

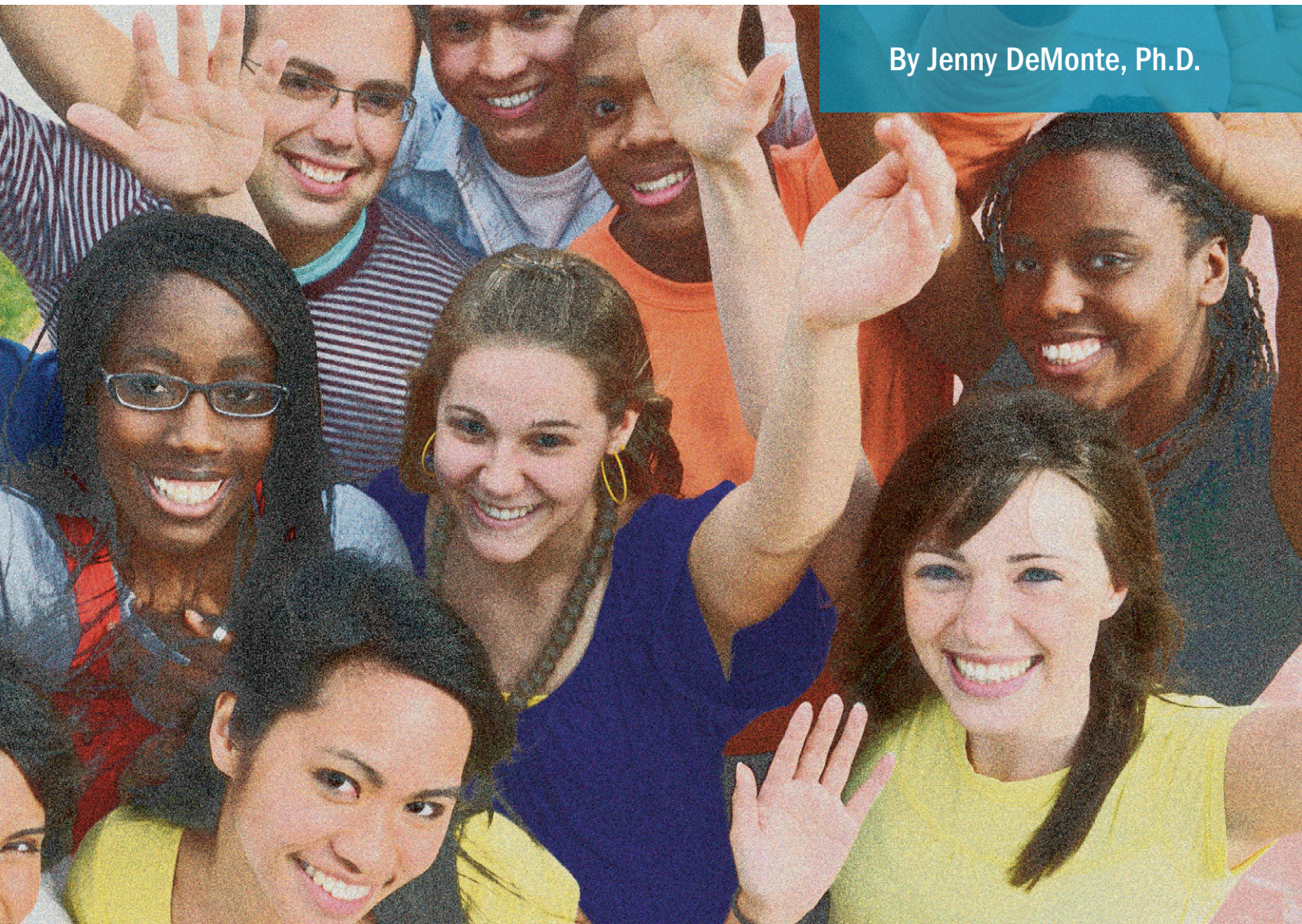
EDUCATION POLICY Center

at American Institutes for Research ■

A MILLION NEW TEACHERS ARE COMING

Will They Be Ready to Teach?

By Jenny DeMonte, Ph.D.



