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CREATING POWERFUL TEACHER EDUCATION

*Wheelock does a better job of preparing early
childhood teachers than any place I know.*

—Boston school principal

*I have sought out Bank Street graduates in all
my positions in the last ten years.*

—New York City school principal

*As I look for teachers, I most immediately look
for Alverno applicants. . . . I'll take ten more teachers
like the two I've had this year.*

—Milwaukee school principal

*I take all the DTE grads I can get. . . . They are
the best teachers—outstanding, dedicated.*

It is a program that stands out.

—San Leandro, California, principal, on graduates
of the University of California at Berkeley's
Developmental Teacher Education Program

*UVA's five-year program has made a huge difference. All of
the student teachers we have had have been excellent.*

—Charlottesville, Virginia, school principal

*ETEP graduates are sought out for interviews.
[They] have an excellent success rate in our district.*

—Southern Maine principal, on graduates of the University
of Southern Maine's Extended Teacher Education Program (ETEP)

*When I hire a Trinity graduate, I know he or she will become
a school leader. These people are smart about curriculum;
they're innovative. They have the torch.*

—San Antonio high school principal

IN A WORLD WHERE EDUCATION MATTERS more than it ever has before, parents and policymakers alike are asking how to find the extraordinary teachers who can help all children acquire the increasingly complex knowledge and skills they need. As the social and economic demands for education grow, so do expectations of teachers' knowledge and skills. Teachers must be able to succeed with a wider range of learners than they were expected to teach in a time when school success was not essential for employment and participation in society. In the early 1900s, when our current school system was designed, only 5 percent of jobs required specialized knowledge and skill; today about 70 percent are "knowledge work" jobs that demand the ability to acquire and use specialized information, manage nonroutine tasks, and employ advanced technologies.

To meet these demands, virtually every state has enacted more ambitious standards for learning tied to new curriculum expectations and assessments. These standards expect students to master more challenging subject matter content, as well as to think critically, create more sophisticated products, and solve complex problems, rather than merely perform routine tasks. The standards press for deeper understanding and for student proficiency in applying knowledge that requires far more than rote recall of facts or application of rules and algorithms.

Teachers are also being asked to achieve these goals for *all* children, not just the 10–20 percent traditionally siphoned off into gifted and talented programs or honors courses. Furthermore, students have more extensive needs: as education becomes more important to life success and schools both expand the range of students they educate and include more of them in "regular" classrooms, teachers encounter more students with learning differences and disabilities; with language learning needs; and with difficult family circumstances, from acute poverty, homelessness, unemployment, and lack of medical care to violence, abuse, and abandonment. Teachers in many communities need to work as professors of disciplinary

content, facilitators of individual learning, assessors and diagnosticians, counselors, social workers, and community resource managers.

Although it is now widely accepted that teacher quality is a critical component of a successful education, there is little agreement about how to fill the nation's classrooms with teachers who can succeed at the more challenging mission of today's schools. Many still believe that good teachers are born and not made. Others believe that good teachers figure out how to teach on their own over time through classroom experience. This book starts from a different premise: if the nation's classrooms are to be filled with teachers who can teach ambitious skills to all learners, the solution must lie in large part with strong, universal teacher education.

This book is about powerful teacher education programs—programs that prepare teachers to teach a wide range of students successfully, including those who struggle to learn from their first days in the classroom. These are programs whose graduates are sought out by principals and superintendents because they prove consistently capable of creating successful classrooms and helping to lead successful schools, even in circumstances where the deck is traditionally stacked against student success.

The need for such teachers is especially great where schools are the critical lifeline for student success. It may not take much training to teach children who are already skillful learners; who are supported by highly educated parents who build home libraries, take them to museums, pay for summer enrichment programs, and hire tutors when their own knowledge runs out; who have the advantages of steady income, health care, food, and home stability; and whose language and culture are compatible with those of the adults in the school. However, these home and community supports are the exception rather than the rule in most urban (and many suburban and rural) public schools, and teachers who rely on “magical learning” that takes place outside of school are not adequately prepared to meet the real needs of their students.

The programs we describe here have long track records of developing teachers who are strongly committed to all students' learning—and to ensuring especially that students who struggle to learn can succeed. The programs also develop teachers who can *act* on their commitments; who are highly knowledgeable about learning and teaching and who have strong practical skills—teachers who can manage, with grace and purpose, the thousands of interactions that occur in a classroom each day; who know how to teach ambitious subject matter to students who learn in different ways; who can integrate solid teaching of basic skills with support for student invention and inquiry; who can teach language and literacy skills in every grade and across the curriculum; and who can work

effectively with parents and colleagues to assemble the resources and motivations needed to help children make progress.

