/development-process/> (last accessed May 2015).
- 18 Common Core State Standards Initiative, "Standards in Your State," available at <http://www.corestandards.org/standards-in-your-state/> (last accessed May 2015).
- 19 Sheila Byrd Carmichael and others, "The State of State Standards—and the Common Core—in 2010" (Washington: Fordham Institute, 2010), available <http://files.eric.ed.gov/fulltext/ED516607.pdf>.
- 20 Cory Turner, "The Common Core Curriculum Void," npr Ed, June 3, 2014, available at <http://www.npr.org/sections/ed/2014/06/03/318228023/the-common-core-curriculum-void>.
- 21 Lillian Mongeau, "Common Core standards bring dramatic changes to elementary school math," EdSource, January 20, 2014, available at <http://edsources.org/2014/common-core-standards-bring-dramatic-changes-to-elementary-school-math-2/63665>; Bill Honig, "Coherent and sequenced curriculum key to implementing Common Core standards," EdSource, January 29, 2014, available at <http://edsources.org/2014/coherent-and-sequenced-curriculum-key-to-implementing-common-core-standards/56704>.
- 22 America Achieves, "Key Instructional Shift of the Common Core State Standards," available at http://commoncore.americaachieves.org/img/The_Common_Core_Key_Instructional_Shifts.pdf (last accessed May 2015).
- 23 Common Core State Standards Initiative, "What Parents Should Know," available at <http://www.corestandards.org/what-parents-should-know/> (last accessed June 2015).

- 24 For examples, see District of Columbia Public Schools, "2014-2015 IMPACT Guidebooks," available at <http://dcps.dc.gov/page/2014-2015-impact-guidebooks> (last accessed October 2015); Colorado Springs School District 11, "Teaching Skills, Knowledge, and Responsibilities Performance Standards," available at <http://www.d11.org/TAP/TAP%20Resources/TAP%20Rubric.pdf> (last accessed March 2015) (based on TAP rubric); New York State Department of Education, "Appendix A: The Framework for Teaching" (2011), available at http://www.rcsdk12.org/cms/lib04/NY01001156/Centricity/Domain/6365/Teachscape_Rubric_expanded_revised.pdf (based on Danielson rubric); Washington State Teacher/Principal Evaluation Project, "The Marzano Teacher Evaluation Model by Washington State Criteria: Version 1.1" (2014), available at <http://tpep-wa.org/wp-content/uploads/Marzano-Rubrics-by-criteria-with-scales-evidence.pdf> (Marzano model).
- 25 Sarah D. Sparks, "Differentiated Instruction: A Primer," *Education Week*, January 28, 2015, available at <http://www.edweek.org/ew/articles/2015/01/28/differentiated-instruction-a-primer.html>.
- 26 Lesli A. Maxwell, "U.S. School Enrollment Hits Majority-Minority Milestone," *Education Week*, August 19, 2014, available at <http://www.edweek.org/ew/articles/2014/08/20/01demographics.h34.html>; Southern Education Foundation, "A New Majority: Low Income Students Now a Majority in the Nation's Public Schools" (2015), available at <http://www.southerneducation.org/getattachment/4ac62e27-5260-47a5-9d02-14896ec3a531/A-New-Majority-2015-Update-Low-Income-Students-Now.aspx>.
- 27 National Center for Education Statistics, "Condition of Education: Children and Youth with Disabilities," available at https://nces.ed.gov/programs/coe/indicator_cgg.asp (last accessed May 2015).
- 28 Donald Evans, "Op-ed: Berkeley Unified Superintendent responds to story on Berkeley Technology Academy," *Berkeleyside*, June 19, 2015, available at <http://www.berkeleyside.com/2015/06/19/op-ed-berkeley-unified-superintendent-responds-to-story-on-berkeley-technology-academy/>.
- 29 Tamar Lewin, "Once a Leader, U.S. Lags in College Degrees," *The New York Times*, July 23, 2010, available at <http://www.nytimes.com/2010/07/23/education/23college.html>.
- 30 Auguste, Hancock, and Laboissière, "The Economic Cost of the U.S. Education Gap"; Shultz and Hanushek, "Education Is the Key to a Healthy Economy."
- 31 Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, "Recovery: Job Growth and Education Requirements Through 2020" (Washington: Georgetown Public Policy Institute Center on Education and the Workforce, 2013), available at <http://www.columbiagreenworks.org/Recovery2020.pdf>.
- 32 Pew Research Center, "The Rising Cost of Not Going to College" (2014), available at <http://www.pewsocial-trends.org/2014/02/11/the-rising-cost-of-not-going-to-college/>.
- 33 Sean McComb, "2014 National Teacher of the Year: Let's stop scapegoating teachers," *Answer Sheet*, April 30, 2014, available at <https://www.washingtonpost.com/blogs/answer-sheet/wp/2014/04/30/2014-national-teacher-of-the-year-lets-stop-scapegoating-teachers/>.
- 34 Peter Temin, "Low Pay, Low Quality," *Education Next* 3 (3) (2003): 8–13, available at <http://educationnext.org/low-pay-low-quality/>.
- 35 Motoko Rich, "Why don't more men go into teaching?," *Sunday Review*, September 6, 2014, available at http://www.nytimes.com/2014/09/07/sunday-review/why-dont-more-men-go-into-teaching.html?_r=0.
- 36 Cindy Long, "Crazy Things People Say To Teachers — And How To Respond," National Education Association, available at <http://www.nea.org/home/53540.htm> (last accessed April 2015).
- 37 Center on International Education Benchmarking, "Finland: Teacher and Principal Quality," available at <http://www.ncee.org/programs-affiliates/center-on-international-education-benchmarking/top-performing-countries/finland-overview/finland-teacher-and-principal-quality/> (last accessed January 2015); Center on International Education Benchmarking, "South Korea: Teacher and Principal Quality," available at <http://www.ncee.org/programs-affiliates/center-on-international-education-benchmarking/top-performing-countries/south-korea-overview/south-korea-teacher-and-principal-quality/> (last accessed January 2015).
