

# POLICY BRIEF

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## Strengthening State Teacher Licensure Standards to Advance Teaching Effectiveness

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### Executive Summary

Today's teacher licensing systems don't hold all candidates—no matter what route they take into teaching—to the same standards. In many ways America does not have a teacher licensing *system*, only a patchwork quilt of rules and regulations that often short-cut quality control when policy makers are not willing to pay for higher quality training and when classrooms need to be staffed quickly. Granted, these problems are not new—and some are rooted back in the mid-19th century and early efforts to professionalize teaching (Angus, 2001). This policy brief presents both challenges and research-based recommendations for policy makers to pursue as they create a results-oriented teaching profession by strengthening teacher licensure standards.

In efforts to strengthen states' teacher licensing standards, policy makers face at least four challenges:

- Creating a system that allows teachers to enter teaching through multiple pathways and on different timelines while *increasing (not lowering) entry standards* to meet the demands of 21st-century teaching and learning.
- Closing down long-standing, traditional university-based teacher education programs as well as high-profile and popular alternative certification approaches when they do not *prepare teachers for the schools of tomorrow*.
- Realizing that strengthening teacher licensing systems will require additional investments in more powerful teaching effectiveness tools and better data systems to make accurate assessments of who is ready to teach.
- Investing in a larger set of teaching policy reforms so teachers can learn over time and spread their expertise to one another in team-based approaches to improving student achievement.

### Recommendations

Licensure systems must—

- Promote the kinds of preservice training that lead to effective teaching.
- Require that teachers know both content and how to teach it to diverse learners for 21st-century schools.
- Hold all teacher candidates to high, 21st-century standards.
- Hold all university-based and alternative preparation programs to the same high standards.
- Require that teachers pass a performance assessment, demonstrating that they know how to teach before serving as the teacher of record.

### About This Series

This policy brief is part of a series commissioned by the Partnership for Teacher Quality to help inform and improve teacher quality policies at the state, local, and national level. The briefs address issues related to teacher licensure, teacher effectiveness, clinical preparation, and data systems, and each includes an overview of the research, promising practices, and recommendations related to their specific topic.

### About the Partnership for Teacher Quality

In September 2008, the National Education Association (NEA) and the American Association of Colleges for Teacher Education (AACTE) formed the Partnership for Teacher Quality to promote awareness, understanding, and collaboration about teacher quality issues at the state level. Shared commitment to strong teacher preparation and licensure standards is the foundation for the policy proposals and meetings that have occurred between NEA affiliates and AACTE state chapters. These alliances are crucial for both organizations in the era of licensure deregulation and the undermining of teacher quality. This policy paper and others in the series are a product of the partnership.

## The Teacher Licensing Challenge

Most school reformers and policy analysts agree about the primary role that teachers play in advancing student achievement (Darling-Hammond & Sykes, 2003; Murnane, 1985; Sanders & Rivers, 1996; Wayne & Youngs, 2003). The bottom line is that students who are taught by qualified and experienced teachers learn more. However, no matter how teaching quality is defined—e.g., credential, experience, or test score gains—more qualified teachers are far less likely to teach students of poverty and color (Ingersoll, 1999; Mayer, Mullens, & Moore, 2002; Boyd, Lankford, Loeb, & Wyckoff, 2008; Sanders & Rivers, 1996; Cavalluzzo, 2004; Goldhaber & Anthony, 2004; Humphrey, Koppich, & Hough, 2005). And the student achievement gap can be explained in significant part by the teaching quality gap (Murnane & Steele, 2007).

Reformers and policy analysts are often at odds over the best means to identify talented teachers and improve teaching effectiveness. Debates rage among analysts as well as researchers over the extent to which teachers are prepared before they enter teaching and what counts in order for a new recruit to be deemed qualified and licensed to teach. Experts in different camps offer varying interpretations of the data—and often propose starkly divergent paths policy makers should follow (Archer, 2002).