Hide and Seek: Looking for Good Teacher Education Programs

Such powerful teacher education programs are, by most accounts, relatively rare. Indeed, some opponents of professionalization might consider the very notion of an effective teacher education program to be an oxymoron (see, for example, Ballou and Podgursky, 1999). Teacher education has long been criticized as a weak intervention in the life of a teacher, barely able to make a dent in the ideas and behaviors teachers bring with them into the classroom from their own days as students. Since normal schools for training teachers were incorporated into universities in the 1950s, a steady drumbeat of complaints has reiterated the perceptions of program fragmentation, weak content, poor pedagogy, disconnection from schools, and inconsistent oversight of teachers-in-training (see, for example, Conant, 1963; Clifford and Guthrie, 1988; Goodlad, 1990).

Although there are certainly accounts of teachers who have valued their preparation, more popular are stories of teachers who express disdain for their training, suggesting that they learned little in their courses that they could apply to the classroom, or that if there was any benefit to their training it was to be found primarily in student teaching. These views have often led to the perception that if there is anything to be learned about teaching, it can be learned on the job, through trial and error if not with supervision. Indeed, U.S. Secretary of Education Rod Paige argued in his 2002 report on teacher quality that “burdensome requirements” for education coursework that make up “the bulk of current teacher certification regimes” should be removed from teacher certification standards (U.S. Department of Education, 2002, p. 8). The Secretary’s report argued that certification should emphasize tests of verbal ability and content knowledge while making most education coursework and student teaching optional (p. 19).

For all the criticism, there is substantial and growing evidence that teacher education matters for teacher effectiveness. (See Chapter Two for discussion of this evidence.) Furthermore, over the many years since Horace Mann created the first normal schools for teachers—and increasingly in the last two decades as teacher education reforms have taken hold—some places where teachers are taught have been known among practitioners as extraordinarily effective.

This book is based on case studies of seven such programs—public and private, large and small, undergraduate and graduate—that, despite their

surface differences, share a great deal in terms of how they go about the work of preparing people to teach. Spanning the country, the programs are at Alverno College in Milwaukee; Bank Street College in New York City; Trinity University in San Antonio; the University of California at Berkeley; the University of Southern Maine near Portland; the University of Virginia in Charlottesville; and Wheelock College in Boston. These seven programs are by no means the only ones that could have been studied. They were selected from a much longer list of candidates in order to represent elementary and secondary programs in distinctive institutions serving a variety of clientele in representative parts of the country.

Two of the programs, at Alverno and Wheelock, are undergraduate programs for elementary teaching candidates. Both can be finished in the traditional four years of undergraduate school by those who focus intensely on program requirements, or in an additional semester or two by those who carry a more normal load. Two other programs, at Trinity and UVA, are designed as five-year models that result in a bachelor's degree in the discipline to be taught by their secondary teaching candidates, plus a master's degree in education. Three are graduate-level programs that serve individuals who completed their bachelor's degree and later decided to teach. The Extended Teacher Education Program (ETEP) program at Southern Maine is a one-year internship model. Bank Street College's graduate program, serving mostly midcareer recruits to teaching, can be completed in eighteen months. The Developmental Teacher Education (DTE) program at Berkeley is a two-year graduate-level program.

A team of researchers conducted in-depth case studies of these programs, interviewing and surveying graduates and employers of the graduates (comparing them to a random comparison group of new teachers); observing the programs in action and the practices of graduates in local schools; and studying syllabi, assignments, clinical placements, and other evidence of how the programs work. Through this intensive examination of these places, we set out to learn how good teachers can be "made" and how the critical components of effective preparation can become more widely available.

Better Than Good: The Contemporary Challenge for Teacher Education

Although the seven programs differ markedly in locale and program design, they have in common an approach that prepares teachers to practice in ways that we describe as both *learning-centered* (that is, supportive of focused, in-depth learning that results in powerful thinking and

proficient performance on the part of students) and *learner-centered* (responsive to individual students' experiences, interests, talents, needs, and cultural backgrounds). These programs go well beyond preparing teachers to manage a calm classroom and make their way through a standard curriculum by teaching to the middle of the class. They help teachers learn to reach students who experience a range of challenges and teach them for deep understanding. They also help teachers learn not only how to cope with the students they encounter but how to expand children's aspirations as well as accomplishments, thereby enhancing educational opportunity and social justice.