- 38 Ripley, *The Smartest Kids in the World: And How They Got That Way*.
- 39 Organisation for Economic Co-operation and Development, "PISA 2012 Results: What Makes Schools Successful?: Resources, Policies and Practices, Volume IV" (2013), available at <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-IV.pdf>.
- 40 Lisa Evans, "Diversity in Canada: an overview," June 4, 2013, available at <http://canadianimmigrant.ca/guides/moving-to-canada/diversity-in-canada-an-overview>.
- 41 Irene Ogrodnik, "25 years since Canada vowed to end child poverty, where are we now?," *Global News*, November 24, 2014, available at <http://globalnews.ca/news/1685376/25-years-since-canada-vowed-to-end-child-poverty-where-are-we-now/>.
- 42 Harry A. Patrinos, "PISA Results: Which Countries Improved Most?," *Education for Global Development*, December 3, 2013, available at <http://blogs.worldbank.org/education/pisa-results-which-countries-improved-most>; Organisation for Economic Co-operation and Development, "PISA 2012 Results: What Makes Schools Successful?"
- 43 Organisation for Economic Co-operation and Development, "PISA 2012 Results in Focus: What 15-year-olds know and what they can do with what they know" (2014), available at <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf>.
- 44 Eric A. Hanushek, Marc Piopiunik, and Simon Wiederhold, "The Value of Smarter Teachers: International Evidence on Teacher Cognitive Skills and Student Performance." Working Paper 20727 (National Bureau of Economic Research, 2014); Amy Hightower and others, "Improving Student Learning by Supporting Quality Teaching: Key Issues, Effective Strategies" (Bethesda, MD: Editorial Projects in Education, 2011), available at http://www.edweek.org/media/eperc_qualityteaching_12.11.pdf.
- 45 John Morris and Rose Patterson, "Around the World: The Evolution of Teaching as a Profession" (Wellington, New Zealand: The New Zealand Initiative, 2013), available at http://nzinitiative.org.nz/site/nzinitiative/files/Around_the_world_web.pdf; Bryon Auguste, Paul Kihn, and Matt Miller, "Closing the talent gap: Attracting and retaining top-third graduates to careers in teaching: An international and market research-based perspective" (New York: McKinsey & Company, 2010), available at http://mckinseysociety.com/downloads/reports/Education/Closing_the_talent_gap.pdf.

- 46 Pasi Sahlberg, "Why There is no Teach for Finland," Presentation at Teaching & Learning Conference 2015, Walter E. Washington Convention Center, Washington, D.C., March 13, 2015.
- 47 Amanda Ripley, "Higher calling: To improve our schools, we need to make it harder to become a teacher," *Slate*, June 17, 2014, available at http://www.slate.com/articles/life/education/2014/06/american_schools_need_better_teachers_so_let_s_make_it_harder_to_become.html.
- 48 Dan Goldhaber and Joe Walch, "Gains in Teacher Quality," *Education Next* 14 (1) (2014): 39–45, available at <http://educationnext.org/gains-in-teacher-quality/>; Stephen Sawchuk, "Higher Academic Standing Seen Among Recent New York Teacher Hires," *Teacher Beat*, December 3, 2014, available at http://blogs.edweek.org/edweek/teacherbeat/2014/12/higher_academic_standing_seen_in_recent_new_york_teacher_hires.html; *ibid.*
- 49 Richard J. Murnane and others, *Who Will Teach?: Policies that Matter* (Cambridge, MA: Harvard University Press, 1991).
- 50 Tamara Hiler and Lanae Erickson Hatalsky, "Teaching: The Next Generation" (Washington: Third Way, 2014), available at <http://www.thirdway.org/report/teaching-the-next-generation>.
- 51 Peter Dolton and Oscar Marcenaro-Gutierrez, "2013 Global Teacher Status Index" (Dubai, United Arab Emirates: Varkey GEMS Foundation, 2013), available at <https://www.varkeyfoundation.org/sites/default/files/documents/2013GlobalTeacherStatusIndex.pdf>.
- 52 Hanushek, Piopiunik, and Wiederhold, "The Value of Smarter Teachers"; Don Boyd and others, "The Narrowing Gap in New York City Teacher Qualifications and Its Implications for Student Achievement in High-Poverty Schools." Working Paper 14021 (National Bureau of Economic Research, 2008), available at <http://www.nber.org/papers/w14021.pdf>.
- 53 Michael J. Feuer and others, "Evaluation of Teacher Preparation Programs: Purposes, Methods, and Policy Options" (Washington: National Academy of Education, 2013), available at http://www.naeducation.org/cs/groups/naedsite/documents/webpage/naed_085581.pdf.
- 54 National Council on Teacher Quality, "National Summary: Are New Teachers Being Prepared for College and Career Readiness Standards?" (2014), available at http://www.nctq.org/dmsView/2014_State_Teacher_Policy_Yearbook_National_Summary_NCTQ_Report.
- 55 Angela Lee Duckworth, Patrick D. Quinn, and Martin E.P. Seligman, "Positive predictors of teacher effectiveness," *Journal of Positive Psychology* 4 (6) (2009): 540–547, available at http://www.tandfonline.com/doi/abs/10.1080/17439760903157232#.VCfKIT_CeAE.
- 56 *Ibid.*
- 57 *Ibid.*
- 58 Ying Guo and others, "The Effects of Teacher Qualification, Teacher Self-Efficacy, and Classroom Practices on Fifth Graders' Literacy Outcomes," *Elementary School Journal* 113 (1) (2012): 3–24, available at <http://eric.ed.gov/?id=EJ992845>.
- 59 Steven Farr, "Leadership, Not Magic," *Educational Leadership* 68 (4) (2010): 28–33, available at <http://www.ascd.org/publications/educational-leadership/dec10/vol68/num04/Leadership,-Not-Magic.aspx>.