One thing is certain: Today's teacher licensing systems don't hold all candidates—no matter what route they take into teaching—to the same standards. In many ways America does not have a teacher licensing *system*, only a patchwork quilt of rules and regulations that often shortcut quality control when policy makers are not willing to pay for higher quality training and when classrooms need to be staffed quickly. Granted, these problems are not new—and some are rooted back in the mid-19th century and early efforts to professionalize teaching (Angus, 2001). This policy brief presents both challenges and research-based recommendations for policy makers to pursue as they create a results-oriented teaching profession by strengthening teacher licensure standards.

## The Challenges

In efforts to strengthen states' teacher licensing standards, policy makers face at least four challenges:

1. Creating a system that allows teachers to enter teaching through multiple pathways and on different timelines while *increasing (not lowering) entry standards* to meet the demands of 21st-century teaching and learning;
2. Closing down long-standing, traditional university-based teacher education programs as well as high-profile and popular alternative certification approaches when they do not *prepare teachers for the schools of tomorrow*;
3. Realizing that strengthening teacher licensing systems will require additional investments in more powerful teaching effectiveness tools and better data systems to make accurate assessments of who is ready to teach; and
4. Investing in a larger set of teaching policy reforms so teachers can learn over time and spread their expertise to one another in team-based approaches to improving student achievement.

There is no doubt that creating 21st-century learning opportunities for all students will require dramatically new approaches to teacher development—including how teachers are recruited, prepared, and licensed as well as how they are developed, assessed, rewarded, and retained over time. Our nation must figure out how to remove state procedures that may inhibit talented individuals from entering teaching—while also avoiding preparation shortcuts that

undermine a teacher's readiness to teach, especially in our highest need schools. Universities, school districts, non-profits, and community-based organizations must also work together to recruit and develop teachers for high-need schools, and they must find valid and reliable means for identifying effective teachers—using evidence of student learning. Finally, performance pay plans

require a collective of researchers and teacher leaders to create an ingenious array of student assessments that both drive instructional change and spread teaching expertise.

But today, many analysts fuel false dichotomies—choosing new recruits from traditional education schools that ignore the realities of high-need schools, or from shortcut alternatives that devalue the training needed to work with growing numbers of second language learners and “iGeneration” students. Conventional wisdom today suggests that teachers do not need much training before they begin to teach, and if new recruits are licensed, the litmus test should be whether or not they know their content. For example, Nicholas Kristof of the *New York Times*, repeating what he found in a number of recent policy reports, has advo-

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cated for “opening [of] classroom doors” so everybody can teach as long as they graduate from a competitive college, know the subjects they teach, and pass a background check (Kristof, 2006).

But in high-need schools where many teachers are already working at least 65 hours a week (Education Sector, 2009), how much time and energy do teachers have to learn on the job? Is it ethical to conduct only a background check on teachers before they begin to work with children, while statisticians take several years to determine whether they pass muster on value-added measures of teaching effectiveness? Annual standardized test results can surface useful information on teaching effectiveness. But once-a-year test scores, and even more sophisticated value-added statistical methods, cannot always account for the full impact of teachers’ contributions to achievement gains and the roles that teaching colleagues play in fostering them. In addition, there is no evidence to suggest that pedagogical course work and internship requirements for entering teaching should be limited or abandoned. Outmoded pedagogical courses should be discarded and current teacher licensing streamlined and refocused on results.

## Recommendations Driven by Evidence

The current teacher licensing system does not work well—especially in terms of recruiting, preparing, identifying, and supporting effective teachers for 21st-century schools. Based on a wide range of empirical evidence, these five recommendations target policy makers:

### **Licensure Systems Must Promote the Kinds of Preservice Training That Lead to Effective Teaching**

**The Evidence:** Most research studies support claims that academic ability is important for teachers to possess and that formal teacher preparation and teaching experience may have only modest effects on student achievement test results. It makes some sense that verbal ability is important for teachers who must present knowledge in different ways to different learners. But consumers of these investigations need to read the fine print—most studies show only a relatively minor relationship between a teacher’s verbal skills and her students’

own standardized test scores (Murnane & Steele, 2007).

Recently a team of economists examined a range of teacher characteristics (e.g., SAT scores, licensure test scores, and selectivity of college attended, as well as traits such as “conscientiousness” and “extraversion”) and their influence on teacher effectiveness, measured by student test scores (Rockoff, Jacob, Kane, & Staiger, 2009). The researchers could explain only 12% of the variance in effectiveness, suggesting that it may not be possible to identify systematically the best teachers without data on actual classroom performance.