The study was designed to understand the work and outcomes of these programs and to *teach* about the teaching of teachers, by revealing in detail how it is these programs accomplish their goals. Alongside the myths about teaching and teacher education that predominate in our society, the stuff of teacher education is to a great extent a mystery.

Most people tend to think of the act of teaching as largely intuitive: someone knows something and then "teaches" it to others—a fairly straightforward transmission model. From this image, the job of teacher preparation appears equally simple: be sure that candidates know what they are to teach and have some tools of the trade for presenting that information to students. However, as mountains of research now demonstrate, this notion of transmission teaching doesn't actually work most of the time. The reality of effective teaching is much different: successful teachers link what students already know and understand to new information, correcting misimpressions, guiding learners' understanding through a variety of activities, providing opportunities for application of knowledge, giving useful feedback that shapes performance, and individualizing for students' distinctive learning needs. They do all this while juggling the social and academic needs of the group and of individuals, the cognitive and motivational consequences of their moment-to-moment teaching decisions, the cultural and community context within which they teach, and much more.

How does one help people learn to do this impossible task? Considered in this way, teacher education seems even more impossible than teaching itself, especially given the challenge of preparing a wide range of individuals to become teachers who can in turn enable an enormously diverse group of students to meet much higher standards than have ever before been expected of education systems. Thus the goals for teacher education today are not just to prepare teachers to deliver a curriculum or get through the book but actually to ensure learning for students with a broad assortment of needs.

A New Mission for Teaching

The old transmission teaching model (which succeeded for some and left many more behind) is not adequate for a knowledge-based society that increases the cognitive requirements of most employment and of life in general. First of all, the kind of learning required to produce students who are strong thinkers and problem solvers creates greater unpredictability in teaching because it cannot be managed primarily through rote memorization or drill. Students must take on novel problems and learn through their own inquiry to find, synthesize, analyze, and interpret information. As students do this, teachers must be able to understand, monitor, and capitalize on student thinking if they are to support a process of knowledge construction that is unique to each one (Darling-Hammond, 1997).

In addition, formulaic approaches to teaching that do not take into account the experiences and needs of students are less and less successful as student populations become more diverse and expectations for student learning grow more ambitious. The image of the student as an empty vessel who can be filled up with facts, drilled on skills, and thus made into an educated person guided much learning theory for the first half of the twentieth century. In this image, teachers needed only to know what facts to pour in and what skills to drill. However, several decades of research have clearly demonstrated that learning—particularly learning that supports problem solving and transfer of knowledge to new situations—does not occur in this way. As the National Academy of Sciences summary of *How People Learn* notes (Donovan and Bransford, 2005), three fundamental and well-established principles of learning are particularly important for teaching:

1. *Students come to the classroom with prior knowledge that must be addressed if teaching is to be effective.* If what they know and believe is not engaged, learners may fail to grasp the new concepts and information that are taught, or they may learn them for purposes of a test but not be able to apply them elsewhere. This means that teachers must understand what students are thinking and how to connect with their prior knowledge if they are to ensure real learning. Because students from a variety of cultural contexts and language backgrounds come to school with distinctive experiences, they present a range of preconceptions and knowledge bases that teachers must take into account in designing instruction.

2. *Students need to organize and use knowledge conceptually if they are to apply it beyond the classroom.* Memorizing is not enough. To develop competence, they must understand how facts and ideas fit

together within a conceptual framework, and they must apply what they are learning. This means that teachers must structure the material around core ideas and engage students actively in using the material, incorporating applications and problem solving while continually assessing students' understanding. Successful teachers offer carefully designed "scaffolds" to help students take each step in the learning process with assistance appropriate to each student's needs and progress.

3. *Students learn more effectively if they understand how they learn and how to manage their own learning.* A metacognitive approach to instruction can help students learn to take control of their own learning. Through modeling and coaching, students can see how to use a range of learning strategies, such as predicting outcomes, creating explanations to improve understanding, noting areas of confusion, activating background knowledge, planning ahead, and apportioning time and memory.

Why Teachers Must Become Adaptive Experts

Modern learning theory implies that teachers must be diagnosticians, knowledge organizers, and skilled coaches to help students master complex information and skills. Thus the desire to succeed at much more formidable learning goals with a much more varied student population radically changes the nature of teaching and the challenges of teacher preparation.