- 60 Morris and Patterson, "Around the World."
- 61 Geneva Gay, *Culturally Responsive Teaching: Theory, Research, and Practice, Second Edition* (New York: Teachers College Press, 2010); Gloria Ladson-Billings, *The Dreamkeepers: Successful Teachers of African American Children, 2nd Edition* (San Francisco: Jossey-Bass, 2009).
- 62 Maxwell, "U.S. School Enrollment Hits Majority-Minority Milestone"; Southern Education Foundation, "A New Majority"; Ulrich Boser, "Teacher Diversity Revisited, a New State-by-State Analysis" (Washington: Center for American Progress, 2014), available at <https://www.americanprogress.org/issues/race/report/2014/05/04/88962/teacher-diversity-revisited/>.
- 63 Linda Tyler, "Toward Increasing Teacher Diversity: Targeting Support and Intervention for Teacher Licensure Candidates" (Lawrence, NJ, and Washington: Educational Testing Service and National Education Association, 2011), available at http://www.nea.org/assets/docs/ETS_NEAteacherdiversity11.pdf.
- 64 Auguste, Kihn, and Miller, "Closing the talent gap."
- 65 Hamilton Lankford and others, "Who Enters Teaching? Encouraging Evidence that the Status of Teaching is Improving," *Educational Researcher* 43 (9) (2014): 444–453.
- 66 Julie Greenberg, Arthur McKee, and Kate Walsh, "Teacher Prep Review: A Review of the Nation's Teacher Preparation Programs" (Washington: National Council on Teacher Quality, 2013), available at http://www.nctq.org/dmsView/Teacher_Prep_Review_2013_Report.
- 67 Arthur Levine, "Educating School Teachers" (Washington: The Education Schools Project, 2006), available at <http://files.eric.ed.gov/fulltext/ED504135.pdf>.
- 68 "The percentage of teacher candidates graduating with honors is 44% compared to 30% for other majors." See National Council on Teacher Quality, "Fact Sheet: Training Our Future Teachers: Easy A's and What's Behind Them" (2014), available at http://nctq.org/dmsView/Easy_As_fact_sheet_graphics.
- 69 Cory Koedel, "Grading Standards in Education Departments at Universities," *Education Policy Analysis Archives* 19 (23) (2011): 1–23, available at <http://epaa.asu.edu/ojs/article/view/905>.
- 70 Linda Darling-Hammond and others, "The Design of Teacher Education Programs." In Linda Darling-Hammond and John D. Bransford, eds., *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able to Do* (San Francisco: Jossey-Bass, 2005); National Council on Teacher Quality, "Training Our Future Teachers: Easy A's and What's Behind Them."
- 71 Ashley Perry, "Teacher Preparation Programs: A Critical Vehicle to Drive Student Achievement," *The Hunt Institute's re:VISION* (1) (2011): 1–8, available at <http://www.hunt-institute.org/wp-content/uploads/2015/03/reVISION-Number-1-November-20111.pdf>.
- 72 Teacher Preparation Task Force, "Raising the Bar: Aligning and Elevating Teacher Preparation and the Teaching Profession" (Washington: American Federation of Teachers, 2012), available at <http://www.highered.nysed.gov/raisingthebar2012.pdf>.
- 73 Darling-Hammond and others, "The Design of Teacher Education Programs."
- 74 Pam Grossman, Matthew Ronfeldt, and Julia J. Cohen, "The Power of Setting: The Role of Field Experience in Learning to Teach." In Karen Harris and others, eds., *Educational Psychology Handbook, Vol. 3* (Washington: American Psychological Association, 2012).
- 75 *Ibid.*

- 76 Personal communication from Nick Profeta, teacher, Brooklyn, New York, August 20, 2015.
- 77 Julie Greenberg, Kate Walsh, and Arthur McKee, "2014 Teacher Prep Review: A Review of the Nation's Teacher Preparation Programs" (Washington: National Council on Teacher Quality, 2015), available at http://www.nctq.org/dmsView/Teacher_Prep_Review_2014_Report.
- 78 Donald J. Hernandez, "Double Jeopardy: How Third-Grade Reading Skills and Poverty Influence High School Graduation" (Baltimore: The Annie E. Casey Foundation, 2012), available at <http://www.aecf.org/m/resourcedoc/AECF-DoubleJeopardy-2012-Full.pdf>.
- 79 Mariana Haynes, "Confronting the Crisis: Federal Investments in State Birth-Through-Grade-Twelve Literacy Education" (Washington: Alliance for Excellent Education, 2012), available at <http://all4ed.org/reports-factsheets/confronting-the-crisis-federal-investments-in-state-birth-through-grade-twelve-literacy-education/>; Carol D. Lee and Anika Spratley, "Reading in the Disciplines: The Challenges of Adolescent Literacy" (New York: Carnegie Corporation of New York's Council on Advancing Adolescent Literacy, 2010), available at https://www.carnegie.org/media/filer_public/88/05/880559fd-afb1-49ad-af0e-e10c8a94d366/ccny_report_2010_tta_lee.pdf.
- 80 Perry, "Teacher Preparation Programs: A Critical Vehicle to Drive Student Achievement."
- 81 Darling-Hammond and others, "The Design of Teacher Education Programs."
- 82 Perry, "Teacher Preparation Programs: A Critical Vehicle to Drive Student Achievement."
- 83 Internal analysis of Baccalaureate and Beyond Longitudinal Study, 2008-09 cohort (2015).
- 84 Julie Greenberg, Kate Walsh, and Arthur McKee, "IV. Findings on Secondary Alternative Certification Programs." In Greenberg, Walsh, and McKee, "2014 Teacher Prep Review," available at http://www.nctq.org/dmsView/Chapter4_FindingsSecondaryAlternative-CertificationPrograms.
- 85 Office of Postsecondary Education, *Preparing and Credentialing the Nation's Teachers* (U.S. Department of Education, 2013), available at <https://title2.ed.gov/Public/TitleIIReport13.pdf>.
