

# **THE CLINICAL PREPARATION OF TEACHERS**

## **A Policy Brief**

*From the  
American Association of Colleges for Teacher Education*

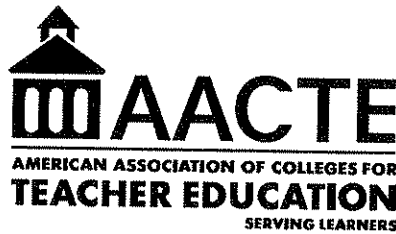
*For release at the briefing*

### **Teacher Preparation: Who Needs It?**

### **THE CLINICAL COMPONENT**

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# The Clinical Preparation of Teachers: A Policy Brief

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*American Association of Colleges for Teacher Education*

## Introduction

As the quality of teaching is now recognized as the most important factor in student learning, teacher preparation is rightfully receiving increased attention. Questions of keen interest are *What is the best way to prepare highly effective teachers?* and *What are the key features of such programs?* Multiple studies have shown the benefits of teacher preparation that is directly linked to practice.<sup>1</sup> Three critical features of such preparation are (1) tight integration among courses and between course work and clinical work in schools; (2) extensive and intensively supervised clinical work integrated with course work; and (3) close, proactive relationships with schools that serve diverse learners effectively and develop and model good teaching.<sup>2</sup>

This policy brief focuses on the clinical aspects of teacher preparation in each of these key features. These aspects include the typical processes of clinical work (observing, assessing, diagnosing, prescribing, and adjusting practice to reflect new knowledge), the location (in direct contact with clients), and the duration of the training (including an extended period of practice such as an internship and/or residency).<sup>3</sup>

The importance of clinical practice is often underestimated and misunderstood by lay audiences and even policy advocacy organizations.<sup>4</sup> The purpose of this brief is to clarify such misconceptions, to describe and define good clinical practice in teacher preparation and the research evidence behind it, and to make policy recommendations to promote widespread adoption of rigorous, clinically based preparation programs.

First, we discuss recent changes in the teacher preparation profession. Next, we offer evidence of the importance of strong clinical experience to successful teaching. We then describe the critical components of clinical preparation, and we profile several examples of promising clinically based preparation programs. Finally, we present AACTE's policy recommendations for states, the federal government, and teacher preparation providers.

## Teacher Preparation Has Changed

The concept of practical experience in teacher preparation goes back at least to the 19th century, when the normal school movement produced four core categories of study for teachers, one of which was *practice teaching*.<sup>5</sup> For the next 150 years, expectations of what teachers should know and be able to do changed very little, although preparation typically included a component labeled "observation and practice," "in-school practicum,"<sup>6</sup> "field experience," or, more commonly, "student teaching."

Teacher candidates generally completed course work on psychological principles, subject matter, and teaching methods before beginning student teaching—for about 8 weeks at the end of the program—with few connections to course content. School-based cooperating teachers were selected not necessarily on the basis of quality. Placements were idiosyncratic, with experiences ranging from primarily clerical work to solo teaching without assistance. Because

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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.

Sharon P. Robinson, President and Chief Executive Officer

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university- and school-based faculty did little joint planning or teaching, candidates learned theory in isolation from practice and had just a quick encounter with classroom practice divorced from theory. New teachers trained in this way, when entering their own classrooms, thus reverted largely to what they knew best—the way they themselves had been taught.<sup>7</sup>

A study of 15,500 education school alumni who graduated 10 to 15 years ago is revealing. Seventy-five percent reported having had only one semester or less of field experience, yet they characterized that experience as *“the most valuable aspect of my education program.”* The most common finding was a desire for more, longer, earlier, and better-integrated field work experiences.<sup>8</sup> A more recent study reports that 65% of nearly 2,300 potential mid- and second-career teachers surveyed said that real classroom experience is an important aspect of a teacher preparation program.<sup>9</sup> It recommends a system for midcareer changers that includes strong clinical experiences in schools that prepare candidates for the specific settings in which they will teach.<sup>10</sup>

**The 21st century has become a watershed in recognizing the importance of high-quality clinical programs in teacher preparation.** Teachers for a New Era (TNE), a large-scale, multiyear grant program of the Carnegie Corporation of New York launched in 2001, supported innovation in teacher education programs at selected colleges and universities. It was based on the premise that excellent teaching is a clinical skill and that exemplary teacher education provides for clinical education in a clinical setting.<sup>11</sup> One of its three essential principles was that “education should be understood as an academically taught ‘clinical practice profession,’ requiring close cooperation between colleges of education and actual practicing schools; master teachers as clinical faculty in the college of education; and residencies for beginning teachers during a two-year period of induction.” This was a different way of thinking about what had previously been considered field experiences and from traditional notions of student teaching.<sup>12</sup>

In any clinical practice profession, a knowledge base of historical, philosophical, sociological, and economic foundations is taught and learned in traditional academic settings. Clinical practice occurs principally with clients (which in teaching are pupils), in clinics (classrooms or laboratories), and it entails interaction among student teachers, teaching staff, administrators, families, and communities. TNE points out that clinical education is developmental and designed to teach clinicians not to act *upon* the client, but to assist the client’s growth and development. Good clinical practice keeps the client’s interests as a central focus at all times. TNE was the precursor to the now more prevalent conception of quality teacher preparation as school-embedded teacher learning.<sup>13</sup>

**Teaching is increasingly recognized as an academically taught “clinical practice profession,”** such as clinical psychology and medicine.<sup>14</sup> As we come to appreciate the nature of teaching as a complex practice that requires considerable knowledge, skill, and judgment, the term “student teaching”—meaning a short practice period at the end of academic course work—is fast becoming anachronistic. The lab school concept, the professional development school<sup>15</sup> movement (now entering its fourth decade), and the rapidly growing interest in yearlong teacher residencies—the precedent for recent revisions in the Higher Education Opportunity Act—are compelling indicators of this trend.

Residency programs in education are adapting medical residency models, created specifically to build effective district-preparation program partnerships. They thus target their recruitment and selection of residents to meet district needs. These programs involve prospective teachers in groups, or cohorts, who are prepared together and easily form professional learning communities. The intensive, extended 1-year preparation tightly weaves education theory and classroom practice together and often offers the course work at the P-12 school site, meshed with ongoing classroom instruction. Each resident is placed with a highly trained, rigorously selected mentor teacher and is gradually released to take on structured teaching roles that are closely examined and refined to enhance students’ learning. Ongoing postresidency support is provided after residents are hired.<sup>16,17</sup> The numbers and types of teacher residency programs are growing and range from urban (e.g., the Academy for Urban School Leadership in Chicago, the Boettcher and Denver Teacher Residencies) to rural (Bard College, California State University–Chico, and Arizona State University) and from undergraduate to postgraduate.

Clearly, a sea change in teacher preparation is now in progress to seat teacher preparation primarily within P-12 schools in close partnership with districts. A leader in the field has just chronicled the path to “a new epistemology” for teacher education that more closely connects campus courses and field experiences to create prospective teacher learning opportunities.<sup>18</sup> Further, just recently, the largest teacher preparation accrediting body took major steps toward revising its standards and accreditation processes to support more clinically based educator preparation and working partnerships between preparation programs and P-12 schools.<sup>19</sup>

## The Importance of Strong Clinical Experience

Strong clinical preparation of teachers is a key factor in their students' success. It will thus have an impact on tomorrow's graduates and their—and the nation's—ability to compete in the challenging global economy and participate in a pluralistic democratic society. To understand this connection, one must understand the nature and requirements of teaching.

**Knowing one's subject matter is necessary, but not sufficient, for effective teaching.** Teaching requires not just knowing the content to be taught, but knowing *how to teach* that content to students of varying backgrounds and levels of understanding. It further requires that teachers be *able* to teach the content, a process different from *knowing about* how to teach it.<sup>20</sup> Teachers must understand and also be able to *do* a wide variety of things—a process termed “enactment”<sup>21</sup>—and do many of them simultaneously. For example, telling prospective teachers about possible classroom strategies or offering teaching routines may be helpful, but *telling* them does not ensure that teachers will develop deep understanding or diagnostic and instructional skills for dealing with students who require different approaches or supports. Teachers must have extended opportunities to observe and practice ways of engaging students with subject matter in ways that are intellectually sound and developmentally appropriate. They must be able to impart the content in ways that children—as opposed to adults—of varying ages and developmental levels will comprehend.