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ABOUT THE AUTHOR

Jenny DeMonte, Ph.D., is a senior technical assistance consultant specializing in teacher preparation and licensure who has worked on research and policy issues related to teacher quality and school improvement for more than two decades—first as a journalist and now as a researcher.

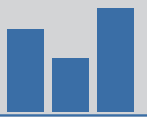
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Will They Be Ready to Teach?



THE ISSUE

Research shows that the most powerful, in-school influence on learning is the quality of instruction that teachers bring to their students. In the next decade, more than 1.5 million new teachers will be hired for our schools—and that’s a conservative estimate. If they are poorly prepared, this influx of new teachers could block efforts to solve our nation’s education problems and guarantee that the next generation of students will not receive the high-quality education they deserve. Unfortunately, teacher preparation programs may not be up to the task of delivering the teacher workforce we need, and critics have identified lax selection of teacher candidates, coursework disconnected from classroom practice, and weak clinical opportunities as indications that we are inadequately preparing teachers.



THE RESEARCH

For more than 30 years, deans of schools of education, researchers, and teachers have criticized the way we prepare our elementary and secondary school teachers. Recent research shows that there are differences in the effectiveness of the graduates of different teacher preparation programs. Although we do not yet have conclusive evidence, research is beginning to uncover some of the characteristics of successful programs that may explain the effectiveness of their graduates. In addition, characteristics of the candidates themselves also seem to contribute to better teaching from our novice teachers.



THE OPTIONS

It’s time to take a start-to-finish look at teacher preparation. Start by being smarter about how we choose candidates for teaching. Then work for consensus on common knowledge and competencies that all new teachers should be expected to master. Reinvent student teaching by demanding properly prepared mentor teachers, providing more hands-on experience, and being open to new forms, such as the medical model of “hospital rounds,” to offer more varied experiences to teacher candidates. Finally, make teacher certification or licensure matter by requiring rigorous assessments that show mastery of academic content and teaching skills through both written and hands-on evaluations.



THE ISSUE

Successfully Preparing the Next Generation of Teachers

The Importance of Being Ready on “Day 1”

To understand the importance of teacher preparation, it's useful to look at where new teachers are likely to get their first jobs. Most often, new teachers start their careers in classrooms with students from low-income households and students of color (Behrstock & Clifford, 2010). Research shows that the most powerful, in-school influence on learning is the quality of instruction that teachers bring to students (Chetty, Friedman, & Rockoff, 2014; Rivkin, Hanushek, & Kain, 2005; Rockoff, 2004), so having well-prepared new teachers who can competently deliver instruction is critical for the most disadvantaged students, who are more likely to have a new recruit leading their classrooms. If one of our national goals is to close the achievement gaps between disadvantaged students and others, then ensuring that new teachers are prepared for the job is essential.

Are the nation's teacher preparation organizations up to the task? That's hard to say.

Critics have called for reform and reinvention of teacher preparation for decades. Thirty

years ago, a group of deans of schools of education soundly criticized teacher preparation (see the box below). Fifteen years ago, a trio of teacher educators reviewed the research on teacher preparation, noting that there were disagreements about what it takes to prepare teachers (Wilson, Floden, & Ferrini-Mundy, 2001) and recommended directions for studies that would provide evidence for program improvement. About 10 years ago, the former president of a prominent school of education likened the field of teacher preparation to the Wild West—disordered and unruly—and said that the field had to fundamentally change to adequately prepare teachers (Levine, 2006).

“Teacher education long has been intellectually weak; this further eroded the prestige of an already poorly esteemed profession, and it encouraged many inadequately prepared people to enter teaching.”

(The Holmes Group, 1986)

ED SCHOOL DEANS CALLED FOR REFORMS 30 YEARS AGO

In the 1980s, a group of 100 deans of schools of education formed The Holmes Group, with the goal of improving and reforming teacher education (The Holmes Group, 1986). The deans wrote that teacher preparation lacked academic rigor and was disconnected from the actual work of teaching students.

The report, titled *Tomorrow's Teachers*, named five goals for improving teacher training and reinforcing excellent professional learning in the workplace:

- ▶ Make the education of teachers intellectually sound.
- ▶ Recognize differences in knowledge, skill, and commitment among teachers.
- ▶ Create relevant and defensible standards of entry to the profession of teaching.
- ▶ Connect schools of education with schools.
- ▶ Make schools better places for practicing teachers to work and learn.