- 86 National Council on Teacher Quality, "IV. Findings on Secondary Alternative Certification Programs."
- 87 Marc S. Tucker, ed., "Chinese Lessons: Shanghai's Rise to the Top of the PISA League Tables" (Washington: National Center on Education and the Economy, 2014), available at <http://www.ncee.org/wp-content/uploads/2013/10/ChineseLessonsWeb.pdf>; Tan Lay Choo and Linda Darling-Hammond, "Creating Effective Teachers and Leaders in Singapore." In Darling-Hammond and Rothman, eds., *Teacher and Leader Effectiveness in High-Performing Education Systems*.
- 88 Matthew Ronfeldt and Michelle Reininger, "More or Better Student Teaching?," *Teaching and Teacher Education* 28 (8) (2012): 1091–1106.
- 89 Office of Postsecondary Education, *Preparing and Credentialing the Nation's Teachers*.
- 90 National Center for Education Statistics, "Schools and Staffing Survey (SASS)," available at <http://nces.ed.gov/surveys/sass/confidentiality.asp> (last accessed January 2015).
- 91 Susan Sclafani with Edmund Lim, "Rethinking Human Capital in Education: Singapore As A Model for Teacher Development" (Washington: The Aspen Institute, 2008), available at <http://www.aspeninstitute.org/sites/default/files/content/docs/education/SingaporeEDU.pdf>; Richard M. Ingersoll, ed., "A Comparative Study of Teacher Preparation and Qualifications in Six Nations" (Philadelphia: Consortium for Policy Research in Education, 2007), available at http://www.cpre.org/images/stories/cpre_pdfs/sixnations_final.pdf; Feuer and others, "Evaluation of Teacher Preparation Programs: Purposes, Methods, and Policy Options."
- 92 Morris and Patterson, "Around the World."
- 93 Darling-Hammond and others, "The Design of Teacher Education Programs."
- 94 Ibid.; Deborah Ball and others, "Combining the development of practice and the practice of development in teacher education," *Elementary School Journal* 109 (5) (2009): 458–474; Linda Kucan and Annemarie Sullivan Palincsar, "Locating struggling readers in a reconfigured landscape: A conceptual review." In Michael Kamil and others, eds., *Handbook of Reading Research*, Volume IV (New York: Routledge, 2010).
- 95 University of Michigan School of Education, "Bachelor's Elementary Teacher Certification Requirements," available at http://www.soe.umich.edu/academics/bachelors_degree_programs/uete/uete_requirements/ (last accessed June 2015).
- 96 Julie Greenberg, Kate Walsh, and Arthur McKee, "III. Findings by Standard." In Greenberg, Walsh, and McKee, "2014 Teacher Prep Review," available at http://www.nctq.org/dmsView/Chapter3_FindingsByStandard.
- 97 Ibid.; Ronfeldt and Reininger, "More or Better Student Teaching?"
- 98 Stephen Sawchuk, "Ed. Dept. Teacher-Prep Regulations Released; Aim to Tie Aid to Program Performance," *Teacher Beat*, November 25, 2014, available at http://blogs.edweek.org/edweek/teacherbeat/2014/11/ed_dept_teacher-prep_regulation.html?q=teacher+prep+regs.
- 99 Jane G. Cogshall, Lauren Bivona, and Daniel J. Reschly, "Evaluating the Effectiveness of Teacher Preparation Programs for Support and Accountability" (Washington: American Institutes for Research, 2012).
- 100 Deans for Impact, "Home," available at <http://www.deansforimpact.org/> (last accessed October 2015).
- 101 Heather Peske, interview with authors, Washington, D.C., November 13, 2014.
- 102 Motoko Rich, "Teacher Shortages Spur a Nationwide Hiring Scramble (Credentials Optional)," *The New York Times*, August 9, 2015, available at <http://www.nytimes.com/2015/08/10/us/teacher-shortages-spur-a-nationwide-hiring-scramble-credentials-optional.html>.
- 103 Ross Brenneman, "Is there a teacher shortage? That depends how you frame it," *Teaching Now*, August 6, 2015, available at http://blogs.edweek.org/teachers/teaching_now/2015/08/is-there-a-teacher-shortage-yes-no-maybe.html.
- 104 Stephen Sawchuk, "Colleges Overproducing Elementary Teachers, Data Find," *Education Week*, January 22, 2013, available at http://www.edweek.org/ew/articles/2013/01/23/18supply_ep.h32.html.

- 105 Emma Beck, "K-5 teacher overload: Too many trained, not enough jobs," *USA Today*, February 19, 2013, available at <http://www.usatoday.com/story/news/nation/2013/02/18/oversupply-elementary-education/1917569/>.
- 106 Asia Society, *Teaching and Leadership for the Twenty-First Century: The 2012 International Summit on the Teaching Profession* (2012), available at <http://asiasociety.org/files/2012teachingsummit.pdf>.
- 107 National Council of Architectural Registration Boards, "Taking the ARE," available at <http://www.ncarb.org/ARE/Taking-the-ARE.aspx> (last accessed March 2015); United States Medical Licensing Examination, "Overview: The USMLE: Purpose, Test Format, and Test Lengths," available at <http://www.usmle.org/bulletin/overview/#TestFormat> (last accessed March 2015).
- 108 Stephen Sawchuk, "States' Teacher-Exam Bar Set Low, Federal Data Show," *Education Week*, May 14, 2013, available at <http://www.edweek.org/ew/articles/2013/05/15/31tests.h32.html>.
- 109 Ed Trust, "Not Good Enough: A content analysis of teacher licensing examinations," *Thinking K-16* 3 (1) (1999): 1–23, available at http://edtrust.org/wp-content/uploads/2013/10/k16_spring99.pdf.
- 110 Ibid.
- 111 Educational Testing Service, "Understanding Your Praxis® Scores" (2014), available at https://www.ets.org/s/praxis/pdf/uyps_1415.pdf.