If all students pursued an identical path to understanding, learning might be ensured by designing the perfect scripted curriculum. Teachers could be prepared to implement a prescribed set of lessons using a limited range of teaching techniques. This is what scientific managers of schooling and inventors of "teacher-proof curriculum" have hoped since the late nineteenth century. However, given human diversity and cognitive complexity, learning cannot be achieved through a single set of activities that presume standardized experiences and approaches to learning. Teaching that aims at deep learning, not merely coverage of material, requires sophisticated judgment about how and what students are learning, what gaps in their understanding need to be addressed, what experiences will allow them to connect what they know to what they need to know, and what instructional adaptations can ensure that they reach common goals.

In fact, the more common the expectations for achievement are, the more variable must be the teaching strategies for reaching these goals with a range of learners. If teaching assumes a single mode and pace of learning, students who start at different places and learn in different ways will end with greatly unequal achievement. This is currently the case in the

United States, where the range in school outcomes is much wider than in other industrialized countries (OECD, 1995). As John Dewey (1929) noted in his *Sources of a Science of Education*, the better prepared teachers are, the more their practice becomes differentiated in response to the needs of individual students, rather than routinized: “Command of scientific methods and systematized subject matter liberates individuals; it enables them to see new problems, devise new procedures, and in general makes for diversification rather than for set uniformity. . . . This knowledge and understanding render [the teacher’s] practice more intelligent, more flexible, and better adapted to deal effectively with concrete phenomena of practice. . . . His ability to judge being enriched, he has a wider range of alternatives to select from in dealing with individual situations” (pp. 12, 20–21).

If teachers are to help learners who begin and proceed differently reach similar outcomes, they will need to be able to engage in disciplined experimentation, incisive interpretation of complex events, and rigorous reflection to adjust their teaching based on student outcomes. This means that teachers must become “adaptive experts” (Hatano and Inagaki, 1986; Bransford, Brown, and Cocking, 1999) who cannot only use routines that afford greater efficiency, but also their ability to innovate where routines are not enough—to figure out what the problems are when students are not learning and to adapt materials, teaching strategies, or supports accordingly. Adaptive experts also know how to continuously expand their expertise, restructuring their knowledge and competencies to meet new challenges. Preparing teachers who can learn *from* teaching, as well as learning *for* teaching, is a key challenge for teacher education today, one that these seven programs successfully engage.

Preparing Teachers for Responsive Practice

This book seeks to answer a question not yet addressed in the conversation on education reform: How can we prepare teachers for this daunting mission? Although there has been much discussion about the structures of teacher education programs (four years or five, undergraduate or graduate) and the certification categories into which programs presumably fit (“traditional,” “alternative”), there has been much less discussion about what goes on *within* the black box of the program—inside the courses and clinical experiences that candidates encounter—and how the experiences programs design for students cumulatively add up to a set of knowledge, skills, and dispositions that determine what teachers actually do in the classroom. In the coming chapters, we describe the content and

processes a set of highly effective programs employ and their outcomes in terms of graduate's feelings of preparedness, their actual practice, and their success with students.

This study confronts some widely shared myths about teaching and teacher education: that good teachers are born and not made, that good practice cannot really be taught but only be intuited through trial and error, and that few can ever master complex teaching practices or attend to individual learners' needs. Those who believe the myths argue that teacher-proof curricula rather than well-trained teachers should be the target of educational investment. (Chapter Two discusses the evidence regarding this issue.)

Perhaps most dangerous is the myth that if high-quality programs of teacher education are lacking, requirements for preparing teachers should be abandoned altogether, since they constitute merely an unnecessary "barrier" to entry. This myth undergirds policy proposals like those put forth by the Fordham Foundation (Kanstoroom and Finn, 1999) that argue for eliminating teacher certification and pursuing alternatives that put would-be teachers directly into classrooms to learn by trial-and-error and to be fired later if they are not successful.

Though lacking empirical grounding, these myths drive much policy work and deflect attention from needed investment in high-quality teacher preparation. Furthermore, proposals to avoid preparing teachers are gaining currency in some states, with at least two dangerous outcomes for children and for the nation. One is that access to knowledge about teaching will never really become widespread; as the need for expert teaching grows exponentially, teachers will not gain access to the knowledge they need to be effective. The other is that students' access to well-trained teachers will continue to be a crapshoot, with the poorest odds going to those with the least clout and the greatest needs.

As was true of medical education in the early 1900s, teacher education ranges widely, from a few weeks of summer orientation to intensive multiyear graduate preparation like that required in France, Germany, Sweden, Finland, and elsewhere. Similarly, when Abraham Flexner conducted his study of medical education between 1908 and 1910, doctors could be prepared in a three-week program of training featuring memorized lists of symptoms and cures, or at the other extreme in a graduate program of medicine (as at Johns Hopkins University) with extensive coursework in the sciences of medicine and clinical training in the newly invented teaching hospital.