The report's central theme was that the work of teaching was actually a set of practices that teachers enact in classrooms. In contrast, most teacher preparation programs consisted of a series of courses in a college or university, followed by some amount of student teaching (Forzani, 2011).

Although the deans themselves identified failures in teacher education and recommended solutions long before the current group of critics echoed the same concerns, their recommendations never became established across traditional teacher preparation programs. A few schools of education in institutions of higher education (IHEs) changed some aspects of teacher preparation, but these changes were small. Perhaps the greatest barrier was the uncertainty and disagreement among the wide range of teacher educators about what constituted good teaching and what was the best way to prepare people to deliver good teaching to students—a problem that continues to plague teacher preparation today (Forzani, 2011).

These criticisms helped spark education outsiders to offer opinions and advocacy. *The New York Times* columnist Nicholas Kristof wrote that teacher education courses don't offer prospective teachers any special knowledge or skills (Kristof, 2006). In 2013 and 2014, the National Council on Teacher Quality (NCTQ), an education advocacy group, conducted a controversial review of teacher preparation organizations. The 2013 review stated that teacher preparation programs at colleges and universities “have become an industry of mediocrity” (NCTQ, 2013, p. 1). The next review included a pilot study of alternative preparation programs and concluded that “alternative certification is generally more broken than its traditional counterpart” (NCTQ, 2014, p. 2).

PATHWAYS INTO TEACHING

In this brief, we refer to preparation programs as either traditional or alternative, based generally on the definitions below. But this is not to imply that all traditional or all alternative programs are alike. They are not.

Traditional programs: About 80 percent of new teachers complete a traditional teacher preparation program. During the past century, more teachers have been prepared in traditional preparation programs at IHEs than through any other pathway into teaching. Traditional programs include undergraduate programs leading to a bachelor's degree and a teaching license, as well as master's degree programs that also lead to a teaching license. Both degree programs include coursework on subject matter and pedagogy, and both include clinical opportunities, usually called student teaching.

Alternative preparation programs: About 20 percent of new teachers come from alternative preparation programs. These programs provide a pathway into teaching for those who hold a bachelor's degree but do not have their teaching credential. Often these programs help people go directly into classroom teaching while taking teacher preparation courses at the same time. Sometimes the extra preparation is carried out inside a college or university. Teachers in these programs also receive coaching and feedback from program staff who observe their classroom teaching.

(U.S. Department of Education, 2013)

Regardless of whether the criticism is overblown or right on target, the United States needs to prepare teachers for the workforce. Teaching is the single largest occupation in the nation, employing more than 3.4 million, which is more than the number of practicing lawyers, physicians, commercial pilots, and architects combined. In the next decade, more than 1.5 million new teachers will be hired into schools and classrooms—and that's a conservative estimate (Pennington & Hanna, 2014). Some say that the number of new teachers entering the profession will be much higher—closer to 3 million (Hiler & Hatalsky, 2014). The power of their preparation to teach should be one of the most critical issues facing policymakers today (Kane & Staiger, 2008).

The good news is that there is agreement among many key stakeholders that it's time to confront the problems that plague teacher preparation. The U.S. Department of Education recently issued new regulations for Title II of the Higher Education Act that will require states to collect data from and about teacher preparation programs that go beyond what must be reported under the current regulations. The new regulations include collecting data on placement and retention of graduates in teaching, feedback from administrators

about the competence of graduates, and the effectiveness of graduates in increasing student achievement (Teacher Preparation Issues, 2014). These new reporting rules, which have not yet been enacted, will likely change the way preparation programs operate. In addition, some states, such as Kentucky and Massachusetts, have taken up the broad responsibility to regulate and approve teacher preparation and licensure in their states, using that power to require programs to improve.

These policy moves—on the state and federal levels—should be informed by a growing body of research about teacher preparation and its effects and by the best lessons from other professions about the preparation and certification of beginners. This report presents a broad view of the teacher preparation landscape, synthesizes the recent research on teacher preparation, and puts forth some ideas for strengthening the education of new teachers.