- 112 Tamara Hiler and Stephenie Johnson, "Creating a Consistent & Rigorous Teacher Licensure Process" (Washington: Third Way, 2014), available at <http://www.thirdway.org/report/creating-a-consistent-and-rigorous-teacher-licensure-process>.
- 113 edTPA, available at <http://edtpa.aacte.org/> (last accessed March 2015); Stephen Sawchuk, "Groups Honing Real-Time Teacher-Performance Exam," *Education Week*, October 14, 2014, available at <http://www.edweek.org/ew/articles/2014/10/15/08performance.h34.html>.
- 114 Meredith Galante, "Why a Middle School in New York is Paying Teachers \$125,000 a Year," *Business Insider*, April 18, 2012, available at <http://www.businessinsider.com/the-equity-project-charter-school-pays-teachers-125000-a-year-2012-4#ixzz3XVUMwJzW>.
- 115 Martin Carnoy and others, "Do Countries Paying Teachers Higher Relative Salaries Have Higher Student Mathematics Achievement?" (Amsterdam, Netherlands: International Association for the Evaluation of Educational Achievement, 2009).
- 116 Organisation for Economic Co-operation and Development, "Building a High-Quality Teaching Profession: Lessons From Around the World" (2011), available at <http://www2.ed.gov/about/inits/ed/international/background.pdf>.
- 117 Ibid.
- 118 National Education Association, "2012-2013 Average Starting Teacher Salaries by State," available at <http://www.nea.org/home/2012-2013-average-starting-teacher-salary.html> (last accessed April 2015).
- 119 National Center for Education Statistics, "Table 211.60. Estimated average annual salary of teachers in public elementary and secondary schools, by state: Selected years, 1969-70 through 2012-13," available at http://nces.ed.gov/programs/digest/d13/tables/dt13_211.60.asp (last accessed April 2015).
- 120 Auguste, Kihn, and Miller, "Closing the talent gap."
- 121 Organisation for Economic Co-operation and Development, "Building a High-Quality Teaching Profession."
- 122 Ibid.
- 123 Sylvia Allegretto, Sean P. Corcoran, and Lawrence Mishel, *The Teaching Penalty: Teacher Pay Losing Ground* (Washington: Economic Policy Institute, 2008).
- 124 Nithya Joseph and Nancy Waymack, "Smart Money: What teachers make, how long it takes and what it buys them" (Washington: National Council on Teacher Quality, 2014), available at http://www.nctq.org/dmsView/Smart_Money.
- 125 Ulrich Boser and Chelsea Straus, "Mid- and Late-Career Teachers Struggle with Paltry Incomes" (Washington: Center for American Progress, 2014), available at <https://www.americanprogress.org/issues/education/report/2014/07/23/94168/mid-and-late-career-teachers-struggle-with-paltry-incomes/>.
- 126 Raegan 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/>.
- 127 Metin Ozdemir and Wendy Stevenson, "Appendix: The Impact of Teachers' Advanced Degrees on Student Learning." In National Council on Teacher Quality, "Human Capital in Boston Public Schools: Rethinking How to Attract, Develop and Retain Effective Teachers" (2010), available at http://www.mbae.org/uploads/24022010204159nctq_boston_human_capitalFINAL.pdf.
- 128 Rivkin, Hanushek, and Kain, "Teachers, Schools, and Academic Achievement"; 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.urban.org/uploadedpdf/1001455-impact-teacher-experience.pdf>.
- 129 National Center for Education Statistics, *Schools and Staffing Survey (SASS): Public School District Data File* (U.S. Department of Education, 2011–2012), available at <https://nces.ed.gov/surveys/sass/>; Susan Moore Johnson and Morgaen L. Donaldson, "Overcoming the Obstacles to Leadership," *Educational Leadership* 65 (1) (2007): 8–13.
- 130 Auguste, Kihn, and Miller, "Closing the talent gap."
- 131 Third Way, "National Online Survey of College Students - Education Attitudes" (2014), available at <http://www.thirdway.org/polling/national-online-survey-of-college-students-education-attitudes>.
- 132 Stephen Sawchuk, "Steep Drops Seen in Teacher-Prep Enrollment Numbers," *Education Week*, October 21, 2014, available at <http://www.edweek.org/ew/articles/2014/10/22/09enroll.h34.html>.
- 133 Karen Hawley Miles, Kaitlin Pennington, and David Bloom, "Do More, Add More, Earn More: Teacher Salary Redesign Lessons from 10 First-Mover Districts" (Washington: Center for American Progress, 2015), available at <https://www.americanprogress.org/issues/education/report/2015/02/17/106584/do-more-add-more-earn-more/>.
- 134 Steve Farkas and others, "A Sense of Calling: Who Teachers and Why" (New York: Public Agenda, 2000), available at http://www.publicagenda.org/files/sense_of_calling.pdf.

- 135 Lisa Niver Rajna, "Why So Many of America's Teachers Are Leaving The Profession," *HuffPost Post50*, November 5, 2013, available at http://www.huffingtonpost.com/lisa-niver-rajna/teaching-profession_b_4172238.html.
- 136 Rice, "The Impact of Teacher Experience."
- 137 Heather G. Peske and Kati Haycock, "Teaching Inequality: How Poor and Minority Students are Shortchanged on Teacher Quality" (Washington: The Education Trust, 2006).
- 138 Shanna Peebles, "Love Before Curriculum," *HuffPost Education*, August 9, 2015, available at http://www.huffingtonpost.com/shanna-peebles/love-before-curriculum_b_7963050.html.
- 139 Robert Hanna and Kaitlin Pennington, "Despite Reports to the Contrary, New Teachers Are Staying in Their Jobs Longer," Center for American Progress, January 8, 2015, available at <https://www.americanprogress.org/issues/education/news/2015/01/08/103421/despite-reports-to-the-contrary-new-teachers-are-staying-in-their-jobs-longer/>.