**Experts recognize that excellent teaching is complex, intricate work that can be learned to high levels of skill with appropriate training.** Good teaching is not simply a matter of personal style and individual commitment. It requires detailed knowledge of the content area being taught, a great deal of precision and skill in making it learnable, as well as good judgment and a tremendous capacity to relate to a wide range of young people. The teaching process is dynamic and reciprocal<sup>22</sup> and, in fact, is unnatural to the lay person. Experts and very smart people are not automatically good at it.<sup>23</sup>

One reason for the complexity is that teachers must act in different time frames and with different levels of ideas with individuals, groups, and an entire class to make each lesson coherent, to link one lesson to another, and to cover a curriculum over the course of a year.<sup>24</sup> Teachers must juggle multiple academic and social goals requiring trade-offs from moment to moment and day to day. Their actions are affected by changing student needs and unexpected classroom events. Many decisions cannot be routinized because they are contingent upon student responses and the particular objectives of a given moment. Teachers must learn to weigh difficult dilemmas and to make and implement decisions on the fly; be able to alter their plan for unforeseen circumstances in the midst of teaching; and to respond to children while presenting well the material they are teaching.<sup>25</sup> Students need teachers who are prepared to help them learn, not beginners who are struggling with or naïve about their responsibilities.<sup>26</sup>

Effective teachers have been described as those who—

- Know how students learn, develop, and acquire and use language
- Understand their subject matter and the purposes of curriculum
- Know and understand teaching:
  - \* how to teach subject matter so it can be understood by diverse learners
  - \* how to use diverse resources to plan and structure engaging learning opportunities
  - \* how to monitor and assess learning using multiple sources of evidence
  - \* how to adapt instruction accordingly
  - \* how to coach and monitor students' use of technology
  - \* how to manage a classroom effectively
- Have high expectations for all students and help students learn
- Contribute to positive academic, attitudinal, and social outcomes for students
- Contribute to the development of classrooms and schools that value diversity and civic-mindedness
- Collaborate with other teachers, administrators, parents, and education professionals to ensure student success, particularly the success of students with special needs and those at high risk for failure<sup>27</sup>



**Much of the information teachers need to make effective decisions emerges in the context of the practice.**

For example, information about what ideas students have developed about a topic, how they are understanding or misunderstanding the material being taught, and how different students learn best emerges in the actual work of teaching—and guides future planning and instruction. How well different strategies will work with this or that group of students, or with a particular individual, also emerges in the course of enacting plans and cannot be fully known ahead of time in the abstract.<sup>28</sup>

Such skills are developed through learning situated in practice, interacting with real children of various cultural backgrounds and developmental levels. Knowledge of content is successfully taught in academic settings, but knowing how to teach and the actual doing, or enacting, of teaching is more effectively learned by teacher candidates in clinical settings with pupils and skilled mentor teachers. Recent verification of this need is seen in the experience of career changers entering teaching, 90% of whom rated their preparation program as good or excellent. However, 75% were especially challenged by classroom realities such as dealing with behavioral issues, teaching English language learners, and incorporating standards into the curriculum.<sup>29</sup>

**Good clinical experience yields positive effects.** We know from research that good clinical experience is associated with effective teaching. Several studies have found that, when a well-supervised clinical experience precedes or is conducted jointly with course work, teacher candidates appear more able to connect theoretical learning to practice, become more comfortable with the process of learning to teach, and can more ably enact what they are learning in practice.<sup>30</sup> In fact, prospective teachers—particularly career changers—want and seek out clinical opportunities. Research shows the importance of strong clinical practice to student achievement, teacher retention, and teachers' sense of preparedness when they enter the classroom:

- **Increased student achievement.** Teachers' initial classroom experiences, especially in the first 1 or 2 years, consistently predict teacher effectiveness,<sup>31</sup> and these initial experiences are much different for candidates with strong preservice preparation.<sup>32</sup> Particularly significant are the results of a 5-year study of the effects of 31 elementary teacher preparation programs in New York City on the learning of nearly 80,000 fourth- through eighth-grade students. Results revealed that preparation programs that are focused more on the work of the classroom and that allow teachers to engage in the actual practices involved in teaching produce significantly more effective first-year teachers.<sup>33</sup> The pupils of teachers in Florida whose alternative preparation program, that of the American Board for Certification of Teacher Excellence (ABCTE),<sup>34</sup> required no clinical experience performed statistically significantly less well on the state math test than students of a comparison group of teachers.<sup>35</sup>
- **Teacher retention.** Several research studies reveal a relationship between candidates' practical experience and retention in teaching. The lack of clinical skills and experience has been linked to high levels of teacher burnout and attrition, and well-prepared novices with intensively supervised clinical experience were found in one study to be more likely to remain than those with limited clinical experience.<sup>36</sup> Another analysis reported that candidates with clinical experience were twice as likely to stay past the first year of teaching as those who have not.<sup>37</sup>
- **Teachers' sense of preparedness.** Teacher candidates want and seek out clinical experience. Two California State University studies<sup>38</sup> found a relationship between the experience of practice teaching and feelings of preparedness. Further, nearly two thirds of career changers recently considering entering teaching indicated that having a program that includes clinical training in real classrooms with experienced teachers is "very important" to them. The research sponsor urged teacher educators to provide strong clinical experiences in schools that fit candidates' future plans, integrating theory and practice.<sup>39</sup>

## Teaching as a Clinical Practice Profession

The attributes of teaching—seen as a clinical practice profession—are clearly parallel to those of other such professions.<sup>40</sup> These include

- **The centrality of clients** (in this case, students), involving direct observation and treatment
- **Requisite specialized knowledge and skills** plus theoretical, practical, and technical understandings not possessed by laypeople
- **The use of evidence and judgment** to determine the best course of treatment<sup>41</sup>

- **A professional community and standards of practice** to which professionals and professional organizations, including preparation institutions, are held accountable.<sup>42</sup>
- **Clinical education**, including rigorous academic and practical training involving working effectively with clients, obtaining a high degree of knowledge, understanding how to use evidence and judgment in practice, and comprehending and valuing the standards of their respective professional communities.<sup>43</sup>

Researchers suggest that teacher candidates should have opportunities to practice and reflect on teaching *while enrolled in their preparation programs*, as well as during initial years of practice.<sup>44</sup>

Standards of the National Council for Accreditation of Teacher Education (NCATE) reflect these findings, stating that prospective teachers should exhibit consistent success through a substantial preservice clinical experience involving a variety of challenging situations and supervised by both university- and school-based faculty.<sup>45</sup> NCATE, in fact, devotes one out of the six standards on which it evaluates institutions' professional education units to "Field Experiences and Clinical Practice."<sup>46</sup> Its Board of Examiners teams determine whether "the unit and its school partners design, implement, and evaluate field experiences and clinical practice so that teacher candidates and other school professionals develop and demonstrate the knowledge, skills, and professional dispositions necessary to help all students learn." Further, seminal documents of the National Board for Professional Teaching Standards<sup>47</sup> are infused with descriptions of practice-based skills that teachers can only develop in classrooms while interacting with students.<sup>48</sup>

## Critical Components of Clinical Preparation

High-quality preparation programs are *school embedded*—i.e., grounded in the work of schools—through closely linked partnerships between the preparation program and the school.<sup>49</sup> They bridge theoretical concepts and pedagogical knowledge, simultaneously taught in an academic format, to the actual doing, or enactment, of teaching in real time with real students in live classrooms. Key components of these programs include the following:<sup>50</sup>

1. **Strong school-university partnerships.** It is imperative that faculty from the education school and the P-12 school be mutually involved in designing, implementing, and evaluating each other's programs; participating in each other's professional development activities; and adapting instructional programs for candidates and for pupils. The partners share expertise and integrate resources to support learning of teacher candidates.
2. **Settings.** Excellent "placement schools" are carefully selected by preparation programs as intellectually rich sites for observation and learning by teacher candidates. The sites are mutually developed and enhanced over time through the building of strong relationships between the teacher development faculties of the school and the university. Sites are screened for their potential to expertly demonstrate specific practices with pupils having particular characteristics, such as varying developmental levels or special needs, in a range of community and school types.
3. **Clinical placements.** The partners ideally determine the specific placement of teacher candidates jointly, so as to provide appropriate learning experiences and share expertise to support candidate learning. Placements that are congruent with candidates' planned teaching grade and subject area are associated with higher student learning.<sup>51</sup> Good placements are well-supervised and mentored by skilled clinical teachers and offer opportunities for a variety of well-structured experiences on the part of the candidate.
4. **Clinical teachers.** Strong school-based clinical teachers are essential to the success of the clinical experience and are selected for their deep expertise, their extensive experience, and their match with candidate subject and grade. They are trained as mentors and highly skilled in supporting the learning of adult candidates as well as that of children. Recent research from the Teacher Education Accreditation Council indicates positive effects of higher levels of training among cooperating teachers.<sup>52</sup> Ideally, they work with each candidate for the duration of his or her clinical experience.
5. **Coordinating faculty.** Specially designated collegiate faculty work closely with K-12 schools and assist and oversee the institution's teacher candidates' clinical experience. These faculty members—like their school counterparts—are uniquely able to positively communicate with and support adult candidates in their often-challenging clinical experience. They work jointly with clinical teachers in designing, implementing, assessing, and revising candidates' clinical experience.
6. **School-based clinical curriculum.** A jointly designed clinical curriculum links theory to practice and provides carefully scaffolded, graduated responsibilities for prospective teachers to undertake. Candidates are guided

through in-school assignments and projects that develop their understanding of student motivation and learning, classroom management, use of technologies, discipline, and assessment techniques and data analysis. Sometimes this experience is structured as a full academic year of internship in the classroom of one or more clinical teachers. Ideally candidates rotate to several placements to experience a greater diversity of students and teaching issues.

7. **Length of program.** Teacher candidates participate in school-embedded clinical work throughout their entire program. Experts stress the importance of a full-year experience to allow time for necessary teacher learning to take place.<sup>53</sup> Accreditation rubrics state that clinical practice must be sufficiently extensive and intensive for candidates to develop and demonstrate proficiencies in the professional roles for which they are preparing.<sup>54</sup> A minimum time frame of one semester, or 450 hours is suggested for acquisition of the clinical skills necessary to serve as teacher of record.<sup>55</sup> Some model preparation programs require twice that—at least 30 weeks (900 hours) of mentored clinical practice under the direct supervision of one or more expert veteran teachers. The time should not be firmly fixed but be dependent on the performance of the particular candidate.
8. **Performance assessment.** Clinical practice includes essential ongoing evaluation and assessment of candidates' performance as they interact with, instruct, guide, correct, and support students in real time. Performance assessment tools for this purpose are becoming increasingly available. The new Teacher Performance Assessment being piloted in 20 states by a collaborative of AACTE, the Council of Chief State School Officers, and Stanford University is expected ultimately to be widely adopted nationally. It is based on the very successful Performance Assessment of California's Teachers (PACT).<sup>56</sup>

## Examples of Promising Clinically Based Preparation Programs

Listed below are brief profiles of clinical preparation programs that are emerging as potential models. They are based on the best research and professional judgment, and unquestionably, they are innovative and inspiring and hold great promise for success.