Vast Differences in Features of Preparation Programs

Before examining the research on teacher preparation and looking at how other professions prepare novices, it's worth spotlighting the enormous variance in these four elements of teacher preparation.

1. Selection

Some preparation programs advertise their easy requirements for entry. Texas Teachers, an alternative certification program, tells potential teachers on its website, "All you need is a four-year bachelor's degree in any major and a 2.5 GPA" (www.texasteachers.org). Conversely, another alternative pathway into teaching, Teach For America, selects just 12 percent of applicants into the program (Clark et al., 2013). Teach For America also asks its teaching corps to commit to just two years of classroom teaching, which is unlike almost every other traditional or alternative preparation program.

Traditional programs in IHEs usually accept undergraduates who enter as college juniors. If an institution is selective, then the prospective teacher will have met the higher selection requirements before freshman year. But if a university is not selective, it is likely its school of education is not selective either. The same generally holds true for graduate programs leading to a teaching certificate.

"Instead of our present sprawling and often scattered courses of study, we need to devise coherent programs that will support the advanced studies in pedagogy required for solid professional education."

(The Holmes Group, 1986)

2. Coursework

A number of alternative certification programs, such as TNTP and Teach For America, offer teacher candidates several weeks of training in the summer. Other programs, such as the postbaccalaureate alternative route to licensure at the University of Nevada, Las Vegas, require several semesters of coursework and do not lead to a degree.

There also are differences in coursework among universities and among programs within the same university. At one university, undergraduates preparing to teach elementary school take a course on curriculum and assessment, while at another university, candidates in a similar degree program do not take that course (Greenberg & Dugan, 2015). This review of required coursework indicated that within the same university, undergraduate students in elementary education are required to take five courses that are not required of teacher candidates in the master's degree program: children's literature, classroom management, special education, health, and math content.

3. Student Teaching/Clinical Preparation

Some nontraditional preparation programs, such as a clinical residency program, place a teacher candidate in a classroom with a mentor teacher for a year to learn teaching skills. Teach For America, on the other hand, includes just four weeks of student teaching in summer school as part of its five-week preparation program.

Traditional undergraduate programs often include two or more semesters during which teacher candidates observe classroom teaching, followed by a semester of student teaching when candidates take on the responsibilities of leading instruction. Graduate programs can have as long as a year of student teaching. Student teachers are supervised by a cooperating or mentor teacher. Some states have requirements for cooperating teachers, such as the amount of their teaching experience.

4. Certification/Licensure

States are responsible for choosing assessments for certification or licensure to teach and for setting the minimum score needed to pass the certification assessment. This means that although certification isn't technically the responsibility of a preparation program, it takes place prior to a candidate becoming a classroom teacher.

These assessments function as both a capstone event at the end of teacher education as well as a threshold that must be successfully crossed to enter teaching as a professional. They serve as a demonstration that a teacher candidate has been well prepared by a preparation program and as a marker that the candidate is capable of delivering competent teaching to a state's students.

Many states use the Praxis II series offered by the Educational Testing Service (ETS) as the assessment for licensure. There are about 100 different tests—some for specific subjects for secondary teachers, some for specialties such as special education, and some more general tests about teaching and learning across subjects. Other states, such as Michigan, use a unique assessment. State passing scores on Praxis assessments vary widely. For example, the passing score in Idaho and Alaska for the biology content knowledge exam is 139, while in Delaware and Rhode Island, it is 157.¹

A few states have begun to use assessments that are focused on professional practices that teachers must demonstrate in classrooms. One of these assessments, edTPA, is already used in New York and a few other states, and the Praxis Performance Assessment for Teachers (PPAT) is also available. These ask for a portfolio of lesson plans, student work, and video of the candidate teaching students.



THE RESEARCH

Learning From Research and From Other Professions

Research about interventions focusing on the four elements of teacher preparation is thin, but even within the limited research, there are some lessons to be found. In addition, other professions have faced similar problems as they have worked to improve the education of novices, and there are things policymakers and teacher educators can learn by looking at preparation in other fields.