- 140 Matthew Ronfeldt and others, "How Teacher Turnover Harms Student Achievement," Working Paper 17176 (National Bureau of Economic Research, 2011), available at <http://www.nber.org/papers/w17176>.
- 141 Barry Pervin and Carol Campbell, "Systems for Teacher and Leader Effectiveness and Quality: Ontario, Canada." In Darling-Hammond and Rothman, eds., *Teacher and Leader Effectiveness in High-Performing Education Systems*.
- 142 Susan Sclafani, "Recruiting, Training and Supporting a 21st Century Teaching Profession," Presented at the International Summit on the Teaching Profession (2011), available at <http://hub.mspnet.org/index.cfm/22821>.
- 143 Richard M. Ingersoll, "Teacher Induction: What the Data Tell Us," *Phi Delta Kappan*, May 16, 2012, available at http://www.edweek.org/ew/articles/2012/05/16/kappan_ingersoll.h31.html.
- 144 TNTP, "The Irreplaceables: Understanding the Real Retention Crisis in America's Urban Schools" (2012), available at http://tntp.org/assets/documents/TNTP_Irreplaceables_2012.pdf.
- 145 Erin Grogan and Kelsey Oeser, "Crunching Our Coaching Data," TNTP Blog, November 20, 2014, available at <http://tntp.org/blog/post/crunching-our-coaching-data>.
- 146 Phillip Longman, "First Teach No Harm," *Washington Monthly*, July/August 2013, available at http://www.washingtonmonthly.com/magazine/july_august_2013/features/first_teach_no_harm045361.php?page=all.
- 147 Ibid.
- 148 John P. Papay and others, "Does Practice-Based Teacher Preparation Increase Student Achievement? Early Evidence from the Boston Teacher Residency," Working Paper 17646 (National Bureau of Economic Research, 2011), available at <http://www.nber.org/papers/w17646.pdf>; Urban Teacher Residency United, "Building Effective Teacher Residencies" (2014), available at <http://nctresidencies.org/research/building-effective-teacher-residencies-2/>.
- 149 Papay and others, "Does Practice-Based Teacher Preparation Increase Student Achievement?"
- 150 Ryan Fuller, "Teaching Isn't Rocket Science. It's Harder," *Slate*, December 18, 2013, available at http://www.slate.com/articles/life/education/2013/12/teaching_in_america_s_highest_need_communities_isn_t_rocket_science_it_s.1.html.
- 151 For example, see "DCPS Teaching and Learning Framework (TLF)," available at <http://dcps.dc.gov/sites/default/files/dc/sites/dcps/publication/attachments/2013-2014%20TLF.pdf> (last accessed October 2015).
- 152 Rachel Krants-Kent, "Teachers work patterns: when, where, and how much do U.S. teachers work?," *Monthly Labor Review* (2008): 52–59, available at <http://www.bls.gov/opub/mlr/2008/03/art4full.pdf>.
- 153 For example, see KIPP NYC, "A Teacher's Day," available at <http://www.kippnyc.org/careers/a-teachers-day/> (last accessed January 2015); Sara Neufeld, "Can a Teacher be Too Dedicated?," *The Atlantic*, November 10, 2014, available at <http://www.theatlantic.com/national/archive/2014/11/can-a-teacher-be-too-dedicated/382563/>; Molly Bloom, "First-Year Ohio Teacher Says Her Real Work Day Goes Beyond Her Contract," *State Impact*, October 7, 2011, available at <http://stateimpact.npr.org/ohio/2011/10/07/first-year-ohio-teacher-says-her-real-work-day-goes-beyond-her-contract/>; Molly Bloom, "Twelve Hours in an Ohio Middle School And Other Ways to Make a Living," *State Impact*, October 6, 2011, available at <http://stateimpact.npr.org/ohio/2011/10/06/twelve-hours-in-an-ohio-middle-school-and-other-ways-to-make-a-living/>.
- 154 National Education Association, "Status of the American Public School Teacher 2005–2006" (2010), available at https://www.unionfacts.com/downloads/Report_Status_of_American_Teachers_05_06.pdf.
- 155 Linda Darling-Hammond, Ruth Chung Wei, and Alethea Andree, "How High-Achieving Countries Develop Great Teachers" (Stanford, CA: Stanford Center for Opportunity Policy in Education, 2010), available at <https://edpolicy.stanford.edu/sites/default/files/publications/how-high-achieving-countries-develop-great-teachers.pdf>.
- 156 Learning First, "Integrating quality professional learning into the daily life of teachers: Insights from high performing systems" (draft; forthcoming).
- 157 Chris Kyriacou, "Teacher Stress: Directions for future research," *Educational Review* 53 (1) (2001): 27–35.
- 158 American Federation of Teachers and Badass Teachers Association, "Quality of Worklife Survey" (2015), available at <http://www.aft.org/sites/default/files/worklifesurveyresults2015.pdf>.
- 159 Heather Wolpert-Gawron, "The Case for Collaboration Days," *HuffPost Education*, August 10, 2015, available at http://www.huffingtonpost.com/heather-wolpertgawron/the-case-for-collaboratio_b_7960390.html.
- 160 Organisation for Economic Co-operation and Development, "TALIS 2013 Results: An International Perspective on Teaching and Learning" (2014), table 6.12, available at http://www.istruzione.it/allegati/2014/OCSE_TALIS_Rapporto_Internazionale_EN.pdf.
- 161 Samuel E. Abrams, "The Mismeasure of Teaching Time" (New York: Center for Benefit-Cost Studies of Education, 2015), available at <http://cbcse.org/wordpress/wp-content/uploads/2015/01/The-MismeasureofTeaching-Time-SA-1.14.15.pdf>.
- 162 Organisation for Economic Co-operation and Development, "TALIS 2013 Results: An International Perspective on Teaching and Learning," table 6.12; Organisation for Economic Co-operation and Development, "Programme for International Student Assessment (PISA): Results from PISA 2012" (2012), available at <http://www.oecd.org/pisa/keyfindings/PISA-2012-results-US.pdf>.
