

re:VISION



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200,000
STUDENTS
*graduate from teacher
preparation programs
each year, joining
the **3.6 MILLION**
PUBLIC
SCHOOL
TEACHERS
in **90,000**
ELEMENTARY
& SECONDARY
SCHOOLS.*



TEACHER PREPARATION PROGRAMS: A CRITICAL VEHICLE TO DRIVE STUDENT ACHIEVEMENT

by Ashley Perry, Policy Analyst



s the economy grows more complex, global, and competitive, students are expected to achieve at higher levels, and they need effective teachers in the classroom to reach these goals. States that wish to remain economically competitive must address head-on the quality of the education workforce.¹

Teacher quality is the most influential school-based factor in improving student learning. The most effective teachers produce, on average, one-and-a-half grade levels of growth each year, a level sufficient to close the achievement gap for low-income students.² Given this influence, it is essential for state education leaders to ensure instructors are recruited, trained, and retained in a manner that gives all students access to the most effective teachers possible.

This issue of *re:VISION* focuses on the need for high-quality training for teachers—training that will empower them to develop and deliver instruction effectively. Teacher training is a large industry characterized by great variation. Approximately 200,000 students graduate from teacher preparation programs each year, joining the 3.6 million public school teachers in 90,000 elementary and secondary schools.³ Teachers enter the profession through traditional or al-

| *Continues on next page.* |

| *Teacher Preparation Programs: cont'd* |

ternative programs, and the program characteristics within these designations vary significantly.

To improve teacher quality, policymakers will need to address the preparation of teacher candidates. Yet the research base in this area is quite weak, offering no particular formula for an effective teacher training program. Moreover, 46 states and the District of Columbia have adopted the Common Core State Standards (CCSS) and must consider whether teacher education programs are aligned to these standards. States now have the opportunity to work together to accomplish that task, and state leaders can learn from a variety of current efforts to overhaul teacher preparation programs in both traditional and alternative settings. In taking steps to evaluate and improve teacher preparation, state education leaders will need to consider a number of factors in building effective teacher training programs.

States that have adopted the CCSS:



This issue of *re:VISION* describes current efforts in teacher preparation, including challenges facing preparation programs and the teaching profession. Upon reviewing the available research, it concludes with several actions state leaders can take to foster improvement in teacher training programs:

- RAISE ADMISSIONS REQUIREMENTS TO ATTRACT HIGH-QUALITY CANDIDATES
- REQUIRE PROGRAMS TO BE ALIGNED WITH EXPECTATIONS FOR STUDENT LEARNING
- REQUIRE MEANINGFUL FIELD EXPERIENCES FOR PROSPECTIVE TEACHERS
- CREATE AN EVALUATION AND ACCOUNTABILITY SYSTEM TO INFORM CONTINUOUS PROGRAM IMPROVEMENT

By taking action now, state leaders can ensure that teacher preparation programs produce professionals who are equipped to drive student achievement within the context of today's schools.

CURRENT CONTEXT OF TEACHER PREPARATION

States have the primary responsibility to form teacher policies. These policies set standards for educators, as well as requirements for certification. States ensure compliance with these conditions through the approval of programs, as well as the authorization, funding, and supervision of newer pathways for obtaining a license to teach, often labeled “alternative” programs.

In establishing guidelines for teacher preparation, many states model those created by national organizations, including the National Council for Accreditation of Teacher Education (NCATE) or the Teacher Education Accreditation Council. Though such models form the basis of state requirements, policymakers often customize requirements to reflect priorities within the state. These resulting requirements set important criteria for teacher preparation programs, including recruitment and selection, type and duration of fieldwork, and length of required training. State policy may also determine the minimum credit hours for coursework or the maximum number of courses of a particular type.⁴

In most states, there are many pathways by which teachers can obtain a license to teach, though the options available look different from state to state. “Traditional” programs typi-

cally include those housed in a higher education setting and result in a bachelor's or master's degree. The label “alternative” has become a catch-all classification in teacher preparation, encompassing many routes by which a prospective teacher can achieve licensure, often without needing to return to a higher education institution for traditional education coursework or an education degree.