### **PDS NEXT Project—Arizona State University and the Arizona Board of Regents**

This bold project is among the 28 Teacher Quality Partnership grants, for which \$43 million was awarded September 30, 2009, by the U.S. Department of Education to reform traditional university teacher preparation and teacher residency programs. It received by far the largest award of all the grantees (\$6.7 million for the first year). PDS NEXT Project is a statewide, school-university, teacher education partnership that includes Arizona State's College of Teacher Education and Leadership, its College of Liberal Arts and Sciences, and the Vice President's Office of Educational Partnerships. Other partners are the Rodel Foundation and 15 high-need urban and rural partner districts representing 230 schools, 10,809 teachers, and 174,308 high-need students. The project builds on the Teacher Advancement Program instructional rubric and teacher development model. The goal of this project is to reform 25 historically struggling schools in the urban and rural partner districts. This will be accomplished by designing and implementing reformed, district-based prebaccalaureate and master's (residency) teacher education programs that yield highly skilled new teachers who, by their second year of teaching, produce student achievement gain scores greater than the partner district average. This project will prepare a total of at least 600 exemplary new teachers through both pathways over the 5-year grant. A feature of this project is its work with the state's community colleges. Well over 70% of the individuals who become teachers in Arizona on the prebaccalaureate degree pathway matriculate through community colleges, so it is important that the universities help the community colleges reform their programs in both content and rigor to improve the pool of teacher candidates.

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see [http://asunews.asu.edu/20090930\\_pdsnextgrant](http://asunews.asu.edu/20090930_pdsnextgrant).

### **Initial Professional Teacher Education Program, University of Colorado Denver**

For 15 years, this program has used an extensive professional development school (PDS) clinical model of preparation to prepare graduate and undergraduates for urban schools. Elementary, secondary, and special

education teacher candidates engage in four internships during their program, exceeding the state's required 800 hours of field experience. Candidates complete the licensure program in a 12- or 18-month format. Cohorts of 10 to 12 candidates are placed in each of the 30 elementary, middle, or high school PDSs throughout their teacher preparation year. Candidates work alongside practicing classroom teachers known as clinical teachers, co-teaching in multiple ways to develop teaching skills while strategically focusing on K-12 student learning. For the first three internships, teacher candidates take courses simultaneously at the university. PDS and university faculty closely align course work with internship experiences as candidates learn complex aspects of teaching early in the week and apply it in a classroom later in the week, with myriad opportunities for ongoing inquiry and reflection about quality instruction. In the fourth and final internship, course work tapers off and candidates immerse themselves at their PDS site 5 days a week. They continue to co-teach with their clinical teachers, but the roles shift as candidates take on increasing responsibility for planning, instruction, and assessment. They plan for co-teaching in ways that support the greatest student learning. At each PDS, candidates are supported by a site team of a university site professor/faculty member who spends at least one day a week in the school and a school-based site coordinator who is a master teacher or instructional specialist released at least part time to support the group of candidates. This site team spends many hours coaching candidates and clinical teachers, facilitating a weekly site seminar to continually help candidates blend theory to practice, and supporting the overall efforts of renewal and professional learning at the school.

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see <http://www.ucdenver.edu/academics/colleges/SchoolOfEducation/Pages/Home.aspx>.

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### **Stanford University's Teacher Education Program (STEP)**

STEP prepares teachers in collaboration with nine local reform-oriented high schools serving diverse student populations in the Bay Area. Like teaching hospitals in the medical profession, these PDSs develop and demonstrate leading-edge practices while training novices and supporting the development of veteran teachers and administrators. STEP currently prepares about 70 secondary and 20 elementary candidates in a master's degree program that includes a strong emphasis on content pedagogy and teaching diverse learners plus a year-long, tightly connected clinical experience. East Palo Alto Academy (EPAA), a partnership school, was launched in 2001 by Stanford University, in collaboration with the Ravenswood School District and Aspire Public Schools, in a low-income, all-minority community near the university that had lacked a public high school for 25 years. Stanford faculty from the education school, medical school, law school, and college work with the school to provide students with a strong education, health care, and other supports. The school has dramatically transformed students' opportunities with a college-preparatory, project-based curriculum organized around performance-based assessments and with a personalized design. More than 90% of students go onto college. In the new East Palo Alto High School, which serves about 300 students annually, California Department of Education (CDE) statistics show that more than 90% have graduated each year, and more than 90% of graduates are accepted to postsecondary education. Each year since its first graduating class, the proportion of students admitted to 4-year colleges has increased, from just over 30% in 2005 to 50% in 2008. Despite the fact that students arrive at the high school about 3 to 4 years below grade level in reading and mathematics, are English language learners, and are low-income on average, the school has sharply increased achievement from the lowest level in the state in 2001—scoring in the bottom 10% on the state academic performance index (API)—to the 70th percentile in relation to schools serving similar populations of students. The school's academic performance and its most recent gain of 27 points on the API were much greater than that of schools serving comparable students, designated by the state as "similar schools." According to the CDE, these schools had an API of 582 in 2005-2006, which remained unchanged in 2006-2007. With Stanford's reforms and supports, achievement increased across the board, e.g.: 10th-grade pass rates on the state exit exams increased by more than 50% in English language arts and by 400% in mathematics, and increases in proficiency rates on the state tests more than doubled in every subject area at every grade level.

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## Woodrow Wilson Teaching Fellowship

The Woodrow Wilson Teaching Fellowship offers a model for states to rethink their teacher education programs and bring new talent into classrooms to address significant shortages of mathematics and science teachers. The fellowships, funded with support from both private philanthropies and state funding, provide \$30,000 stipends to prospective teachers who enroll in exemplary master's-level teacher education programs and agree to teach for 3 years in low-income rural and urban secondary schools. The fellowships offer additional funding to the participating campuses to rework their approach to teacher preparation, emphasizing intensive clinical experience and discipline-specific pedagogy. Participating states are focusing on math and science in high-need urban and rural schools. In Indiana, Michigan, and Ohio, over the course of their 3-year programs, the Woodrow Wilson Teaching Fellowship will prepare more than 700 math and science teachers at 14 institutions, with a total of nearly \$40 million in public and private funding and a lifelong impact on the math and science achievement of an estimated 87,500 students who will learn from the Fellows every year. The Woodrow Wilson Indiana Teaching Fellowship was created in 2007 with leadership from Governor Mitch Daniels, \$10 million in funding from the Lilly Endowment, and additional state funds. Four Indiana universities are participating: Ball State University, Indiana University-Purdue University Indianapolis, Purdue University, and the University of Indianapolis. These institutions have redesigned their graduate-level math and science teacher preparation programs so that Fellows spend significant time in school classrooms throughout their study while also engaging in rigorous academic work—a requirement for all participating universities. The W. K. Kellogg Foundation's Woodrow Wilson Michigan Teaching Fellowship, inaugurated in 2009, will be offered at the University of Michigan, Michigan State University, Eastern Michigan University, Western Michigan University, Grand Valley State University, and Wayne State University. The six institutions will collectively host 120 Fellows annually. Governor Jennifer Granholm led the way in bringing the program to Michigan with the help of \$16.7 million in funding from the W. K. Kellogg Foundation. In 2010, Ohio Governor Ted Strickland and Chancellor Eric Fingerhut of the Ohio Board of Regents launched the Woodrow Wilson Ohio Teaching Fellowship as part of the state's Choose Ohio First scholarship program. The four selected partner institutions—the Ohio State University, the University of Akron, the University of Cincinnati, and John Carroll University—will host 80 Fellows each year. The Ohio program is supported with \$9 million from Choose Ohio First funds and an additional \$2.5 million in commitments from five Ohio funders. Additional states are in the pipeline and could be added as early as fall 2010.

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## St. Cloud State University

St. Cloud State University (SCSU), St. Cloud, Minnesota,<sup>57</sup> has transformed its student teaching experience, with the help of a \$5 million Teacher Quality Enhancement partnership grant (2003-2008) from the U.S. Department of Education. In collaboration with the St. Cloud Area Schools, the project addresses challenges related to placing teacher candidates, strengthening the preparation program, and maximizing human resources in the classroom. The focus of this initiative is on the development, implementation, and evaluation of a co-teaching model of student teaching. It provides two adults in the classroom, actively engaged with K-12 students for greater periods of time than in traditional student teaching. The two adults are the certified teacher and the teacher candidate (introduced to students as a "teacher"), with whom the certified (cooperating, or clinical) teacher has agreed to work on a co-teaching basis. The co-teaching model allows children increased opportunities to get help when and how they need it; it allows teachers to incorporate co-teaching pedagogy, grouping students in ways that are not possible otherwise. To date, the SCSU co-teaching intervention has provided co-teaching training to more than 700 cooperating teachers and more than 2,000 teacher candidates. This initiative has been honored by receiving the Innovative Partnering and Collaboration Award from the Minnesota State Colleges and Universities; the prestigious Christa McAuliffe Award for Excellence in Teacher Education from the American Association of State Colleges and Universities for the innovative use of co-teaching in student teaching; and the AACTE Best Practice Award in Support of Research on Teacher Education Quality and Accountability. Research reveals that students in a co-taught classroom statistically outperform students with a single teacher and that traditional student teaching,

which often leaves teacher candidates unassisted in the classroom, results in statistically significantly lower proficiency levels on the part of students compared with those of students in either a co-teaching student-teaching setting or with a single teacher.