In his introduction to the Flexner Report, Henry Pritchett, president of the Carnegie Foundation for the Advancement of Teaching, noted that

although there was a growing science of medicine, most doctors did not get access to this knowledge because of the great unevenness in medical training. He observed that “very seldom, under existing conditions, does a patient receive the best aid which it is possible to give him in the present state of medicine, . . . [because] a vast army of men is admitted to the practice of medicine who are untrained in sciences fundamental to the profession and quite without a sufficient experience with disease” (Flexner and Pritchett, 1910, p. x). He attributed this problem to the failure of many universities to incorporate advances in medical education into their curricula.

As in teaching today, some argued against the professionalization of medicine, feeling medical practice could best be learned by following another doctor around in a buggy, learning to apply leeches to reduce fevers and selling tonics that purported to cure everything from baldness to cancer. Flexner’s identification of universities he deemed successful in conveying new knowledge about causes and treatment of disease and in creating strong training was the stimulus for reforming medical education. Despite resistance from many would-be doctors and from weaker training sites, the enterprise was transformed over the subsequent two decades, as a common curriculum was adopted by the accrediting bodies that approved all programs and incorporated into the licensing tests used to admit all candidates to practice.

Getting Knowledge to Teachers

Without similar efforts in teacher education, much of what is known about learning and teaching will not reach those most desperate to have it. Although many who enter teaching initially believe they do not need specialized training, most learn quickly that teaching is much more difficult than they thought, and they either desperately seek out additional training, construct a teaching style focused on control (often by “dumbing down” the curriculum to what can be easily managed), or leave in despair. Some, like this recruit who entered teaching after a few weeks of summer training, find that they end up blaming the students for their own lack of skills:

I stayed one year. I felt it was important for me to see the year out but I didn’t necessarily feel like it was a good idea for me to teach again without something else. I knew if I wanted to go on teaching there was no way I could do it without training. I found myself having problems with cross-cultural teaching issues—blaming my

kids because the class was crazy and out of control, blaming the parents as though they didn't care about their kids. It was frustrating to me to get caught up in that. Even after only three-fourths of a semester at Berkeley I have learned so much that would have helped me then.

—A recruit who later entered the teacher preparation program at University of California at Berkeley

Inadequate preparation also increases teacher attrition, which exacerbates the revolving door that contributes to teacher shortages. Several studies report beginning teachers who lack professional training are about twice as likely to leave teaching in their first year as those who have had student teaching and preparation in such areas as learning theory, child development, and curriculum (Henke, Chen, and Geis, 2000; NCTAF, 2003; Luczak, 2004).

This has been borne out in the aftermath of the crash courses on teaching many states and districts created to get would-be teachers into classrooms quickly (see, for example, Battenfeld, 2001; Fowler, 2001; Goodnough, 2000). A vivid report in the St. Petersburg (Florida) *Times* in January 2001 reported the loss of nearly one hundred area recruits in the first half of the school year, most of them midcareer alternative certification candidates who lacked education training but were supposed to learn on the job. Microbiologist Bill Gaulman, a fifty-six-year-old African American former Marine and New York City firefighter, left before midyear. He reflected the experience of many: "The word that comes to mind is 'overwhelmed.' People told me 'Just get through that first year.' I was like, 'I don't know if I can get through this week.' I didn't want to shortchange the kids. I didn't want to fake it. I wanted to do it right." Erika Lavrack, a twenty-nine-year-old psychologist without education training who was assigned to teach special education, resigned on her second day. "The kids were nice enough. But they were running all over the place. There was no way I could teach them anything if I couldn't get them to sit down. I didn't know what to do" (Hegarty, 2001).

Contrast these recruits' experiences with those of two young teachers in the tough urban district of Oakland, California. The first attended a program that had been referred to us for our study:

I arrived at my first teaching job five years ago, midyear. . . . The first-grade classroom in which I found myself had some two dozen

ancient and tattered books, an incomplete curriculum, and an incomplete collection of outdated content standards. Such a placement is the norm for a beginning teacher in my district. I was prepared for this placement, and later came to thrive in my profession, because of the preparation I received in my credential program. The concrete things Mills College gave me were indispensable to me my first year as they are now: the practice I received developing appropriate curricula, exposure to a wide range of learning theories, training in working with non-English-speaking students and children labeled "at risk. . . ." It is the big things, though, that continue to sustain me as a professional and give me the courage to remain and grow: my understanding of the importance of learning from and continually asking questions about my own practice, the value I recognize in cultivating collegial relationships, and the development of a belief in my moral responsibility to my children and to the institution of public education. . . . I attribute this wholly to the training, education, and support provided to me by Mills.