State policymakers set rules and guidelines for program content and operation of traditional, university-based teacher preparation programs, often in great detail. The established requirements for such programs vary significantly from state to state. Traditional programs train between 70 and 80 percent of teacher candidates—an overwhelming majority of teachers—and yet, half of education professors surveyed by the Fordham Institute report that these programs fail to prepare teachers for the demands of today's classrooms.⁵

The approximately 130 alternative teacher preparation programs across the country were designed for varying purposes, such as addressing teacher shortages, appealing to those with degrees in special areas such as science and math, those wishing to make a mid-career change, or as a way to challenge the status quo. Alternative programs can be housed

TRADITIONAL PROGRAMS TRAIN BETWEEN 70 AND 80 PERCENT OF TEACHER CANDIDATES — AN OVERWHELMING MAJORITY OF TEACHERS — AND YET, HALF OF EDUCATION PROFESSORS SURVEYED BY THE FORDHAM INSTITUTE REPORT THAT THESE PROGRAMS FAIL TO PREPARE TEACHERS FOR THE DEMANDS OF TODAY'S CLASSROOMS.

within higher education settings or in other locations. They are meant to offer substantially different programs than colleges of education by providing innovative and flexible routes for teacher candidates. However, researchers and education policymakers question whether states' alternative routes to licensure reflect a genuine alternative to the traditional teacher preparation programs.⁶ For instance, alternative programs located within schools of education are often repackaged traditional preparation programs with adjusted timelines or courses offered at night, online, or on weekends.⁷

Many policymakers and state leaders are surprised to learn the distinction between traditional and alternative programs is not always clear. There is a great deal of diversity along almost every dimension within the traditional and alternative designations, and there is also a great deal of overlap between the two types of programs.

WHAT IS KNOWN ABOUT THE EFFECTIVENESS OF TEACHER PREPARATION?

The current mechanisms for accountability and quality control in teacher preparation programs are a patchwork of mandatory and voluntary actions. States and professional accrediting organizations directly influence the operations and content of teacher preparation programs by establishing standards, accreditation requirements, and program approval processes. State policies for teacher certification also influence preparation programs, which have a goal of ensuring their graduates attain certification and are prepared to pass the required tests. State leaders can use program approval, accreditation, and certification as critical policy levers to hold teacher preparation programs accountable for results. However, in most states, a coherent, outcomes-based accountability system for teacher preparation programs does not yet exist.⁸

One of the primary barriers to establishing an accountability system is poor information. Information about the structure and performance of alternative and traditional programs is not available due to inadequate systems to gather and analyze data. Much of the innovation in teacher preparation has not been well documented, and data have not been sufficiently collected to support conclusions about which programs yield more effective teachers. This paucity of data makes it difficult to form policies that ensure teachers are successfully recruited and trained.⁹ In an effort to improve data collection, the recent American Recovery and Reinvest-

ment Act of 2009 required states to collect evaluation data through the Teacher and Principal Evaluation Survey as a condition of receiving stimulus funds.

In order to shed more light on the state of teacher education programs and provide education policymakers with the information needed to make decisions, a number of organizations are conducting research and gathering relevant data. In December 2010, the National Research Council (NRC) concluded a three-year congressional study of teacher preparation programs, including an attempted analysis of the characteristics of teacher candidates, the instruction and experience currently offered, and the data that are needed to make valid and reliable conclusions about preparation programs. Although the NRC committee's work was hampered by a lack of data and the incredible diversity among teacher preparation programs, the committee was able to derive a few suggestions and examples states might want to consider as they set out to improve teacher training.

One current effort to examine traditional teacher preparation programs housed in higher education institutions is attracting significant attention. The National Council on Teacher Quality (NCTQ) partnered with *U.S. News and World Report* in January 2011 to begin a review of the

nation's approximately 1,400 education schools. This review will build on six years of NCTQ research, examining aspects of teacher training and evaluating the quality of education schools based on 17 specifications of what NCTQ deems to be the most important characteristics of training programs. Though this effort has attracted some opposition, primarily in response to the indicators used in the study, it is a landmark attempt to establish a measure by which teacher preparation programs are judged. Results from the review will be available in fall 2012.

A handful of studies have explored whether teachers prepared in traditional pathways are as effective as those trained in alternative pathways. Separate studies by the National Center for Education Evaluation and the NRC found little variation and no statistical significance in the difference in student outcomes.¹⁰ However, a 2005 study

of high school students in North Carolina concluded that teachers who were certified in their field, trained in a comprehensive teacher preparation program, had high scores on the teacher licensing exam, matriculated from a competitive college, and were national board certified produced higher levels of student achievement.¹¹

Although research on specific programs has not been sufficient to draw conclusions about teacher preparation, several studies have found that teachers become more successful with experience, regardless of their prior preparation. The largest gains in effectiveness occur during the first five years of teaching, with the most improvements occurring between the first and second year of teaching.¹² These findings suggest that teachers learn the most about honing and improving their effectiveness by applying their skills in a classroom setting.