- 163 Ibid.

- 164 Ben Levin, Avis Glaze, and Michael Fullan, "Results Without Rancor or Ranking: Ontario's Success Story," *Phi Delta Kappan* 90 (4) (2008): 273–280, available at http://www.pdkmembers.org/members_online/publications/Archive/pdf/k0812lev.pdf; Michael Fullan, "What America Can Learn from Ontario's Education Success," *The Atlantic*, May 4, 2012, available at <http://www.theatlantic.com/national/archive/2012/05/what-america-can-learn-from-ontarios-education-success/256654/>.
- 165 Ibid.
- 166 Darling-Hammond, Wei, and Andree, "How High-Achieving Countries Develop Great Teachers."
- 167 David A. Farbman, David J. Goldberg, and Tiffany D. Miller, "Redesigning and Expanding School Time to Support Common Core Implementation" (Washington: Center for American Progress, 2014), available at <https://www.americanprogress.org/issues/education/report/2014/01/31/81861/redesigning-and-expanding-school-time-to-support-common-core-implementation/>.
- 168 Emily Hassel, "Professional Development: Learning from the Best" (Oak Brook, IL: North Central Regional Educational Laboratory, 1999), available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.397.6197&rep=rep1&type=pdf>.
- 169 Greg Anrig, "Why collaboration is vital to creating effective schools," Answer Sheet, May 2, 2013, available at <https://www.washingtonpost.com/blogs/answer-sheet/wp/2013/05/02/why-collaboration-is-vital-to-creating-effective-schools/>.
- 170 Eva Moskowitz and Arin Lavinia, *Mission Possible: How the Secrets of the Success Academies Can Work in Any School* (San Francisco, Jossey-Bass, 2012); KIPP, "Sharing and Collaboration," available at <http://www.kipp.org/our-approach/sharing-and-collaboration> (last accessed March 2015).
- 171 Jenny DeMonte, "High-Quality Professional Development for Teachers: Supporting Teacher Training to Improve Student Learning" (Washington: Center for American Progress, 2013), available at <https://www.americanprogress.org/issues/education/report/2013/07/15/69592/high-quality-professional-development-for-teachers/>.
- 172 TNTP, "The Mirage: Confronting the Hard Truth About Our Quest for Teacher Development" (2015), available at http://tntp.org/assets/documents/TNTP-Mirage_2015.pdf.
- 173 Bill & Melinda Gates Foundation, "Teachers Know Best: Teachers' Views on Professional Development" (2014), available at <http://collegeready.gatesfoundation.org/wp-content/uploads/2015/04/Gates-PDMarket-Research-Dec5.pdf>.
- 174 Hayes Mizell, "Why Professional Development Matters" (Oxford, OH: Learning Forward, 2010), available at http://learningforward.org/docs/pdf/why_pd_matters_web.pdf?sfvrsn=0.
- 175 Linda Darling-Hammond and others, "Professional Learning in the Learning Profession: A Status Report on Teacher Development in the United States and Abroad" (Oxford, OH: National Staff Development Council, 2009), available at http://www.researchgate.net/publication/237327162_Professional_learning_in_the_learning_profession_A_Status_Report_on_Teacher_Development_in_the_United_States_and_Abroad_Dallas_TX_National_Staff_Development_Council.
- 176 Heather Hill, "Fixing Teacher Professional Development," *Phi Delta Kappan* 90 (7) (2009): 470–477, available at http://www.pdkmembers.org/members_online/publications/archive/pdf/k0903hil.pdf.
- 177 Darling-Hammond and others, "Professional Learning in the Learning Profession."
- 178 Ibid.
- 179 Bruce Joyce and Beverly Showers, "The coaching of teaching," *Educational Leadership* 40 (1) (1982): 4–10, available at http://ascd.com/ASCD/pdf/journals/ed_lead/el_198210_joyce.pdf.
- 180 Allison Gulamhussein, "Teaching the Teachers: Effective Professional Development in an Era of High Stakes Accountability" (Alexandria, VA: Center for Public Education, 2013), available at <http://www.centerforpubliceducation.org/Main-Menu/Staffingstudents/Teaching-the-Teachers-Effective-Professional-Development-in-an-Era-of-High-Stakes-Accountability/Teaching-the-Teachers-Full-Report.pdf>.
- 181 Michael S. Garett and others, "The Impact of Two Professional Development Interventions on Early Reading Instruction and Achievement" (Washington: National Center for Education Evaluation and Regional Assistance, 2008), available at <http://ies.ed.gov/ncee/pdf/20084030.pdf>; Michael S. Garett and others, "Middle School Mathematics Professional Development Impact Study: Findings After the Second Year of Implementation" (Washington: National Center for Education Evaluation and Regional Assistance, 2011), available at <http://ies.ed.gov/ncee/pubs/20114024/pdf/20114024.pdf>.
- 182 TNTP, "The Mirage."
- 183 Ann Duffett and others, "Waiting to be won over: Teachers speak on the profession, unions, and reform" (Washington: Education Sector, 2008).
- 184 Ulrich Boser and Robert Hanna, "In the Quest to Improve Schools, Have Teachers Been Stripped of Their Autonomy?" (Washington: Center for American Progress, 2014), available at <https://www.americanprogress.org/issues/education/report/2014/01/21/81062/in-the-quest-to-improve-schools-have-teachers-been-stripped-of-their-autonomy/>.
- 185 Darling-Hammond and others, "Professional Learning in the Learning Profession."
- 186 James Surowiecki, "Better All the Time," *The New Yorker*, November 10, 2014, available at <http://www.newyorker.com/magazine/2014/11/10/better-time>.
- 187 NPR Staff, "Building a Better Teacher": Dissecting America's Education Culture," NPR, August 9, 2014, available at <http://www.npr.org/2014/08/09/338831269/building-a-better-teacher-dissecting-americas-education-culture>.