A new study of effective teaching, assembled by Teach for America (TFA), points to the importance of determination or “grit” on the part of the teacher in raising student achievement in high-need schools (Ripley, 2010). Personal traits such as energy and enthusiasm can serve as predictors of effective teaching (Goldhaber & Anthony, 2004)—but not without subject matter expertise, pedagogical skills, and knowledge of students. In fact, the TFA study points to how effective teachers reflect on what they are doing, actively engage families as well as students in the learning process, and plan “exhaustively and purposefully” by “working backward from the desired achievement outcomes” (Ripley). But these are *learned* forms of knowledge and skills—and require technical knowledge of *how* to teach content—whether it is teaching *Moby Dick* to a student who reads three levels below his grade or U.S. history to a second-language learner who does not have a command of the English language. The reality is that while many teacher education programs, both traditional and alternative, do not systemically prepare new recruits to teach effectively, some exemplary programs do.

Researchers are beginning to find that specific types of preservice preparation, with *extensive clinical training*, are key predictors of teaching effectiveness. For example, a 2008 examination of evidence on teacher education by the National Bureau of Economic Research found that teachers with more extensive clinical training (including a full-year internship) before they begin to teach actually produce higher student achievement gains (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2008). In a study of both traditional and alternative pathways into teaching, the researchers—using a large and sophisticated database—found that teacher education programs that produce higher student achieve-

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ment gains in their graduates' first year of teaching had the following characteristics (Boyd, Grossman, et al., 2008):

- Extensive and well-supervised student teaching, with strong “congruence” between the training experience and the first-year teaching assignment.
- Opportunities to engage in the actual practices involved in teaching.
- Opportunities to study and assess local school curricula.
- A capstone experience in which action research or data-focused portfolios are used to make summative judgments about the quality of the teacher candidate.

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### **Licensure Systems Must Require That Teachers Know Both Content and How to Teach It to Diverse Learners for 21st-Century Schools**

**The Evidence:** A growing body of research shows that teachers' knowledge of content and of teaching matters for student achievement. In a recent study, Clotfelter and colleagues (Clotfelter, Ladd, & Vigdor, 2007) found that high school teachers are more effective in raising student achievement scores if they are fully prepared when they entered, are licensed in the specific field they teach, have higher scores on teacher licensing tests, have taught for more than 2 years, have graduated from a more competitive college, and are National Board certified. The strongest negative effects on student achievement were associated with a teacher being licensed through an alternative route, having a license in an inappropriate field, or lacking teaching experience. But most important, it was the combined effects of each quality indicator that seemed to make the most difference. In fact, teachers with very strong credentials had a more powerful effect on student achievement than the combined effects of race and parent education or of lowering class sizes by an average of five students (Clotfelter, Ladd, & Vigdor).

In addition, in a well-designed study using a longitudinal database, David Monk (1994) found that a teacher's subject matter and methods course work in college had a positive influence on their students' achievement in math and science—but it was the *content-specific*

*pedagogical preparation* that seemed to be most important. Importantly, new research released in 2008 by the National Mathematics Advisory Panel found no evidence of a link between teachers' content degrees and later academic gains of the students they taught (U.S. Department of Education, 2008). However, the researchers were clear: Effective math teachers need more than a specific skill set imparted by typical math degrees conferred by universities; they must know how to “represent the meaning of problems to students in different ways” and know how to make “in-class adjustments” (Cavanagh, 2009). The translation for licensing is clear: Teachers need to demonstrate that they know how to teach key topics in key curricular domains, but they also need to show that they know to do so in varied context with diverse students.

At a time when more than 1,500 new books are published daily in the United States alone (Bowker, 2009), no one teacher can keep pace with the explosion of new content and the flow of new ideas. But students *can* gain the habits of mind, the learning skills, and the facility with digital tools necessary to process relevant information and determine what is useful and valid. Teachers, in learning how to reach every learner in an expanding educational marketplace, must develop more than content knowledge and generic pedagogical skills. They must learn how manage and broker content for students as they matriculate through a potentially bewildering world of technology-driven learning opportunities.