1. Selection Into the Profession

By comparing the graduates of preparation programs that admit applicants with better grades or better standardized test scores with the graduates of less selective programs, it is possible to get some idea of how selection impacts the experience of candidates as they prepare for and enter teaching. Several studies have found that those admitted to the selective Teach For America achieve better student outcomes than other teachers (Clark et al., 2013; Glazerman et al., 2006; Henry et al., 2014).

Several teacher residency programs—in which candidates are placed in urban schools with a mentor teacher for an entire year while taking coursework or teaching nights and weekends—are as selective as Teach For America. Overall, the 22 programs that are part of Urban Teacher Residency United (UTRU) admit 11 percent of applicants, and, unlike Teach For America, the residency programs aim to prepare teachers to stay in the

¹ These scores come from a document published online by ETS, showing state passing scores on all Praxis II assessments. See https://www.ets.org/s/praxis/pdf/passing_scores.pdf.

profession. In 2013–14, 82 percent of teachers prepared at UTRU programs were still serving as classroom teachers after five years (UTRU, 2014) compared with Teach For America’s five-year retention rate of 28 percent (Donaldson & Johnson, 2011).

Another study found that graduates of the Boston Teacher Residency, part of UTRU, were less effective at increasing student achievement in mathematics in their first year than typical teachers, but by the fourth and fifth years, they were outperforming similar teachers in Boston Public Schools (Papay, West, Fullerton, & Kane, 2012).

Other professions handle selectivity into preparation programs in different ways. Medical schools have limited the number of openings for students, which allows schools to be competitive. Some law schools are very selective; others are not. It depends on the institution—it may be more difficult to get into an Ivy League professional school than a similar school in another institution. In many cases, selectivity into a profession comes at the licensure stage.

2. The Impact of Coursework in Preparation

Fifteen years ago, teacher education researchers pegged a lack of evidence about how much content knowledge and how many courses on pedagogy were needed as problems that should be addressed (Wilson et al., 2001). Since then, research findings have shown that teachers need to know content and know how to teach it (Goe & Stickler, 2008). It is fairly clear that graduates of some preparation programs are more capable than graduates of others (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009; Goldhaber, Krieg, & Theobald, 2013).

But studies looking more deeply at coursework came away with contradictory findings. One found that the amount or type of coursework had no effect on a new teacher’s ability to increase student achievement (Constantine et al., 2009). Another found that teachers who had more coursework on methods of teaching, or pedagogy, felt better prepared to teach and stayed longer in the profession, regardless of the selectivity of their program (Ronfeldt, Schwartz, & Jacob, 2014). In one study, the depth of teachers’ content knowledge was positively associated with student achievement in their second year of teaching but not the first. This suggests that as novices become more experienced, they are able to use more of what they know about the subject matter (Boyd et al., 2009). One study investigated the perceptions of teacher candidates and found that the link between coursework and clinical experiences contributed to a teacher candidate’s perception of coherence (Grossman, Ronfeldt, & Cohen, 2012).

Some professions require that candidates for professional licenses be prepared in institutions accredited by a national organization that determines whether the course of study is suitable. To get a medical license in most states (medicine, like teaching and

many other professions, is regulated by the states), an applicant must have successfully completed a course of study at a school accredited by the Liaison Committee on Medical Education and then take the licensure exam.² One of the roles of the accreditor is to ensure that a school is offering candidates essential coursework, such as anatomy in medicine or contracts in law.

Teacher education has a fairly new accreditor, the Council for the Accreditation of Educator Preparation (CAEP), formed in 2013 by the merger of two previous accreditors. CAEP's standards for accreditation include improving selectivity in teacher preparation, reporting on the ability of graduates to increase student achievement, and ensuring that a school of education has the capacity and resources to offer appropriate preparation programs. CAEP is so new that it has not had the chance to do full every-seven-years accreditations for teacher preparation institutions. Another twist on accreditation in teacher preparation is that, unlike many other professions, teacher preparation accreditation is voluntary in many states, although a few require it.

3. Clinical Preparation

The locations where teacher candidates do their student teaching and the characteristics of that clinical preparation may influence where they work, how prepared they feel, and how long they stay in teaching. Although the evidence about which features of student teaching matter most is still emerging, there is a growing body of research showing that learning how to teach in a supervised, clinical setting is important.