CHALLENGES AND ISSUES FACING TEACHER PREPARATION PROGRAMS

In recent decades, a number of changes have presented challenges to the teaching profession and the programs that prepare educators for the classroom. These issues are important to keep in mind as state policymakers and higher education leaders look for ways to improve the effectiveness of teacher preparation programs.

Today, teachers are expected to ensure that every student is career- and college- ready upon graduation from high school. This commitment to equity has profound implications for the profession. When current disparities in student achievement are considered, the enormity of the task becomes evident. In 2009 and 2011, the National Center for Education Statistics found African-American and Hispanic students to be lagging behind their white peers by roughly two grade levels on the National Assessment for Education Progress's math and reading assessments in fourth and eighth grades.¹³ Research by Dr. William Schmidt of Michigan State University found discrepancies in student exposure to content-rich instruction, as some students were allowed access to rigorous classes, while others only had access to less rigorous classes that were unlikely to prepare them for career and postsecondary opportunities. To help address these discrepancies, 46 states and the District of Columbia recently adopted the CCSS as their new content

standards for higher and more rigorous student learning. Teachers must now be adequately prepared to diagnose learning gaps and develop customized instruction to meet individual student needs. Such skills are essential for teachers to successfully help students achieve the goals of these rigorous standards.

The increasingly diverse student population also requires teachers to be more skilled in meeting individual student needs. In recent decades, the numbers and distribution of students who are either immigrants or children of recent im-

migrants have grown significantly. These children have varying education backgrounds and language skills, presenting complicated challenges for educators. The Pew Hispanic Center, a project of the Pew Research Center, found that 23 percent of the population under 18 was Latino in 2010, up from 17 percent in 2000.¹⁴ This growth is especially pronounced in certain states. The majority of students in Texas and California are Latino, and in Arizona, the population of Latino students is greater than the population of white students. All teachers, regardless of specialty,

can expect to be responsible for the learning of students with a range of needs, including those with disabilities, language deficiencies, and diverse cultural and economic backgrounds. Yet teacher preparation programs that incorporate the



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knowledge and skills necessary to effectively teach high-need students are irregular, at best.¹⁵

Schools with large populations of minority and immigrant students, low-performing students, and high rates of poverty experience very high teacher attrition rates. The annual attrition of teachers is 16.8 percent nationwide, and in urban school districts the rate is closer to 20 percent. In addition, new teachers have a higher attrition rate than their more experienced colleagues, with 46 percent leaving the profession within five years. The high turnover rate is costly for states in terms of employee replacement costs and lower student achievement as students in these high-mobility settings are repeatedly taught by a rotation of inexperienced teachers. This situation hampers equitable learning opportunities within public schools and costs the nation an estimated \$7.3 billion a year.¹⁶

The profession has also seen a decline in talent among the pool of prospective teachers. The proportion of teachers scoring at the top of their high school class has dropped significantly over the last 40 years. In 1964, 20 percent of new teachers scored in the top 10 percent of their high school graduating class, while only one in 10 new teachers test at that level today.¹⁷ Indeed, most of the nation's prospective teachers graduated in the bottom third of their high school class.¹⁸ The selectivity of education schools has mirrored this change in recruitment talent. For example, in 2008, *US News and World Report* found that Penn State University's business school, which ranked 43rd, accepted less than 25 percent of applicants while the School of Education, which ranked in the top 10 in school administration, accepted 50 percent of applicants. Seventy-three percent of professors in education schools say more needs to be done to weed out less suitable applicants.¹⁹

WHAT IS KNOWN ABOUT THE EFFECTIVENESS OF TEACHER PREPARATION?



Although the research based on teacher training is rather weak, some researchers have attempted to offer prescriptions for what programs and pathways should look like.