*Policy makers must develop incentives for universities, schools, and other educational agencies to cultivate teachers who can serve as both specialists and generalists and invest in new technological tools that can measure their potential as effective teachers and license them accordingly.*

### **Licensure Systems Must Hold All Teacher Candidates to High, 21st-Century Standards**

**The Evidence:** Most other professions—such as medicine, law, architecture, and now nursing—have created preparation and licensing systems to ensure that all new members to the field are ready to begin professional practice. Within these systems, preparation and licensure standards vary little from state to state, and national exams ensure quality control to a large extent (Berry, forthcoming).

Despite having accreditation processes in place, teacher education today remains a very uneven enterprise. While

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some programs have improved dramatically in recent years, others still draw on professors who have little recent or meaningful experience in public school teaching (Levine, 2006). Additionally, some preservice faculty do a poor job of ensuring that teacher candidates are skilled in what works best in *literacy* and *assessment strategies*—perhaps two of the most important skills of which every teacher should have mastery (Steiner & Rozen, 2004).

But this unevenness should come as no surprise to policy makers—who actually are responsible for poor preparation programs, whether alternative or traditional. This is because state government officials continue to reinforce a patchwork quilt of teacher licensing requirements. For example, while 43 states require teachers to pass written tests in their content area, only five require them to demonstrate their knowledge of subject-specific pedagogy (*Education Week*, 2010). And only 39 states require student teaching—ranging from 8 weeks in Wyoming to 18 weeks in Wisconsin and 20 weeks in Maryland—and only 15 states actually require other clinical training that would prepare a candidate for student teaching (*Education Week*). There are no state standards for who supervises student teachers, and no requirements that they themselves are effective teachers who know how to mentor recruits. Only 17 states require programs to be accountable for the classroom performance of their graduates, but then again, only 20 states have the capacity to match teacher and student records so the determination of where a program's graduates teach and how effective they become over time is even possible (*Education Week*).

According to the Education Trust (Brennan, 1999), most content-area teacher tests are generally viewed as too easy or irrelevant. Granted, each state uses formal procedures (including analyzing items) to determine what is a passing score to enter teaching. These procedures include the use of experts with knowledge of the minimum requirements for success in the relevant teaching roles. But cut scores can vary widely. For example, both Arkansas and Oregon use the Praxis II Mathematics: Content Knowledge exam for the licensure of prospective secondary school math teachers. Oregon has the highest cut score in the country, 147, while

Arkansas has the lowest cut score in the country, 116 (U.S. Department of Education, 2005). In many states, basic literacy or general-knowledge tests are used to assess whether elementary school teachers have the subject matter expertise to teach math and science (Education Trust, 1999). But to make matters more challenging, state policy makers often *lower* cut scores on these tests in the face of teacher shortages (Education Trust).

However, increasing the cut scores on current teacher licensing tests is not the answer to the problems that policy makers face. For example, Dan Goldhaber (2007) found that raising the cut score for the licensing test in North Carolina to the level used in Connecticut would eliminate a number of teachers who actually have shown that they can produce higher student achievement, as measured by the state's standardized tests.

Policy makers need to recognize that many of the current state licensure tests that are quite inexpensive (ranging from \$80 to \$110) are not designed to provide much evidence about whether a teacher can teach effectively. In fact, a report from the National Research Council (Mitchell, Robinson, Plake, & Knowles, 2001) warned policy makers that most teacher licensing tests “provide some useful information,” but that they are only “designed to assess competence in a narrow set of skills and to make a crude split between prospective teachers who are unqualified and those who are minimally qualified.”

Unfortunately, the current slate of licensure assessments, designed decades ago, are not befitting of 21st-century teaching and teachers. They do not assess a continuum of performance and provide too little feedback to candidates and to employers. They do not draw on new technologies and do not focus on the pedagogical skills needed to teach diverse students. For well over a decade, the Council of Chief State School Officers, through a 15-state consortium,\* has been developing a Test of Teaching Knowledge to

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\* The consortium, The Interstate New Teacher Assessment and Support Consortium (INTASC), was established in the late 1980s and has developed model “core” standards for beginning teachers, validated performance assessments, and initiated the Test of Teaching Knowledge as well as issued policy recommendations for how to move the field forward.

assess a beginning teacher's professional knowledge in areas such as theories of teaching and learning; cognitive, social, and physical development; diagnostic and evaluative assessments; language acquisition; and the role of student background in the learning process.