The setting where student teachers learn appears to have an impact on where they are hired (Goldhaber et al., 2013). If that setting is in the school district where a candidate will ultimately be employed, it may foster a strong relationship between the district and the new teacher. School administrators, teachers, and graduates of a teacher residency program in Denver, which was evaluated by American Institutes for Research, praised the residency for its rigor and depth of preparation (Hallberg & Green, 2015).

However, the setting is just one characteristic of the quality of clinical preparation and may not be the most important in some cases (Ronfeldt, 2012; Ronfeldt & Reininger, 2012). Among the characteristics of clinical preparation that matter is the ability of the cooperating or mentor teacher in the classroom in which student teachers learn (Grossman et al., 2012). A study of national data found that teachers who did more practice teaching felt more prepared to teach and stayed longer (Ronfeldt et al., 2014). The duration of clinical experiences was particularly important for teachers with minimal or no coursework on pedagogy. For teachers who had no student teaching, the amount of pedagogical coursework mattered more. This was true for teachers regardless of the selectivity of their program (Ronfeldt et al., 2014).

² See <http://www.op.nysed.gov/prof/med/medlic.htm>.

The interplay between clinical experiences and coursework and how teacher candidates use both when they enter teaching may be one of the strongest characteristics of preparation programs. First-year teachers whose preparation focused on the actual work of teaching were more effective at increasing student achievement; for example, graduates of programs that provided more oversight of student teaching and required a capstone project produced more effective new teachers (Boyd et al., 2009).

Other professions vary on the amount of clinical experience candidates receive. The medical model may be the most well known; on “rounds,” groups of medical students or residents follow an experienced physician and learn at the bedside about the diagnosis and treatment of injury and disease. Nursing schools have a similar structure, working in hospitals under the supervision of skilled professionals while learning. Pilots learn to fly by sitting beside a licensed pilot and also on simulators where their professional practice can be honed and improved. Some professional schools do not have a clinical component embedded in preparation—law, for example—where nationally only 25 percent of students participate in clinical experiences. But, recently, law schools have begun to include clinical preparation; at the University of Minnesota, more than half of law students take at least one clinical course.³

4. Certification as the End of Preparation and the Beginning of Professional Practice

The national passing rate on teacher licensure tests is more than 95 percent, according to the U.S. Department of Education (2013). Most states use the Praxis II series as a certification/licensure assessment. Research on the relationship between these scores and the effectiveness of teachers is not conclusive (Goe & Stickler, 2008). One study found a positive relationship between teachers’ scores on Praxis II and student achievement (Goldhaber, 2007).

A technical report by edTPA (2013) provides some information about its strength as a performance assessment. There is more data available about its precursor, the Performance Assessment for California Teachers (PACT) (Pecheone & Chung, 2007). There is other evidence that teachers’ ratings on PACT are related to their students’ achievement (Darling-Hammond, Newton, & Wei, 2013). EdTPA and PPAT, a similar assessment created by ETS, offer materials for teacher educators to help teacher candidates learn the skills to pass the assessment, but there is no hard evidence that offering these materials has an impact on teacher effectiveness.

³ See <http://www.law.umn.edu/prospective/clinics.html>.

Other professions rely on the rigor of their end-of-program or licensure exams as the mechanism to ensure that only well-prepared candidates enter the profession and as a way to provide trustworthy evidence to the community that a licensed professional has proven himself or herself responsible to practice. For example, stories of the difficulty of passing the bar exam are well known; just 64 percent of test-takers passed the bar exam in 2014.⁴ The architecture licensure exam requires a total of 33 hours to complete and is taken in sections.⁵ The pass rate on the sections ranges from 62 percent to 77 percent.⁶



THE OPTIONS

Taking a Start-to-Finish Look at Teacher Preparation

The findings from research—although insufficient—and the lessons from other professions offer some options for policymakers and teacher educators to improve teacher preparation. They also suggest opportunities for innovation to more tightly align the four elements of preparation with the actual work of classroom teaching.

1. **Get smart about selection.** Although there is evidence from research suggesting that programs with more rigorous selection criteria have graduates with different outcomes, the teaching profession may be too large to select its way into better professional practice. The highly selective Teach For America admits about 5,000 teachers each year (12 percent of applicants); the nation needs more than 150,000 teachers each year.