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## State Requirements and Clinical Preparation

*State regulatory policies to ensure high-quality clinical preparation for teacher candidates vary widely.* As the annual *Quality Counts*<sup>58</sup> 2010 report and its EdCounts database illustrate (see chart, next page), state requirements differ in terms of the number of weeks and hours required for student teaching and for clinical experiences other than student teaching. Currently only 39 states require any such experience. Maryland has the highest requirement in terms of weeks (20 weeks), and Wisconsin follows next with 18 weeks. However, states also report “other clinical experiences” in terms of hours, and Colorado leads with 400 hours. Eleven states and the District of Columbia require no clinical preparation.

In most states, clinical-experience requirements for alternative-route candidates are less rigorous than those for traditional-route candidates. Only five states—Georgia, Michigan, Rhode Island, Wisconsin, and Wyoming—are reported as requiring student teaching for preservice alternative-route candidates, and none are listed as requiring preservice clinical experiences for alternative-route candidates.

Data from another source, the National Association of State Directors of Teacher Education and Certification, also reveals that state policies cover the gamut regarding clinical preparation. Eighty-five percent of the state respondents to the latest survey indicated that their state requires field experiences prior to student teaching. Only 60% said that experience in a multicultural setting is required, and 60% said their state requires experience with more than one group of students. Only about one third of state respondents said training is required for cooperating teachers, and 10 to 15 weeks of student teaching was the norm among the 31 respondents.<sup>59</sup>

## Recommendations for States

- *All states should require clinical experience during preservice teacher preparation.* A minimum length of one semester, or 450 hours (15 weeks at 30 hours per week), should be required of and provided to each candidate.<sup>60</sup>
- *The same clinical preparation requirements should apply to all teacher preparation routes.* With the exception of candidates who successfully test out of clinical experience requirements based on a valid and reliable teacher performance assessment, all candidates in all states—regardless of the pathway to teaching—should be required to complete a supervised clinical preparation program of the same length and rigor.
- *A high-quality teacher performance assessment should be required of all candidates.* AACTE encourages all states to join the current 20 that are piloting and moving toward adoption of a valid and reliable teacher performance assessment, which ultimately will enable teacher candidates who are competent and qualified to enter the classroom as soon as they can demonstrate these competencies.<sup>61</sup>
- *States should join together to agree on common clinical experience requirements.* Such agreement would enhance the mobility of teachers and could help to reduce shortages of teachers in certain areas and certain subjects.
- *States should offer incentives to schools that act as clinical settings for teacher candidates.* Such incentives could support salaries for newly hired mentor teachers and coaches working with teacher candidates, substitutes for pullout sessions between clinical teachers and candidates, or stipends for postgraduate residents.<sup>62</sup>
- *States should support the expansion or replication of successful teacher residency programs.* Such support could cover the piloting of new teacher residency programs and provide funding to evaluate the impact of such programs.

## State Requirements for Student Teaching and Other Clinical Experiences

State	Minimum weeks required of traditional-route candidates for student teaching	Minimum hours required of traditional-route candidates for clinical experiences	State requires preservice student teaching for alternative-route candidates	State requires preservice clinical experiences for alternative-route candidates
Alabama	15	150	No	No
Alaska	—	—	No	No
Arizona	—	—	No	No
Arkansas	12	—	No	No
California	9	—	No	No
Colorado	13	400	No	No
Connecticut	10	—	No	No
Delaware	—	—	No	No
District of Columbia	—	—	No	No
Florida	10	—	No	No
Georgia	—	—	Yes	No
Hawaii	—	—	No	No
Idaho	6 semester hours	—	No	No
Illinois	—	—	No	No
Indiana	—	—	No	No
Iowa	14	80	No	No
Kansas	12	—	No	No
Kentucky	12	—	No	No
Louisiana	9	180	No	No
Maine	—	—	No	No
Maryland	20	—	No	No
Massachusetts	150-300 hours	—	No	No
Michigan	12	—	Yes	No
Minnesota	10	—	No	No
Mississippi	12	—	No	No
Missouri	8 semester hours	2 semester hours	No	No
Montana	—	—	No	No
Nebraska	12	100	No	No
Nevada	8 semester hours	—	No	No
New Hampshire	15	—	No	No
New Jersey	15	—	No	No
New Mexico	14	—	No	No
New York	8	100	No	No
North Carolina	10	—	No	No
North Dakota	10	—	—	—
Ohio	12	100	No	No
Oklahoma	12	45	No	No
Oregon	15	—	—	—
Pennsylvania	12	190	No	No
Rhode Island	12	—	Yes	No
South Carolina	12	100	No	No
South Dakota	10	—	No	No
Tennessee	15	—	No	No
Texas	12	30	No	No
Utah	—	—	No	No
Vermont	12	60	No	No
Virginia	5	150	No	No
Washington	—	—	No	No
West Virginia	12	125	No	No
Wisconsin	18	—	Yes	No
Wyoming	8	—	Yes	No

Source: Quality counts. (2010, January 14). *Education Week*, 29(17). See <http://www.edcounts.org/createtable/step1.php>.

## Federal Requirements and Clinical Preparation

The federal government has sent mixed messages to potential teachers, parents of K-12 students, policy makers, providers, and accreditors about the role of clinical preparation for teachers. On the one hand, federal policy supports programs with little to no preservice clinical preparation requirements (e.g., ABCTE and Teach for America), urges state expansion of alternative routes, and allows teachers to be labeled “highly qualified” by earning a bachelor’s degree and simply passing a paper-and-pencil test.<sup>63</sup> On the other hand, clinical preparation is promoted by Education Secretary Arne Duncan as critical to effective preparation<sup>64</sup> and is extensively required in the Higher Education Opportunity Act’s signature teacher preparation program, the Title II Teacher Quality Partnership (TQP) grants.<sup>65</sup>

The TQP grant program bears further scrutiny. Enacted in 2008, it was the result of 5 years of congressional deliberation and represents a state-of-the-art bipartisan agreement about the key characteristics for teacher preparation in the 21<sup>st</sup> century. Developed with extensive input from experts and leaders in residency programs,<sup>66</sup> its rigorous program requirements are purposefully intended to ground the field of teacher preparation in a clinical setting.

In order to receive a TQP grant, a school of education must partner with a high-need local education agency and the school of arts and sciences in the college or university. Numerous additional partners, such as community agencies, businesses, and the governor’s office, are encouraged. Grantees are required to strengthen the clinical component of preservice preparation at the baccalaureate level and/or to develop preservice residency programs at the master’s level. In both instances, the clinical component must be of 1 year’s duration. This yearlong requirement, which could translate to about 900 hours, is relatively stringent, considering that the most demanding state requirement for clinical preparation is 800 hours for undergraduate internships. By design, these programs are intended to significantly expand the clinical component of preparation based on the promising success of the residency model and research on the efficacy of clinical preparation.

## Federal Recommendations

- *The “Highly Qualified Teacher” definition in the Elementary and Secondary Education Act (ESEA)* should be revised to require that teachers establish not only their content expertise but their ability to teach it effectively, as measured by their actual performance in classrooms, following extended clinical experience. Prospective teachers should exhibit consistent success through a substantial preservice clinical experience in a challenging school setting supervised by both university- and school-based faculty. This requirement should pertain to both traditional- and alternative-route candidates. A minimum of 450 sequential hours of closely monitored and supervised clinical experience should be required. No candidate should serve as teacher of record until he or she has completed a preparation program.
- *ESEA should invest in the development of a national teacher performance assessment* that would parallel the development and adoption of Common Core State Standards, an initiative being spearheaded by the Council of Chief State School Offices and the National Governors Association.<sup>67</sup> With all but two states having endorsed the common core standards, a need will soon become evident for performance assessments of and professional development for teachers that are linked to these standards.
- *The Teacher Quality Partnership grants, with a specific clinical preparation focus, should be maintained in the Higher Education Opportunity Act and their funding increased.*
  - \* AACTE recommends a TQP appropriation of \$300 million for FY 2011 and at least 10% increases in subsequent years through 2015.
  - \* AACTE particularly supports the teacher residency concept—both undergraduate and graduate—whereby prospective teachers, as part of a cohort of candidates, are placed for an entire academic year in a school implementing similarly high-quality clinical experiences. AACTE urges the expansion of that program and the award of both evaluation and technical assistance contracts to enable successful practices to be disseminated widely.
  - \* New provisions should be included requiring that teacher candidates supported by TQP programs be evaluated as successful using multiple measures, including a valid and reliable teacher performance assessment, prior to assuming a position as teacher of record.

- \* The federal government should make an investment in establishing a system and network of clinical preparation, much like the Health Professions Education Assistance Act,<sup>68</sup> which supports a network of teaching hospitals to prepare doctors.
- \* The federal government should require bodies that accredit teacher preparation programs to develop and utilize strong standards for clinical preparation that support more clinically based educator preparation and working partnerships between preparation programs and P-12 schools.
- \* The federal government should require *all* providers of teacher preparation to be professionally accredited. Currently, professional accreditation is voluntary in some states, and alternative routes to teaching operate outside any accreditation process. A requirement for professional accreditation was one of candidate Barack Obama's campaign promises, and it should be put in place with uniform clinical requirements for all providers.