Progress has been made, but more work must be done to determine costs, how states and candidates can pay for these more expensive assessments (approximately \$500), and how states will score them. Perhaps more important is determining how these much-needed performance assessments will fit into the current policy framework, where value-added methods are expected to serve as a key metric in judging teacher impact on student gains on 20th-century standardized tests. Teachers of tomorrow need to possess skills in technology literacy and teaching second-language learners as well as expertise in collaborative teaching (in both brick and mortar and virtual settings) and a deep understanding of other nations and cultures (Council of Chief State School Officers, 2008). These 21st-century skills and knowledge must be measured by new assessments.

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### **Licensure Systems Must Hold All University-Based and Alternative Preparation Programs to the Same High Standards**

**The Evidence:** Some recent studies have revealed that alternative preparation programs—designed mostly for midcareer switchers—attract much-needed nontraditional teachers into teaching (Sawchuk, 2009). However, not all of the programs are of high quality—and many actual *lower* standards for entry into teaching (Walsh & Jacobs, 2007).

For example, the recent *Education Week* “Quality Counts” report (2010) surfaced some stunning numbers. Eighteen states do not require alternative certification recruits to pass a basic skills tests before entering teaching, and 15 do not even require tests in their subject matter. Thirty-five do not require alternative certification candidates to pass written tests in subject-specific pedagogy. *None requires clinical experience.*

Granted, some researchers have concluded that new recruits who graduate from traditional university-based teacher education programs and those who enter teaching

through alternative-route programs differ very little in terms of how much their students learn (Constantine et al., 2008). However, a closer look at these studies showed that alternatively trained teachers who had very limited pedagogical course work before they began to teach actually *lowered* their students' achievement scores over the course of the academic year (Corcoran & Jennings, 2009).

To be sure, researchers have shown that the negative effects of alternative certification recruits are reduced when they complete their pedagogical training, fulfill their licensure requirements, and gain teaching experience (Kane, Rockoff, & Staiger, 2006). But by that time, many students have been systematically undereducated by ill-prepared teachers, who have much higher attrition rates.

For example, a 2006 study (Boyd, Grossman, et al.) of more than 3,700 new recruits who entered New York City schools found that students of more traditionally prepared teachers outperformed their peers taught by educators who entered through alternative certification routes such as Teach for America and the New York Teaching Fellows program. The investigation (which focused on reading and language arts in grades 4-8 and on mathematics in grades 4-5) discovered that the alternative certification recruits became more effective over time—and after they completed their pedagogical preparation on the job. However, they were also more likely to leave teaching sooner—50% for alternative and 37% for traditional recruits (Boyd, Grossman, et al., 2006). This latter finding suggests that *some* recruits from alternative pathways, if they stay in teaching, may perform as well as or even better than their traditional counterparts—but only *after* they complete teacher education requirements and become fully licensed.

Granted, not all traditionally prepared and licensed recruits are fully prepared to teach. In fact, researchers have suggested that there is more variation in teacher effectiveness *within* different certification categories than *between* them (Boyd, Goldhaber, et al., 2007). However, by not setting a high bar for all recruits, policy makers exacerbate the nation's teaching effectiveness problems by permitting school districts to hire almost anyone to fill

a classroom vacancy. No other profession allows anyone to practice without serious preparation and formal certification that they are safe to practice. Lesser-prepared professionals can work, but not *independently* until they have passed muster on a tightly defined set of performance metrics.

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meet, and they should insist that school districts allow only proven teachers to teach independently.