This doesn't mean that teacher preparation shouldn't be selective. For example, the standard for selection that is part of the new accreditation system from CAEP calls for preparation programs to show that the average grade point average of its new enrollees is 3.0 and will eventually require that the average performance of an admitted class on SAT or ACT scores to be in the top 33 percent.⁷

Beyond academic credentials, additional measures may be even more predictive of a candidate's ability to succeed in teaching. Angela Duckworth, a psychology professor at the University of Pennsylvania, won a John D. and Catherine T. MacArthur Foundation grant for her research on what she calls "grit," the ability to persist and focus on a particular endeavor even if it is difficult, takes time, and doesn't offer quick rewards. Duckworth and a colleague studied first-year teachers in a low-income school district and, through background data, assigned each

⁴ See <https://www.ncbex.org/publications/statistics/>.

⁵ See <http://www.lifeofanarchitect.com/taking-the-architectural-registration-exam/>.

⁶ See <http://www.ncarb.org/ARE/ARE-Pass-Rates/DivisionPR.aspx>.

⁷ See <http://caepnet.org/standards/standard-3>.

teacher a “grit” score. Their study found that teachers with higher grit scores were more likely to be retained in teaching and more likely to increase student achievement (Robertson-Kraft & Duckworth, 2014).

This measure of the ability to persist may be as important as academic achievement in predicting which candidates may be excellent teachers, and this is an area in which teacher preparation programs may be able to improve their candidate pools. In addition, it may be possible to teach the ability to persist to prospective teachers as part of their preparation or help them become “grittier” before they enter the teacher workforce.

2. **Define common knowledge and competencies for new teachers.** Currently, the coursework required to become a teacher varies from organization to organization. That makes teaching relatively unique among professions. Imagine a nursing school that didn’t ask students to take a course on anatomy or a law school that had only some students take a course on contracts. These professions and most others have come together to determine the basic curriculum that all future practitioners need to pass in order to have enough basic content knowledge to do the work.

Research suggests that there is an important relationship between the coursework and clinical preparation teachers receive. As teacher educators improve clinical experiences, they may want to attend to the related coursework. This is something that policymakers could do through the state-level approval process of teacher preparation programs. But it is also something that professional educators might take up. Every profession that has been able to raise the level of preparation of its new members has at some point gathered the best ideas of its members to design a rigorous, meaningful, and standardized curriculum for preparation. In medicine, this happened in the early 20th century after a report by Abraham Flexner (1910) cited the incoherence of medical training and lack of rigor. That report led the profession to strengthen and standardize training.

One important task that could be taken up by teacher educators is the work of building professional consensus about what novice teachers need to know and be able to do before they enter the classroom as practicing teachers. Then working from that consensus, education professionals could begin to build a curriculum for teacher education that leads to that knowledge and competency.

3. **Reinvent student teaching.** Perhaps the most compelling evidence from research is the importance of high-quality student teaching, also called clinical preparation (see the box below). It’s time to pay more attention to the characteristics of clinical preparation—from the length to the structure to the mentor teacher—because novice teachers have indicated that high-quality, hands-on experience is important.

Research suggests that teacher candidates feel prepared in proportion to the scope of their clinical preparation. Clinical opportunities are an essential part of preparation for professionals who serve clients as independent practitioners on Day 1, such as doctors, psychologists, nurses, and pilots. Because the responsibilities for regulating student teaching fall to each state, policymakers could increase the duration of student teaching required for all prospective teachers, regardless of program, and could require that mentor teachers are given professional development by preparation programs and then compensated for taking on the important work of preparing new teachers.

WHAT IS STUDENT TEACHING?

Depending on the program, student teaching may be called clinical preparation or practice teaching. In many traditional undergraduate programs, student teaching lasts one semester, following several semesters when prospective teachers observe in classrooms while still taking college courses. In graduate programs, prospective teachers may spend a semester, or a full year, student teaching. Alternative certification programs usually have much shorter clinical preparation, ranging from a few days to a semester. Some programs provide professional learning opportunities to K-12 teachers who act as host mentors for student teachers; others do not.