## Recommendations for Providers of Teacher Preparation

- ***School districts and universities should jointly design and supervise strong clinical practice collaborations.*** Such partnerships involve accomplished teachers serving as mentors, clinical teachers, and clinical faculty to ensure that internship-style preparation remains connected to advances in the disciplines, teaching and learning, and technology. Further, special systems should be developed for career changers to transition to teaching through clinically based preparation tailored to adult learners.<sup>69</sup>
- ***All teacher candidates should receive substantial and appropriate clinical preparation prior to becoming teachers of record in their own classrooms.*** This preparation should meet the *Critical Components of Clinical Preparation* described above and comply with recommended state requirements.
  - \* ***A minimum of one semester of at least 450 hours of clinical practice should be completed*** by teacher candidates and required for state licensure. This requirement should pertain to both traditional- and alternative-route candidates.
  - \* ***More highly desired, and preferred, is a full year of clinical practice***—approximately 30 weeks, or 900 hours, as is typical for postbaccalaureate residency programs. A period of induction support should be available to the novice teacher for at least 1 additional year.
  - \* ***Evaluation using multiple measures, including valid assessments of teaching performance*** as mentioned above, should determine candidates' readiness to assume an unsupervised teaching role.
- ***Clinical teachers and other teacher mentors should be trained*** in helping and supporting novice teachers, modeling excellent teaching practice, and exercising positive problem-solving skills. Their designation as mentors should be determined by excellent supervisor and peer evaluations as well as outstanding performance on a teacher performance assessment.
- ***Clinical teachers should have at least 3 years of teaching experience,***<sup>70</sup> be matched to their novice teachers by subject and grade level, and be selected jointly by preparation program and school faculty on the basis of the clinical teacher's interest in and ability to deftly guide the specific candidate through a clinical practice program.
- ***Our nation's public schools and teacher preparation programs should jointly adopt standards*** for clinically based teacher preparation programs. Whether programs are initiated by higher education institutions or school districts, they should be held to the same high-quality standards. AACTE stands ready to assist in the development of such standards and is currently working with leading experts to help in their design.

## Conclusion

The profession of teaching has changed. It is now recognized that good teaching is not merely a matter of personal style, individual commitment, or a fondness for children. Teaching involves a complex set of intricate skills requiring extended preservice practice in a clinical setting. "Winging it" is not an acceptable strategy, especially in today's high-need schools. Content mastery is the keystone upon which essential teaching skills are developed. But without extensive clinical practice, new teachers will default to the untenable and unethical practice of trial-and-error instruction.



Teaching is fast becoming a clinical practice profession such as medicine, nursing, and psychology. Credible organizations across the nation attest to the critical importance of extended, rigorous, embedded clinical preparation of teachers.<sup>71</sup> Although high-quality clinical practice is not yet the norm in today's preparation programs, it should be the heart of teacher preparation and the focus of innovation. Leadership and support to make that happen are essential. AACTE members stand ready to join with neighboring school districts, our essential partners, in developing educators needed in today's diverse classrooms.

AACTE members are sending a message to federal and state policy makers: All providers of educator development must be required to meet the same professional standards of program efficacy and accountability. Extensive clinical development is a program standard that all must meet. Policy makers should require all providers to report on the impact of their programs, including their effect on the learning of P-12 students.

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## Notes

- 1 Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. H. (2008, September). Teacher preparation and student achievement. *NBER Working Paper No. W14314*.
- 2 Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. San Francisco: Jossey-Bass.
- 3 See, for example: Carnegie Corporation of New York (2001, July 1), *Teachers for a New Era: A national initiative to improve the quality of teaching—announcement and prospectus* and Hinds, M. D. (2002), *Teaching as a clinical profession: A new challenge for education*, Carnegie Corporation of New York.
- 4 See, for example, the August 27, 2009 letter from Kate Walsh, president of the National Council on Teacher Quality, to Secretary Arne Duncan, in response to the Education Department's Notice of Proposed Priorities, Requirements, Definitions, and Selection Criteria relative to the Race to the Top initiative. Walsh urges deletion of the requirement to provide a clinical/student teaching experience in the definition of *alternative certification route*. She says that "programs can compensate for the absence of a student teaching experience by providing intensive mentoring support" and encourages "the Department to reconsider its definition to one that ... does not explicitly require a clinical or student teaching experience."
- 5 McDiarmid, G. W., & Clevenger-Bright, M. (2008). Rethinking teacher capacity. In M. Cochran-Smith, S. Feiman-Nemser, D. J. McIntyre, & K. E. Demers (Eds.), *Handbook of research on teacher education: Enduring questions in changing contexts*. New York: Routledge/Taylor & Francis Group and the Association of Teacher Educators.
- 6 Ibid.
- 7 Ibid., p. 153.
- 8 Levine, A. (2006). *Educating school teachers*. Washington, DC: The Education Schools Project.
- 9 Hart, P. D., Research Associates. (2008). *Teaching as a second career*. Princeton, NJ: Woodrow Wilson National Fellowship Foundation.
- 10 Haselkorn, D., & Hammerness, K. (2008). *Encore performances: Tapping the potential of midcareer and second-career teachers*. Princeton, NJ: Woodrow Wilson National Fellowship Foundation.
- 11 Carnegie Corporation of New York, 2001.
- 12 Ibid, p. 12.
- 13 Levine, M. (2009, Spring). *Preparing high quality teachers for high needs schools: Investing in clinical education and partnerships*. Washington, DC: National Council for Accreditation of Teacher Education.
- 14 Alter, J., & Coggsall, J. G. (2009, March). *Teaching as a clinical practice profession: Implications for teacher preparation and state policy*. The New York Comprehensive Center and the National Comprehensive Center on Teacher Quality.
- 15 Professional development schools, or PDSs, are innovative institutions formed through partnerships between professional education programs and P-12 schools. There are over 1,000 PDSs in the United States and many more that are similar but not specifically defined as PDSs. The partnerships have a four-fold mission: the preparation of new teachers, faculty development, inquiry directed at the improvement of practice, and enhanced student achievement. The goal of PDSs is to improve both the quality of teaching and student learning. They are often compared to teaching hospitals, which are also hybrid institutions created in the early 20th century. For further information go to <http://www.ncate.org/public/pdswhat.asp?ch=133> for PDS standards and [www.napds.org](http://www.napds.org), the *National Association for Professional Development Schools*.

- 16 Berry, B., Montgomery, D., Curtis, R., Hernandez, M., Wurtzel, J., & Snyder, J. (2008, August). *Creating and sustaining urban teacher residencies: A new way to recruit, prepare, and retain effective teachers in high-needs districts*. Center for Teaching Quality and the Aspen Institute. Retrieved March 9, 2010, from <http://www.teachingquality.org/legacy/AspenUTR.pdf>. See also <http://www.utrunited.org/> for the Urban Teacher Residency United, which is providing assistance to interested parties, crafting standards, and developing a network of urban residency programs.
- 17 See the U.S. Department of Education's recent Teacher Quality Partnership grant awardees, most of which include a residency component, at: <http://www2.ed.gov/programs/tqpartnership/2009awards.html>.
- 18 Zeichner, K. (2010). Rethinking the connections between campus courses and field experiences in college- and university-based teacher education. *Journal of Teacher Education*, 61(1-2), 89-99.
- 19 The National Council for Accreditation of Teacher Education (NCATE) on January 5, 2010, announced the creation of a Blue Ribbon Panel to restructure the preparation of teachers to reflect teaching as a practice-based profession akin to medicine, nursing, or clinical psychology. The panel will establish a set of guiding principles for the clinical preparation of teachers so preparation focuses more on building the expertise necessary for effective practice as professionals. It will examine characteristics and elements of clinical preparation in exemplary programs, review the research, and make policy recommendations. This work is intended to lead to changes in NCATE standards and accreditation processes to support more clinically based educator preparation and working partnerships between preparation programs and P-12 schools.
- 20 See National Board for Professional Teaching Standards (2002, August), *What teachers should know and be able to do*, p. 13: "Traditional distinctions between knowing and doing have obscured the fact that thought and action interpenetrate in teaching—knowing about something and knowing how to do something are both forms of understanding central to teaching." Arlington, VA.
- 21 Kennedy, M. (1999). The role of preservice teaching education. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 54-85). San Francisco: Jossey-Bass.
- 22 Interstate New Teacher Assessment and Support Consortium. (1992). *Model standards for beginning teacher licensing, assessment, and development*. Washington, DC: Council of Chief State School Officers.
- 23 Ball, D. (2009, June 18). Statement at the AACTE Congressional Briefing on Innovation and Reform in Teacher Preparation. Washington, DC.
- 24 Hammerness, K., Darling-Hammond, L., Bransford, J., Berliner, D., Cochran-Smith, M., McDonald, M., & Zeichner, K. (2005). How teachers learn and develop. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 358-389). San Francisco: Jossey-Bass.
- 25 Ibid., p. 377.
- 26 Ball, 2009.
- 27 This is a composite definition, based primarily on Little, O., Goe, L., & Bell, C. (2009, April), *A practical guide to evaluating teacher effectiveness*, Washington, DC: National Comprehensive Center for Teacher Quality; and on Darling-Hammond, L., & Baratz-Snowden, J. (2005), *A good teacher in every classroom: Preparing the highly qualified teachers our children deserve*, San Francisco: Jossey-Bass.
- 28 Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.
- 29 Hart, P. D., Research Associates. (2010, February). *Career changers in the classroom: A national portrait*. Princeton, NJ: Woodrow Wilson National Fellowship Foundation.
- 30 Hammerness et al., 2005.
- 31 Rowan, B., Correnti, R., & Miller, R. J. (2002). *What large-scale, survey research tells us about teacher effects on student achievement: Insights from the Prospects Study of Elementary Schools*. Philadelphia: University of Pennsylvania.
- 32 Darling-Hammond, L., Chung, R., & Frelow, R. (2002). Variation in teacher preparation: How well do different pathways prepare teachers to teach? *Journal of Teacher Education*, 53(4), 286-302.
- 33 Boyd et al., 2008.
- 34 The ABCTE program is a fast-track program designed for career changers that leads to teacher licensure in states that have approved its use. Its candidates must meet four requirements: (1) hold a bachelor's degree from a U.S. Department of Education-accredited college or university; (2) pass a criminal background check; (3) receive a passing score on a subject area exam; and (4) receive a passing score on the ABCTE Professional Teaching Knowledge exam. ABCTE was founded in 2001 with a grant from the U.S. Department of Education. It is promoted as a flexible and cost-effective certification program designed for career