### **Licensure Systems Must Require That Teachers Pass a Performance Assessment, Demonstrating That They Know How to Teach Before Serving as the Teacher of Record**

**The Evidence:** Researchers have shown how performance assessments can serve as powerful tools for determining instructional quality and effective teaching. These assessments require prospective teachers to demonstrate their deep understanding of content and how to teach it, as well as knowledge of the context in which students learn. For example, the National Research Council recently concluded that teachers certified by the National Board for Professional Teaching Standards are more likely to raise student achievement than others who have not achieved National Board Certification (Hakel, Koenig, & Elliott, 2008). Most research evidence shows that teachers who do well on this rigorous performance assessment help students learn more (Berry, 2007).

In addition, evidence from Connecticut suggests that using a performance-based assessment system for new teachers makes a difference for K-12 student learning. Beginning in the late 1980s, the Beginning Educator Support and Training (BEST) system required beginning teachers in their second year of teaching to submit a content-specific teaching portfolio that included documentation such as teacher lesson plans, videotaped segments of teaching, student work samples, and reflective commentaries on their teaching and learning. In the past, most recruits passed muster on the BEST assessments by the end of their third year of teaching. And while BEST provisions have been changed, a recent study showed that the portfolio scores successfully predict teachers' success in enhancing their students' achievement in literacy (Wilson & Hallam, 2006).

Building on the 20-year history of BEST, educators working on the Performance Assessment for California Teachers (PACT) are now developing a nationwide approach to evaluating new teaching recruits. PACT is a multiple-measure assessment that documents teaching and learning (including a focus on second-language learners). Researchers have documented that PACT is a valid measure of individual teacher competence for the purpose of licensure and is a

powerful tool for teacher learning and program improvement (Pechone & Chung, 2006).

Some policy analysts suggest that teachers should be licensed only after they show evidence that they help students learn, based on standardized achievement scores (Chait & McLaughlin, 2009). However, researchers have shown that using value-added PK-12 achievement scores to measure teaching effectiveness requires at least 3 years of test data to generate reliable estimates of teacher effects on student learning (Braun, 2005; McCaffrey, Lockwood, Mariano, & Setodji, 2005). In addition, other researchers have found that it is “difficult to separate the effects of teachers from other inputs, particularly those based on contextual factors at the school or classroom level, that the estimated teacher effects are not very stable over time” (Ladd, 2009). Still other researchers (Kupermintz, 2003) have found that many value-added models do not account for the fact that less effective teachers in schools or districts who teach with other less effective colleagues may actually generate more favorable ratings than they would in systems with stronger teachers. These psychometric realities do not mean that data from standardized achievement tests should not be used at all when measuring teacher effectiveness, but they do mean that policy makers need to be especially careful in how they apply these tools.

The state of Louisiana has been at the forefront using value-added data in assessing

teacher education—both traditional and alternative models. Over the last 5 years, higher education leaders have developed a Value-Added Teacher Preparation Model that can estimate the impact that different preparation programs have on student achievement—and have found that some teacher education institutions are more likely to recruit and develop teachers who are more effective (Noell, Porter, Patt, & Dahir, 2008). However, researchers have found that there is often more variation *within* universities and nonprofits that prepare teachers than *between* them. As a result, several policy lessons have surfaced. First, the licensing system should include measures of student learning *and* consider how teachers adapt their instruction based on data and other evidence. Both standardized tests and performance assessments should be used to determine teacher effectiveness over time, and to identify programs (traditional and nontraditional) that are successful in producing more effective teachers. Additional data need to be collected on the

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context under which new recruits teach—as working conditions (e.g., access to mentors) may serve as a mediating variable in determining the effects of preservice preparation on student achievement. Also, policy makers will still need to make even more substantial investments in new data systems that can link teacher and student records from both universities and school districts in order to assemble reliable and valid data.

Through the American Recovery and Reinvestment Act of 2009 (ARRA) and the \$4.3 billion Race to the Top fund, the federal government is advancing efforts to establish prekindergarten-to-college and -career data systems that track progress and improve teacher effectiveness. In addition, the Bill and Melinda Gates Foundation (2009) recently launched a major \$45 million research and development initiative to design multiple ways of measuring teaching effectiveness—methods that would be fair, informative, reliable, and agreeable to both teachers and researchers. The Foundation’s research methods are using value-added student achievement data as well as classroom observations (using peer review), careful analyses of videotaped teaching, evidence of student work and engagement, and indicators of instructional support (e.g., working conditions).