- 188 Massachusetts Department of Elementary and Secondary Education, "Quick Reference Guide: Educator Plans" (2014), available at <http://www.doe.mass.edu/edeval/resources/QRG-EducatorPlans.pdf>.
- 189 Louisiana Department of Education, "Data Center," available at <https://www.louisianabelieves.com/resources/library/data-center> (last accessed March 2015); Patrice Pujol, interview with authors, Washington, D.C., February 7, 2014.
- 190 Jane G. Coggshall and Ellen Behrstock-Sherratt, "Workplaces That Support High-Performing Teaching and Learning: Insights From Generation Y Teachers" (Washington: American Institutes for Research and American Federation of Teachers, 2011), available at <http://www.air.org/resource/workplaces-support-high-performing-teaching-and-learning-insights-generation-y-teachers>.
- 191 Ibid.

- 192 Heather Peske and others, "The Next Generation of Teachers: Changing Conceptions of a Career in Teaching," *Phi Delta Kappan* 83 (4) (2001): 304–311.
- 193 Organisation for Economic Co-operation and Development, "Building a High-Quality Teaching Profession."
- 194 Darling-Hammond and others, "Professional Learning in the Learning Profession."
- 195 YES Prep, "Continuum," available at <http://www.yesprep.org/careers/continuum> (last accessed August 2015).
- 196 YES Prep, "Results," available at <http://www.yesprep.org/about/results> (last accessed August 2015).
- 197 Coggshall and Behrstock-Sherratt, "Workplaces That Support High-Performing Teaching and Learning."
- 198 The Aspen Institute, "Sharing the Load: Denver Public Schools' Differentiated Roles Pilot" (2014), available at <http://www.aspendri.org/portal/browse/DocumentDetail?documentId=2399&download>; Education Resource Strategies, "Teaching District Story: Washington, D.C.," March 2013, available at http://www.erstrategies.org/library/focus_on_effective_teaching.
- 199 Casey Given, "Time to end teacher tenure," *The Hill*, July 11, 2014, available at <http://thehill.com/blogs/congress-blog/education/211857-time-to-end-teacher-tenure>.
- 200 Equal Employment Opportunity Commission, "Federal Laws Prohibiting Job Discrimination Questions and Answers," available at <http://www.eeoc.gov/facts/qanda.html> (last accessed January 2015); Legal Information Institute, "Employment Discrimination," available at http://www.law.cornell.edu/wex/employment_discrimination (last accessed January 2015).
- 201 Patrick McGuinn, "Ring the Bell for K-12 Teacher Tenure Reform" (Washington: Center for American Progress, 2010), available at <https://www.americanprogress.org/issues/education/report/2010/02/09/7314/ringing-the-bell-for-k-12-teacher-tenure-reform/>.
- 202 National Council on Teacher Quality, "2013 State Teacher Policy Yearbook National Summary" (2014).
- 203 National Council on Teacher Quality, "The NCTQ Teacher Trendline: July 2014," available at <http://www.nctq.org/commentary/article.do?id=77> (last accessed January 2015).
- 204 Janellen Duffy, "Opinion: TEACHNJ reforms are major step forward to evaluate, reward, support teachers," *NJ.com*, October 12, 2013, available at http://www.nj.com/times-opinion/index.ssf/2013/10/opinion_teachnj_reforms_are_ma.html; Stephen Sawchuk, "Due Process Laws Vary for Teachers by State," *Education Week*, September 23, 2014, available at <http://www.edweek.org/ew/articles/2014/09/24/05tenure.h34.html>.
- 205 National Council on Teacher Quality, "The NCTQ Teacher Trendline: July 2014."
- 206 Ibid.
- 207 *Education Week*, "Both Sides Say Tenure Law Working in New Jersey," June 3, 2014, available at <http://www.edweek.org/ew/articles/2014/06/04/33brief-5.h33.html>; Melissa Bailey, "A teachers union embraces reform in New Haven, creating a model for others," *The Hechinger Report*, June 11, 2013, available at <http://hechingerreport.org/a-teachers-union-embraces-reform-in-new-haven-creating-a-model-for-others/>.
- 208 Kenneth Leithwood and others, "How leadership influences student learning" (New York: The Wallace Foundation, 2004), available at <http://www.wallacefoundation.org/knowledge-center/school-leadership/key-research/Pages/How-Leadership-Influences-Student-Learning.aspx>.
- 209 Susan Moor Johnson, Matthew A. Kraft, and John P. Papay, "How Context Matters in High-Need Schools: The Effects of Teachers' Working Conditions on Their Professional Satisfaction and Their Students' Achievement," *Teachers College Record* 114 (10) (2012): 1–39, available at <http://www.tcrecord.org/content.asp?contentid=16685>.
- 210 Ibid.
- 211 MetLife, "The MetLife Survey of the American Teacher: Challenges for School Leadership" (2013), available at <https://www.metlife.com/assets/cao/foundation/MetLife-Teacher-Survey-2012.pdf>.
- 212 Sarah Rosenberg and Elena Silva, "Trending Toward Reform: Teachers Speak on Unions and the Future of the Profession" (Washington: Education Sector, 2012), available at http://studentsmatter.org/wp-content/uploads/2012/09/SM_Trending-Toward-Reform-Ed-Sector-Survey_07.10.12.pdf.
- 213 Jane G. Coggshall and others, "Retaining Teacher Talent: The View from Generation Y" (Washington and New York: Learning Point Associates and Public Agenda, 2009), available at http://www.publicagenda.org/files/retaining_teacher_talent_1.pdf.
- 214 TNTP, "The Irreplaceables."
- 215 Lee Mitgang, "The Making of the Principal: Five Lessons in Leadership Training" (New York: The Wallace Foundation, 2012), available at <http://www.wallacefoundation.org/knowledge-center/school-leadership/effective-principal-leadership/Pages/The-Making-of-the-Principal-Five-Lessons-in-Leadership-Training.aspx>.
- 216 Center for Public Education, "The Principal Perspective: Full Report" (2012).

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