- changers. ABCTE is a state-approved route to full teacher certification in Florida, Idaho, Mississippi, Missouri, New Hampshire, Oklahoma, Pennsylvania, South Carolina, and Utah. See [www.abcte.org](http://www.abcte.org).
- 35 Tuttle, C. C., Anderson, T., & Glazerman, S. (2009). *ABCTE teachers in Florida and their effect on student performance: Final report*. Princeton, NJ: Mathematica Policy Research.
  - 36 National Commission on Teaching and America's Future. (2003). *No dream denied: A pledge to America's children: Summary report*. Washington, DC: Author.
  - 37 Whitener, S. D., Gruber, K. J., Lynch, H., Tingos, K., Perona, M., & Fondelier, S. (1997). *Characteristics of stayers, movers, and leavers: Results from the Teacher Follow-up Survey, 1994-95*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
  - 38 California State University. (2002). *First systemwide evaluation of teacher education programs in the California State University: Summary report*. Long Beach: Author; and California State University. (2002). *Preparing teachers for reading instruction (K-12): An evaluation brief by the California State University*. Long Beach: Author.
  - 39 Haselkorn & Hammerness, 2008.
  - 40 Alter & Coggs, 2009.
  - 41 Shulman, L. S. (1998). Theory, practice, and the education of professionals. *The Elementary School Journal*, 98(5), 511-526.
  - 42 Darling-Hammond, 2006; Shulman, 1998.
  - 43 Shulman, 1998.
  - 44 Hammerness et al., 2005.
  - 45 National Council for Accreditation of Teacher Education. (2001). *Standards for professional development schools*. Washington, DC: Author.
  - 46 National Council for Accreditation of Teacher Education. (2008). *Professional standards for the accreditation of teacher preparation institutions*. Washington, DC: Author.
  - 47 The National Board for Professional Teaching Standards is an independent, nonprofit, nonpartisan, and nongovernmental organization formed in 1987 to advance the quality of teaching and learning. It has developed professional standards for accomplished teaching, created a voluntary system to certify teachers who meet those standards, and helped integrate certified teachers into educational reform efforts. Virtually every state and more than 25% of all school districts now offer financial rewards or incentives for teachers seeking National Board Certification. More than 82,000 educators are now NBCTs. See [www.nbpts.org](http://www.nbpts.org).
  - 48 National Board for Professional Teaching Standards. (n.d.). *The five core propositions*; and NBPTS, 2002.
  - 49 Levine, 2009.
  - 50 From Darling-Hammond, 2006, unless otherwise noted.
  - 51 Boyd et al. (2008), pp. 27 and 42.
  - 52 Murray, F. B. (2010, February). *Cooperating teachers' evaluation of TEAC accredited teacher education programs*. Washington, DC: Teacher Education Accreditation Council.
  - 53 Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record*, 103(6), 1013-1055. See also Darling-Hammond, L. & Hammerness, K., with Grossman, P., Rust, F., & Shulman, L. (2005), *The design of teacher education programs*, in Darling-Hammond & Bransford (Eds.), *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able to Do*.
  - 54 NCATE, 2008. Standard 3a. See <http://www.ncate.org/public/unitStandardsRubrics.asp?ch=4#stnd3>.
  - 55 Personal communication with Linda Darling-Hammond, March 3, 2010.
  - 56 A description of the Teacher Performance Assessment is found at <http://www.aacte.org/index.php?/Programs/Teacher-Performance-Assessment-Consortium-TPAC/teacher-performance-assessment-consortium.html>.
  - 57 See American Association of Colleges for Teacher Education. (2009, June). *Innovation and reform in teacher preparation*. Washington, DC: Author. Retrieved March 9, 2010, from <http://www.aacte.org/Downloads/Innovation%20and%20Reform%20in%20Teacher%20Preparation.pdf>
  - 58 Quality counts. (2010, January 14). *Education Week*, 29(17).
  - 59 See the National Association of State Directors of Teacher Education and Certification at <http://www.nasdtc.info/>.

60 See Note 53.

61 See <http://www.aacte.org/index.php?/Programs/Teacher-Performance-Assessment-Consortium-TPAC/teacher-performance-assessment-consortium.html>.

62 These last recommendations coincide with those of the National Comprehensive Center on Teacher Quality. See <http://www.tqsource.org/publications/clinicalPractice.pdf>.

63 See the U.S. Department of Education's Race to the Top guidelines at <http://www2.ed.gov/legislation/FedRegister/announcements/2010-1/012710c.html>.

64 See, for example, Secretary Duncan's speeches at the AACTE Annual Meeting & Exhibits on February 17, 2010 (<http://www2.ed.gov/news/speeches/2010/02/02192010.html>) and at Teachers College, Columbia University on October 22, 2009 (<http://www.tc.columbia.edu/news/article.htm?id=7195>).

65 Teacher Quality Partnership guidelines are found at <http://www2.ed.gov/programs/tqpartnership/index.html>.

66 Senate HELP Committee hearing March 6, 2007, on NCLB Reauthorization: Strategies for Attracting, Supporting, and Retaining High Quality Educators. See [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110\\_senate\\_hearings&docid=34-052](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_senate_hearings&docid=34-052).

67 The Common Core State Standards Initiative is a state-led effort coordinated by the National Governors Association Center for Best Practices and the Council of Chief State School Officers. Governors and state commissioners of education from 48 states, 2 territories, and the District of Columbia have committed to developing a common core of state standards in English language arts and mathematics for grades K-12. The college- and career-readiness standards were released for public comment in September 2009. The K-12 standards are expected to be released for public comment in March. Both sets of standards, the college- and career-readiness and the K-12, are expected to be finalized in early 2010. See <http://www.corestandards.org/>.

68 See the Health Professions Education Assistance Act at [http://www.eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?\\_nfpb=true&\\_&ERICExtSearch\\_SearchValue\\_0=ED148192&ERICExtSearch\\_SearchType\\_0=no&accno=ED148192](http://www.eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED148192&ERICExtSearch_SearchType_0=no&accno=ED148192).

69 Haselkorn & Hammerness, 2008.

70 In line with the requirement of having 3 full years of teaching before a teacher can apply to be certified by the National Board for Professional Teaching Standards. See [http://www.nbpts.org/become\\_a\\_candidate/eligibility\\_policies](http://www.nbpts.org/become_a_candidate/eligibility_policies).

71 The critical importance of extended, embedded clinical preparation has been acknowledged, for example, by: AACTE, the Center for Teaching Quality, the Council of Chief State School Officers, the National Board for Professional Teaching Standards, the National Comprehensive Center on Teacher Quality, the National Commission on Teaching and America's Future, the National Council for Accreditation of Teacher Education, the Teacher Education Accreditation Council, Teachers for a New Era, the Woodrow Wilson National Fellowship Foundation, the U.S. Congress, the U.S. Department of Education, Presidential Candidate Barack Obama, and many more.

## AACTE Member Institutions

### Alabama

Alabama A&M University  
Alabama State University  
Athens State University  
Auburn University  
Auburn University Montgomery  
Birmingham Southern College  
Jacksonville State University  
Miles College  
Samford University  
Spring Hill College  
Stillman College  
Troy University  
Tuskegee University  
University of Alabama  
University of Alabama at Birmingham  
University of Alabama Huntsville  
University of Mobile  
University of Montevallo  
University of North Alabama  
University of South Alabama  
University of West Alabama

### Alaska

University of Alaska Anchorage  
University of Alaska Fairbanks  
University of Alaska Southeast

### Arizona

Arizona State University  
Arizona State University, West Campus  
Grand Canyon University  
Northern Arizona University  
University of Arizona  
University of Phoenix Arizona

### Arkansas

Arkansas State University  
Arkansas Tech University  
Harding University  
Henderson State University  
John Brown University  
Lyon College  
Ouachita Baptist University  
Philander Smith College  
Southern Arkansas University  
University of Arkansas  
University of Arkansas at Little Rock  
University of Arkansas at Monticello  
University of Arkansas at Pine Bluff  
University of Arkansas Fort Smith  
University of Central Arkansas  
University of the Ozarks

### California

Alliant International University  
California Lutheran University  
California Polytechnic State University  
California State Polytechnic Univ. Pomona  
California State University Stanislaus