These new investments, in concert with the new PACT developments, can be leveraged to make major shifts in how evidence is assembled on prospective teachers and to forge the development of a nationally accessible teaching performance assessment. Such performance assessments will allow states, school districts, and teacher education programs (traditional and alternative) to define and measure a common set of essential teaching skills that promote a valid and robust vision of teacher effectiveness. They can also capture key elements of the conditions under which new recruits teach. If 70% of teacher candidates can’t pass the performance assessment, the preparation program should not be accredited, and if it does not improve over time, it should be closed down.

*Policy makers should work with administrators, teachers, and teacher educators to set clear standards for all recruits to meet, and they should use a nationally accessible teaching performance assessment to determine who is ready to teach and under what conditions.*

## Teacher Licensure Systems for Tomorrow

Current licensing systems measure whether teachers are minimally qualified to teach in late-20th-century schools—not ones filled with second-language learners and students with increasing technological savvy. In today’s “flattening world,” students must know more than the three “Rs” of reading, writing, and arithmetic now tested by outmoded standardized tests. In the emerging workplace, most students—not just an elite few—must be able to find, synthesize, and evaluate information from a wide variety of subjects and sources. As our interconnected world gets smaller, our schools must help students understand and work effectively with culturally diverse people across local, state, and international boundaries.

Increasingly, students and families are seeking opportunities for anytime/anywhere learning. Teachers must be able to connect with students in the educational marketplace, helping them to develop financial, economic, business, and entrepreneurial literacy as well as to problem-solve and collaborate using multimedia and technology skills. New research calls for teachers who can design standards-based classroom assessments; assess student work in far more reliable, valid, and consistent ways; detect student learning differences; and adapt their lessons to those differences. Teachers must be able to use new technologies to assemble and analyze student data and support students in managing their own learning. And they must do all of this in collaboration with their colleagues and therefore require teacher leadership skills. Teachers must also be able to work even more effectively with parents and families as well as with the community organizations and afterschool programs that serve students outside the traditional school day and year.

Licensing systems of the 21st century must reflect contemporary demands placed on schools and the professionals who teach in them, and they must help policy makers and educators know which teachers are ready to teach and lead. New technologies will make it easier to assemble the multiple measures needed to make high-stakes decisions about who becomes licensed and what specific role they should play in the increasingly complex world of public school teaching. Today, policy makers debate teacher licensing

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decisions that are rooted in outmoded conceptions of teaching and learning—and not the needs of the students and the teachers who will serve them tomorrow.

The late Ted Sizer, one of our nation’s most well-respected and accomplished education reformers, once

said, “To change anything [in education], you have to change just about everything.” This wisdom is undoubtedly true of efforts to strengthen state teacher licensure standards and systems in ways that will advance teaching effectiveness.

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## About AACTE

The American Association of Colleges for Teacher Education (AACTE) is a national alliance of educator preparation programs dedicated to the highest quality professional development of teachers and school leaders in order to enhance PK-12 student learning. The 800 institutions holding AACTE membership represent public and private colleges and universities in every state, the District of Columbia, the Virgin Islands, Puerto Rico, and Guam. AACTE's reach and influence fuel its mission of serving learners by providing all school personnel with superior training and continuing education.

## About the NEA

The National Education Association (NEA) is the nation's largest professional organization, representing 3.2 million elementary and secondary teachers, higher education faculty, education support professionals, school administrators, retired educators, and students preparing to become teachers.

## About the Author

**Barnett Berry** is president and CEO of the Center for Teaching Quality, Inc., founded in 1999 with the aim to close the student achievement gap by closing the teaching quality gap. A former high school teacher, Berry leads a research-based advocacy organization dedicated to creating a 21st-century teaching profession. In 2003, he created the Teacher Leaders Network, a dynamic virtual community designed to elevate the voices of expert teachers on matters of education policy that impact their profession and the students they serve. Berry also has worked at the RAND Corporation and with the South Carolina State Department of Education, and he directed an education policy center while he was a professor at the University of South Carolina. He has authored numerous academic reports and publications and many articles for the popular education press. He frequently serves in an advisory capacity to organizations committed to teaching quality, equity, and social justice in America's schools.



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