*Drawing from recent studies by organizations such as the NRC and NCTQ, there are **five key elements** to consider in the development or evaluation of teacher preparation programs: **program purpose; requirements for subject-***

matter knowledge; requirements for professional knowledge; clinical and field

***experiences; and faculty qualifications.** States can contribute to the knowledge base by establishing evaluation systems that collect and analyze data about these elements of teacher preparation programs.*

ACHIEVING OUTCOMES THAT ARE ALIGNED WITH THE PROGRAM'S PURPOSE: Although all teacher training programs share the purpose of preparing teachers for the classroom, there is a great deal of variation in their specific missions. Policy-makers and education leaders need to review the demands of their state education workforce to inform planning and funding for teacher preparation. For example, the teacher training program at the Massachusetts Institute of Technology prepares mathematics and science teachers with a focus on challenging established norms within the profession, providing in-depth subject matter knowledge, and developing skills to confront unexpected challenges. Meanwhile, the Mississippi Teacher Corps, which is modeled after the Peace

Corps, aims to recruit teachers to high-need schools in the rural Mississippi Delta.

BUILDING SUBJECT-MATTER KNOWLEDGE: State policies and programs vary with regard to their requirements for subject-matter preparation. Some require prospective teachers to major in the subject they will teach, while others require teachers to take courses in a range of subjects that roughly correspond to those taught in public schools. In some programs housed in higher education institutions, faculty from education schools and disciplinary departments collaborate to prepare teachers and even co-teach content courses.

According to the NRC, very little research exists to calculate the influence of teachers' content knowledge on student learning. Of the research that does exist, much of it focuses heavily on mathematics and science. Given this absence of information, it is difficult to draw conclusions about subject-matter requirements or whether particular requirements correspond with teacher effectiveness.²⁰ However, common sense seems to dictate that if a teacher has deep content knowledge, the students will benefit from his or her expertise.

CLINICAL/FIELD EXPERIENCE: Researchers agree that high-quality practical experience is important in learning to teach. When done well, these experiences ensure teachers can apply the education program knowledge and skills they have acquired in the classroom. Like other parts of teacher preparation, the scope and duration of clinical and field experiences vary. Some programs place candidates in the classroom at the beginning of the program, while others require candidates to complete a capstone or a final project in the field.²¹

A study by NCTQ completed in July 2011 rated 134 student-teaching programs nationwide—about one-tenth of existing programs—based on the organization's own criteria for high-quality student teaching programs. The resulting report found that only seven percent were “model” and that seventy-five percent were weak in terms of five criteria: duration of teacher placement; role of the teacher preparation program in teacher placement; teaching experience of those serving as mentors; mentor's demonstrated capacity to have a positive impact on student learning; and the capacity of the mentor to provide meaningful feedback.²² Critics of the study question the NCTQ's rubrics and methodology.²³ Though definitive guidance regarding the format and timing of clinical experiences is not available, it is clear that this component of teacher preparation must include opportunities to apply knowledge, test new skills, and receive feedback.

New models for field experiences, such as the apprenticeship or “residency” model, have gained attention in recent years from policymakers and institutions of higher education. These residency programs are designed similarly to teaching hospitals in medical education. A report commissioned by NCATE called on education schools to make structured and supervised school-based experiences the primary component of teacher preparation, with content courses supplementing the fieldwork. The report emphasizes the teacher-residency model and highlights higher education-based programs that incorporate such an approach to teacher training.²⁴

CULTIVATING PROFESSIONAL KNOWLEDGE: Education scholars have identified professional knowledge that all teachers need, regardless of subject or grade-level. Drawing on professional and scholarly consensus, a report by the National Academy of Education concluded there is a body of research that should shape the preparation of every teacher. The study identified the core knowledge and skills that new teachers need in several domains.²⁵

Teacher preparation programs tend to differ with regards to how they incorporate and emphasize professional knowledge and training, as distinct from subject-matter knowledge. Professional preparation typically covers a range of study, including the history of education, educational psychology, formative and summative assessment, multiculturalism and diversity, theories of learning, special education, and classroom management. Alternative programs typically require less professional coursework, though there has not been a thorough inventory of these requirements.²⁶

FACULTY/STAFF QUALIFICATIONS: The NRC found that a wide range of professionals, including professors, doctoral students, and practicing and retired K-12 teachers, are serving as instructors in preparation programs, but did not find sufficient data to draw conclusions about the effectiveness of instructors from various backgrounds.

NCTQ 2011 Study Rating 134 Student-Teaching Programs

7% *model*

75% *weak*

THE RESULTING REPORT FOUND THAT ONLY SEVEN PERCENT WERE “MODEL” AND THAT SEVENTY-FIVE PERCENT WERE WEAK IN TERMS OF FIVE CRITERIA: DURATION OF TEACHER PLACEMENT; ROLE OF THE TEACHER PREPARATION PROGRAM IN TEACHER PLACEMENT; TEACHING EXPERIENCE OF THOSE SERVING AS MENTORS; MENTOR'S DEMONSTRATED CAPACITY TO HAVE A POSITIVE IMPACT ON STUDENT LEARNING; AND THE CAPACITY OF THE MENTOR TO PROVIDE MEANINGFUL FEEDBACK.