California State University Bakersfield  
California State University Chico  
California State Univ. Dominguez Hills  
California State University East Bay  
California State University Fresno  
California State University Fullerton  
California State University Long Beach  
California State University Los Angeles  
California State University Northridge  
California State Univ. San Bernardino  
California State University Sacramento  
California State University San Marcos  
Chapman University  
Claremont Graduate University  
Loyola Marymount University  
National University  
Pepperdine University  
Point Loma Nazarene University  
Saint Mary's College of California  
San Diego State University  
San Jose State University  
Sonoma State University  
Stanford University  
Touro University California  
University of California Los Angeles  
University of La Verne  
University of San Diego  
University of San Francisco  
University of Southern California  
University of the Pacific

### Colorado

Adams State College  
Colorado College  
Colorado State University  
Fort Lewis College  
Jones International University  
Metropolitan State College  
University of Colorado at Boulder  
University of Colo. at Colorado Springs  
University of Colorado Denver  
University of Denver  
University of Northern Colorado  
University of Phoenix Colorado

### Connecticut

Central Connecticut State University  
Eastern Connecticut State University  
Fairfield University  
Quinnipiac University  
Sacred Heart University  
Saint Joseph College  
Southern Connecticut State University  
University of Connecticut  
University of Hartford  
Western Connecticut State University

### Delaware

Delaware State University  
University of Delaware

Wesley College  
Wilmington University

### District of Columbia

American University  
Catholic University of America  
Gallaudet University  
George Washington University  
Howard University  
Trinity College  
University of the District of Columbia

### Florida

Bethune Cookman University  
Florida A&M University  
Florida Atlantic University  
Florida Gulf Coast University  
Florida International University  
Florida State University  
Nova Southeastern University  
Saint Leo University  
Southeastern University  
University of Central Florida  
University of Florida  
University of Miami  
University of North Florida  
University of South Florida  
University of South Florida St. Petersburg  
University of West Florida  
Warner University

### Georgia

Albany State University  
Armstrong Atlantic State University  
Augusta State University  
Berry College  
Brenau University  
Brewton Parker College  
Clark Atlanta University  
Clayton State University  
Columbus State University  
Dalton State College  
Emory University  
Fort Valley State University  
Georgia College & State University  
Georgia Southern University  
Georgia Southwestern State University  
Georgia State University  
Kennesaw State University  
Macon State College  
Mercer University  
North Georgia College & State University  
Paine College  
Spelman College  
University of Georgia  
University of West Georgia  
Valdosta State University

### Hawaii

University of Hawaii at Manoa



University of Hawaii West Oahu  
University of Phoenix Hawaii

### **Idaho**

Boise State University  
College of Idaho  
Idaho State University  
Lewis Clark State College  
Northwest Nazarene University  
University of Idaho

### **Illinois**

Augustana College  
Aurora University  
Bradley University  
Chicago State University  
Columbia College Chicago  
Concordia University  
DePaul University  
Dominican University  
Eastern Illinois University  
Elmhurst College  
Governors State University  
Greenville College  
Illinois College  
Illinois State University  
Lewis University  
Loyola University Chicago  
McKendree University  
Millikin University  
National Louis University  
North Park University  
Northeastern Illinois University  
Northern Illinois University  
Olivet Nazarene University  
Roosevelt University  
Saint Xavier University  
Southern Illinois University Carbondale  
Southern Illinois University Edwardsville  
University of Illinois at Chicago  
University of Illinois at Urbana Champaign  
Western Illinois University  
Wheaton College

### **Indiana**

Anderson University  
Ball State University  
Butler University  
DePauw University  
Franklin College  
Goshen College  
Grace College  
Huntington University  
Indiana State University  
Indiana University  
Indiana University East  
Indiana University Kokomo  
Indiana University Northwest  
Indiana Univ. Purdue Univ. Fort Wayne  
Indiana University South Bend  
Indiana University Southeast  
Indiana Wesleyan University

Manchester College  
Marian University  
Oakland City University  
Purdue University  
Purdue University Calumet  
Purdue University North Central  
Saint Joseph's College  
Saint Mary of the Woods College  
Saint Mary's College  
Taylor University  
University of Evansville  
University of Indianapolis  
University of Notre Dame  
University of Southern Indiana  
Valparaiso University  
Wabash College

### **Iowa**

Ashford University  
Central College  
Clarke College  
Drake University  
Graceland University  
Iowa State Univ. of Science and Tech.  
Loras College  
Morningside College  
Mount Mercy College  
Northwestern College  
Saint Ambrose University  
Simpson College  
University of Iowa  
Wartburg College

### **Kansas**

Baker University  
Benedictine College  
Emporia State University  
Fort Hays State University  
Kansas State University  
MidAmerica Nazarene University  
Ottawa University  
Pittsburg State University  
Southwestern College  
Tabor College  
University of Kansas  
University of Saint Mary  
Washburn University  
Wichita State University

### **Kentucky**

Asbury College  
Bellarmine University  
Berea College  
Brescia University  
Campbellsville University  
Eastern Kentucky University  
Georgetown College  
Kentucky State University  
Lindsey Wilson College  
Morehead State University  
Murray State University  
Northern Kentucky University

Pikeville College  
Spalding University  
Thomas More College  
Transylvania University  
Union College  
University of Kentucky  
University of Louisville  
University of the Cumberlands  
Western Kentucky University

### **Louisiana**

Centenary College of Louisiana  
Dillard University  
Grambling State University  
Louisiana College  
Louisiana State University Alexandria  
Louisiana State Univ. and A&M College  
Louisiana State University Shreveport  
Louisiana Tech University  
Nicholls State University  
Northwestern State University  
Southeastern Louisiana University  
Southern University and A&M College at  
Baton Rouge  
Southern University at New Orleans  
University of Louisiana at Lafayette  
University of Louisiana at Monroe  
University of New Orleans  
Xavier University of Louisiana

### **Maine**

University of Maine  
University of Maine at Farmington  
University of Southern Maine

### **Maryland**

Bowie State University  
Coppin State University  
Frostburg State University  
Hood College  
Johns Hopkins University  
Loyola College in Maryland  
McDaniel College  
Morgan State University  
Mount Saint Mary's University  
Salisbury University  
Stevenson University  
Towson University  
University of Maryland Baltimore County  
University of Maryland College Park  
University of Maryland Eastern Shore  
University of Maryland University College

### **Massachusetts**

Boston College  
Bridgewater State College  
Eastern Nazarene College  
Framingham State College  
Harvard University  
Lesley University  
Northeastern University  
Salem State College

Suffolk University  
University of Massachusetts Amherst  
University of Massachusetts Boston  
University of Massachusetts Dartmouth  
University of Massachusetts Lowell  
Westfield State College  
Wheelock College

### **Michigan**

Andrews University  
Calvin College  
Central Michigan University  
Eastern Michigan University  
Ferris State University  
Grand Valley State University  
Madonna University  
Michigan State University  
Northern Michigan University  
Oakland University  
Saginaw Valley State University  
Spring Arbor University  
University of Detroit Mercy  
University of Michigan  
University of Michigan Flint  
Wayne State University  
Western Michigan University

### **Minnesota**

Augsburg College  
Bemidji State University  
Bethel University  
College of St. Benedict/St. John's Univ.  
College of Saint Scholastica  
Concordia College  
Concordia University Saint Paul  
Gustavus Adolphus College  
Hamline University  
Metropolitan State University  
Minnesota State University Mankato  
Minnesota State University Moorhead  
Northwestern College  
Saint Catherine University  
Saint Cloud State University  
Saint Olaf College  
University of Minnesota  
University of Minnesota Duluth  
University of Minnesota Morris  
University of Saint Thomas  
Walden University  
Winona State University

### **Mississippi**

Alcorn State University  
Blue Mountain College  
Delta State University  
Jackson State University  
Millsaps College  
Mississippi College  
Mississippi State University  
Mississippi University for Women  
Mississippi Valley State University  
University of Mississippi

University of Southern Mississippi  
William Carey College

### **Missouri**

Avila University  
College of the Ozarks  
Culver-Stockton College  
Drury University  
Evangel University  
Fontbonne University  
Harris-Stowe State University  
Lincoln University  
Lindenwood University  
Maryville University of Saint Louis  
Missouri Baptist University  
Missouri Southern State University  
Missouri State University  
Missouri Western State University  
Northwest Missouri State University  
Park University  
Rockhurst University  
Southeast Missouri State University  
University of Central Missouri  
University of Missouri at Kansas City  
University of Missouri Columbia  
University of Missouri Saint Louis  
Washington University  
Webster University  
William Jewell College

### **Montana**

Montana State University  
Montana State University Billings  
University of Great Falls  
University of Montana  
University of Montana Western

### **Nebraska**

Chadron State College  
Concordia University  
Creighton University  
Doane College  
Hastings College  
Midland Lutheran College  
Nebraska Wesleyan University  
Peru State College  
Union College  
University of Nebraska at Kearney  
University of Nebraska at Omaha  
University of Nebraska Lincoln  
Wayne State College  
York College

### **Nevada**

Nevada State College  
Nova Southeastern University Nevada  
University of Nevada Las Vegas  
University of Phoenix Las Vegas

### **New Hampshire**

Keene State College  
Plymouth State University  
University of New Hampshire

### **New Jersey**

Caldwell College  
College of New Jersey  
Georgian Court University  
Kean University  
Monmouth University  
Montclair State University  
New Jersey City University  
Princeton University  
Ramapo College of New Jersey  
Richard Stockton College of New Jersey  
Rider University  
Rowan University  
Rutgers University New Brunswick  
Seton Hall University  
William Paterson University of New Jersey

### **New Mexico**

Eastern New Mexico University  
New Mexico Highlands University  
New Mexico State University  
University of New Mexico  
Western New Mexico University