There are also some innovations in clinical preparation that could prove useful because they borrow ideas from other professions. Pairing a teacher candidate with a single mentor for semesters of observation and student teaching, which is common in traditional preparation programs, may not be the optimal way to allow candidates to see expert teachers in action. Instead, imagine “rounds,” borrowing from the medical model, which would allow teacher candidates to learn in the field from a number of mentor teachers in a variety of settings. Imagine Grand Rounds, when 50 teacher interns watch a video and critique the work or explain what they see. This model is already in place at the University of Michigan School of Education.

Another scenario would move teacher preparation into a K-12 school, with university faculty, teacher candidates, and practicing teachers all in the same building. The school would become the equivalent of a teaching hospital, and teacher candidates could meet to learn about pedagogy and then walk down the hall to observe and practice teaching moves under the supervision of classroom teachers and teacher educators. The iTeachAZ program at Arizona State University offers undergraduates the opportunity to spend their entire senior year student teaching in a real classroom and moves the college coursework into the school district.

An alternative preparation design offers a clinical residency model. In a typical residency, teacher interns spend several days a week in a classroom with mentor teachers who guide them as they learn teaching practices. When not teaching, interns attend classes in subject matter and pedagogy and get feedback from teacher educators who regularly observe them teaching.

4. **Make licensure matter.** Other professions require entrants to pass rigorous licensure tests that assess knowledge of content and professional practice. Medical students face demanding assessments of their knowledge of biochemistry and other content and must diagnose and prescribe treatment for “standardized patients” to demonstrate their competency in basic medical practices. Teaching could have this kind of demanding licensure, too. If it did, school districts could be certain that any newly hired teacher who had passed the assessment was capable of leading instruction. Parents would know that if their child is assigned to the new teacher’s class, the quality of instruction would be up to acceptable professional standards.

Current assessments for licensure are known for being undemanding. And many states have “licensure bands” that span many grades, so a teacher who did all of her clinical work in a sixth-grade classroom may end up teaching kindergarten in her first job. Eighteen states offer elementary teacher certification for kindergarten through sixth grade, four states certify teachers prekindergarten through sixth grade, and 14 states certify elementary educators for kindergarten through eighth grade or higher.

Instead of trying to reconfigure current tests, states could use one of the newer, more practice-focused assessments, such as edTPA or PPAT. Think of these as teacher licensure 2.0. Although they include tests of content knowledge, they go beyond that and ask candidates to submit videos of student teaching and a portfolio of lesson plans, student work, and other materials more closely aligned with the practice of teaching. Meanwhile, ETS and TeachingWorks are testing another assessment called the National Observational Teaching Exam (NOTE), which asks each candidate to teach a lesson in real time, whether alone in front of a video camera or in a classroom of virtual students through a live online interface.⁸ NOTE mimics the professional practice assessment that is part of medical licensure and requires candidates to demonstrate proficiency in a simulated, on-the-spot setting (Sawchuk, 2014). Although NOTE is not scheduled to be ready until spring 2016, the other assessments are available. State policymakers have the authority to substitute these for current licensure assessments.

⁸ TeachLivE, created at the University of Central Florida, uses student avatars in an interface that allows teacher candidates to perform teaching practices and real time (<http://teachlive.org/>).

Preparing new teachers to be capable on Day 1 is an obvious way to deliver better teaching to all students. State policymakers have the opportunity to review the content of teacher preparation programs and the requirements for licensure and make specific recommendations based on research of what works. Colleges, universities, and other organizations that prepare teachers must make sure that their teacher education faculty and staff deliver the kind of preparation that leads new teachers to be capable and competent on Day 1.

Researchers can support these efforts by conducting studies that provide useful evidence that can be applied to practice. Isolating features of preparation to determine whether they influence the effectiveness of graduates can help teacher educators and policymakers better understand what works.

For all of those involved in the work of helping students learn, teacher preparation is a central issue that must be addressed. Teacher preparation—from college courses to student teaching to alternative programs—needs to help beginning teachers learn to teach. Anything less will fail these new professionals.

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1000 Thomas Jefferson Street NW
Washington, DC 20007-3835
800.356.2735 | 202.403.5000

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