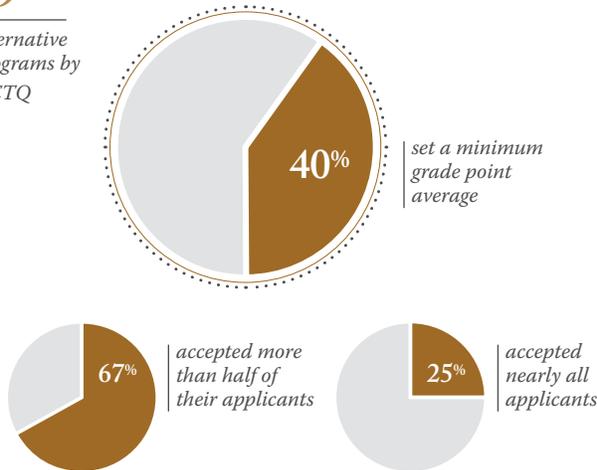
WHAT CAN STATE LEADERS DO TO IMPROVE TEACHER PREPARATION?

ADJUST ADMISSION REQUIREMENTS TO RECRUIT TOP-QUALITY TEACHER CANDIDATES.

Despite the importance of teacher education programs in improving teacher quality, only 15 states have established minimum admissions requirements for individuals seeking a degree in education.²⁷ Similarly, a study of 49 alternative programs by NCTQ President Kate Walsh and Vice President Sandi Jacobs found that only 40 percent of the programs set a minimum grade point average. Two-thirds of the programs accepted more than half of their applicants and one-quarter accepted nearly all applicants. Such high acceptance rates are in stark contrast to Teach For America, which accepts just one in six applicants and relies on an extensive selection process.²⁸ States might consider using their authority to introduce or strengthen minimum requirements for admission to both traditional and alternative teacher preparation programs.

49

alternative programs by NCTQ



REQUIRE MEANINGFUL FIELD EXPERIENCES. Clinical field experiences have a number of advantages because they create context for teachers to apply their training and allow school districts to share responsibility for teacher preparation. Clinically based approaches require the support and commitment of the stakeholders who need to be involved in the process.²⁹ Policymakers and leaders in teacher preparation programs should evaluate their current field experience models to ensure teacher candidates are allowed the opportunity to apply their skills in the classroom, and with sufficient supervision and feedback.

ENSURE THAT TEACHER PREPARATION PROGRAMS ARE ALIGNED WITH EXPECTATIONS FOR STUDENT LEARNING.

Data from the National Comprehensive Center for Teacher Quality find that 32 states require programs to align their curricula with K-12 content standards.³⁰ As states implement the CCSS, it is critical for education leaders to ensure that teacher education programs prepare educators to meet new instructional demands in mathematics and English Language Arts. In late 2010, Indiana became the first state to fully align its teacher preparation standards with the CCSS. The state involved K-12 and higher education representatives in detailing the subject-matter knowledge and skills required for teachers to be effective. The Interstate Teacher Assessment and Support Consortium Model Core Teaching Standards - released by the Council of Chief State School Officers in 2011 - are designed to be aligned with the CCSS and provide a valuable resource as education leaders align their own teacher preparation programs with these rigorous expectations for students.³¹

INCORPORATE EVALUATION AND IMPROVE ACCOUNTABILITY USING AN OUTCOMES BASIS.

Evaluation is an important component in creating and maintaining successful teacher preparation programs. States need to hold programs accountable for the performance of their graduates. Alabama and Louisiana base the approval of teacher preparation programs on the effectiveness of their graduates using recently graduated teachers' student achievement data.³² Similarly, Texas approves programs based on the average three-year performance of their graduates' students as well as results from surveys of school principals.³³

To implement accountability measures for teacher education programs, states must invest in data systems that link teachers with student achievement data and the teacher preparation programs they completed.³⁴ States may look to the American Association of Colleges for Teacher Education, which is now developing a performance-based assessment of teaching methods that may provide teacher preparation programs with a gauge of their graduates' effectiveness.³⁵ Additionally, the Obama Administration has recently proposed changes to federal reporting requirements for schools of education, placing a greater focus on outcome measures such as those emphasized by AACTE.³⁶

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