### **New York**

Adelphi University  
Bank Street College of Education  
Brooklyn College of CUNY  
Canisius College  
City College of New York of CUNY  
College of Saint Rose  
College of Staten Island, CUNY  
Columbia University  
Dowling College  
D'Youville College  
Five Towns College  
Fordham University Lincoln Center  
Hofstra University  
Hunter College of CUNY  
Iona College  
Lehman College of CUNY  
Manhattanville College  
Molloy College  
New York City College of Tech., CUNY  
New York Institute of Technology  
New York University  
Niagara University  
Pace University  
Queens College of CUNY  
Sage Colleges  
Saint Bonaventure University  
Saint John Fisher College  
Saint Thomas Aquinas College  
Siena College  
SUNY College at Cortland  
SUNY at New Paltz  
SUNY College at Oneonta  
SUNY College at Brockport  
SUNY Buffalo State College  
SUNY at Geneseo  
SUNY at Oswego



Syracuse University  
Utica College  
Wagner College  
York College of CUNY

### **North Carolina**

Barton College  
Bennett College  
Campbell University  
Chowan University  
Davidson College  
East Carolina University  
Elizabeth City State University  
Elon University  
Fayetteville State University  
Gardner-Webb University  
Greensboro College  
Johnson C Smith University  
Lees McRae College  
Lenoir Rhyne University  
Livingstone College  
Meredith College  
Methodist College  
North Carolina A&T State University  
North Carolina Central University  
North Carolina State University  
Peace College  
Saint Augustine's College  
Salem College  
Shaw University  
University of North Carolina at Chapel Hill  
University of North Carolina at Charlotte  
University of N. Carolina at Greensboro  
University of North Carolina at Pembroke  
University of North Carolina Wilmington  
Wake Forest University  
Western Carolina University  
Wingate University  
Winston-Salem State University

### **North Dakota**

Dickinson State University  
Mayville State University  
Minot State University  
North Dakota State University  
University of North Dakota  
Valley City State University

### **Ohio**

Baldwin-Wallace College  
Bluffton University  
Bowling Green State University  
Capital University  
Case Western Reserve University  
Central State University  
Cleveland State University  
Heidelberg University  
Hiram College  
John Carroll University  
Kent State University  
Lourdes College  
Marietta College

Miami University  
Mount Vernon Nazarene University  
Notre Dame College  
Ohio Dominican University  
Ohio Northern University  
Ohio State University  
Ohio University  
Ohio Wesleyan University  
Otterbein College  
Shawnee State University  
University of Akron  
University of Cincinnati  
University of Dayton  
University of Findlay  
University of Rio Grande  
University of Toledo  
Urbana University  
Ursuline College  
Walsh University  
Wittenberg University  
Wright State University  
Xavier University  
Youngstown State University

### **Oklahoma**

Cameron University  
East Central University  
Langston University  
Northeastern State University  
Northwestern Oklahoma State University  
Oklahoma Baptist University  
Oklahoma Christian University  
Oklahoma City University  
Oklahoma Panhandle State University  
Oklahoma State University  
Oklahoma Wesleyan University  
Oral Roberts University  
Southeastern Oklahoma State University  
Southern Nazarene University  
Southwestern Oklahoma State University  
University of Central Oklahoma  
University of Oklahoma  
Univ. of Science and Arts of Oklahoma

### **Oregon**

George Fox University  
Lewis and Clark College  
Oregon State University  
Pacific University  
Portland State University  
Southern Oregon University  
University of Oregon  
University of Portland  
Western Oregon University  
Willamette University

### **Pennsylvania**

Alvernia College  
Bloomsburg University of Pennsylvania  
California University of Pennsylvania  
Cheyney University  
Duquesne University

Edinboro University of Pennsylvania  
Gannon University  
Indiana University of Pennsylvania  
King's College  
Kutztown University  
Lehigh University  
Lincoln University of Pennsylvania  
Lock Haven University  
Mansfield University  
Millersville University of Pennsylvania  
Penn State Harrisburg  
Penn State University  
Shippensburg University  
Slippery Rock University of Pennsylvania  
Temple University  
University of Pennsylvania  
University of Pittsburgh  
University of Scranton  
Widener University

### **Puerto Rico**

University of Phoenix Puerto Rico  
University of Puerto Rico Rio Piedras

### **Rhode Island**

Providence College  
Rhode Island College  
Roger Williams University  
Salve Regina University  
University of Rhode Island

### **South Carolina**

Anderson University  
Benedict College  
Charleston Southern University  
Citadel Military College of South Carolina  
Claflin University  
Clemson University  
Coastal Carolina University  
College of Charleston  
Erskine College  
Francis Marion University  
Furman University  
Lander University  
Limestone College  
Morris College  
Newberry College  
Presbyterian College  
South Carolina State University  
University of South Carolina  
University of South Carolina Aiken  
University of South Carolina Beaufort  
University of South Carolina Upstate  
Winthrop University  
Wofford College

### **South Dakota**

Augustana College  
Black Hills State University  
Dakota State University  
Mount Marty College  
Northern State University

South Dakota State University  
University of South Dakota

### **Tennessee**

Aquinas College  
Austin Peay State University  
Belmont University  
Carson-Newman College  
Christian Brothers University  
Crichton College  
Cumberland University  
East Tennessee State University  
Fisk University  
Freed Hardeman University  
Lee University  
LeMoyne Owen College  
Lipscomb University  
Middle Tennessee State University  
Milligan College  
South College  
Southern Adventist University  
Tennessee State University  
Tennessee Technological University  
Trevecca Nazarene University  
Union University  
University of Memphis  
University of Tennessee  
University of Tennessee at Chattanooga  
University of Tennessee at Martin  
Vanderbilt University Peabody College

### **Texas**

Angelo State University  
Austin College  
Baylor University  
Lamar University  
Midwestern State University  
Our Lady of the Lake Univ. of San Antonio  
Sam Houston State University  
Southern Methodist University  
Southwestern University  
Stephen F. Austin State University  
Texas A&M International University  
Texas A&M University  
Texas A&M University Commerce  
Texas A&M University Corpus Christi  
Texas A&M University Kingsville  
Texas Christian University  
Texas Southern University  
Texas State University San Marcos  
Texas Tech University  
Texas Woman's University  
Trinity University  
University of Houston  
University of Houston Clear Lake  
University of Houston Victoria  
University of Mary Hardin Baylor  
University of North Texas  
University of Saint Thomas  
University of Texas at Arlington  
University of Texas at El Paso

University of Texas at Tyler  
University of Texas of the Permian Basin  
University of the Incarnate Word

### **Utah**

Brigham Young University  
University of Phoenix Utah  
University of Utah  
Utah State University

### **Vermont**

University of Vermont

### **Virgin Islands**

University of the Virgin Islands

### **Virginia**

Bridgewater College  
College of William and Mary  
Eastern Mennonite University  
George Mason University  
Hampton University  
James Madison University  
Liberty University  
Longwood University  
Mary Baldwin College  
Marymount University  
Norfolk State University  
Old Dominion University  
Radford University  
Regent University  
Saint Paul's College  
University of Virginia  
Virginia Commonwealth University  
Virginia Polytechnic Inst. and State Univ.  
Virginia State University  
Virginia Union University

### **Washington**

Central Washington University  
City University of Seattle  
Eastern Washington University  
Evergreen State College  
Gonzaga University  
Northwest University  
Pacific Lutheran University  
Saint Martin's University  
Seattle Pacific University  
Seattle University  
University of Puget Sound  
University of Washington  
Washington State University  
Western Washington University  
Whitworth University

### **West Virginia**

Alderson Broaddus College  
Bethany College  
Bluefield State College  
Concord University  
Fairmont State University  
Glennville State College  
Salem International University

Shepherd University  
West Liberty University  
West Virginia State University  
West Virginia University  
West Virginia University at Parkersburg  
West Virginia Wesleyan College

### **Wisconsin**

Alverno College  
Cardinal Stritch University  
Edgewood College  
Marian University  
Marquette University  
Mount Mary College  
Silver Lake College  
University of Wisconsin Eau Claire  
University of Wisconsin Green Bay  
University of Wisconsin La Crosse  
University of Wisconsin Madison  
University of Wisconsin Milwaukee  
University of Wisconsin Oshkosh  
University of Wisconsin Parkside  
University of Wisconsin River Falls  
University of Wisconsin Stevens Point  
University of Wisconsin Stout  
University of Wisconsin Whitewater  
Viterbo University

### **Wyoming**

University of Wyoming

### **Affiliate Members**

California Commission on Teacher  
Credentialing  
Carnegie Foundation for the  
Advancement of Teaching (CA)  
Connecticut State Dept. of Education  
Hinds Community College (MS)  
Howard Community College (MD)  
J. Sargeant Reynolds Community Center  
for Teacher Education (VA)  
Kansas State Department of Education  
Maricopa Community Colleges (AZ)  
Metro High School (OH)  
Montgomery College (MD)  
Nat'l Board for Prof. Teaching Stds. (VA)  
Okla. Commiss. for Teacher Preparation  
Okla. State Regents for Higher Education  
Queensborough Comm. College, CUNY  
Rhode Island Department of Elementary  
and Secondary Education  
San Roque Charitable Trust (CA)  
South Carolina Commission on Higher  
Education  
South Carolina Department of Education  
SUNY System Administration  
University of Aberdeen (Scotland)  
University of Wisconsin System  
Administration  
Western Governors University (UT)  
Wisconsin Department of Public  
Instruction