The second finished the UC Berkeley Developmental Teacher Education program we studied: "I'm miles ahead of other first-year teachers. There are five other first-year teachers here this year. I am more confident. I had a plan for where I was trying to go. The others spent more time filling days. . . . I knew what I was doing and why—from the beginning."

Unfortunately, most students in poor urban schools, especially students of color from low-income families, are much less likely to encounter this kind of confident, well-prepared teacher than they are to meet a string of underprepared teachers who suffer from their lack of training and often leave before they learn how to help students succeed. Nationwide, poor and minority students are far more likely than affluent students to have untrained and inexperienced teachers (NCTAF, 1996, 2003). In states that allow large loopholes in the certification and preparation requirements for teachers, there are schools where few teachers complete formal preparation for their job and where many have only the barest rudiments of initial training (Darling-Hammond, 2003, 2004). In virtually every case, these are segregated schools serving exclusively so-called minority students.

In states opting to reduce standards for teaching rather than promoting incentives to enter the profession, the most vulnerable students—those who most need strong teachers—are least likely to get them. Thus the second outcome of proposals to reduce requirements for teacher preparation

is that existing inequities in access to expert teaching for rich and poor students will grow more severe. To advance knowledge about teaching, spread good practice, and enhance equity, strong preparation for teachers must become universal, not a rare occurrence available only to a lucky few.

Studying Successful Programs

The seven programs described in this book were selected after extensive review of evidence, including a nationwide reputational survey of researchers, expert practitioners, and scholars of teacher education; interviews with local employers about whom they prefer to hire and why; and outcomes from prior surveys of program graduates. (Appendix A discusses the study's methodology.) To these data about program outcomes, we added a survey of more than nine hundred beginning teachers about their preparation and practices, including graduates from these programs plus a national random sample of beginning teachers, used as a comparison group. We also surveyed the principals of program graduates about their views of graduates' abilities compared to those of other beginning teachers, and we observed graduates' classroom practice in their early years as teachers.

The study did three things. First, it documented the goals, strategies, content, and processes of programs widely acknowledged as exemplars for preparing prospective teachers to engage in skillful, learner-centered practice. Using a standard set of observation and interview protocols as well as survey instruments, a team of researchers examined all aspects of the program of study and clinical practice engaged in by students, by surveying graduates and their employers; shadowing and interviewing students; visiting classes, seminars, and professional development school sites; collecting record data (syllabi, assignments, student work, program descriptions, statistics); and observing and interviewing university-based and school-based faculty about the intentions, processes, and outcomes of their work.

Second, the study documented the capabilities of the prospective teachers who graduate from these programs. It examined the teachers' own work during teacher education and in the field (direct observations as well as artifacts of practice: portfolios, exhibitions, lesson plans, assignments, samples of students' work); surveys and interviews of graduates about how well prepared they felt in various domains when they entered the classroom; interviews with faculty and administrators in the schools where graduates teach; surveys of principals comparing the knowledge and skills

of these candidates to others whom they have hired; and record data from other surveys and accreditation reviews.

Finally, the study examined what policies, organizational features, resources, and relationships enabled these programs to be successful, taking into account university and state policy contexts. The end result is a picture of what good teacher education looks like in practice, what those who have experienced it can do, and what it takes to provide this quality of preparation within and across universities and schools.

The seven institutions use distinctive models of preparation: undergraduate models that can be completed in four or four and a half years, five-year models combining undergraduate and graduate preparation in content and pedagogy, and postbaccalaureate models. Some have created professional development school relationships while others organize student teaching more traditionally; some use cohort models while others do not; some attract current or recent college graduates while others attract midcareer recruits into teaching. Together they represent diverse strategies for teacher education serving a range of clientele in different contexts.

The programs also have strong commonalities that are described in the chapters that follow:

- In the remainder of Part One, I lay the groundwork for the discussion of program models by discussing how teacher education matters and why it is enormously difficult (Chapter Two). Chapter Three then presents program overviews and evidence of success.

- The next three chapters, comprising Part Two, describe how these programs organize themselves to impart the knowledge, skills, and practices they value. Chapter Four discusses how they conceptualize the knowledge base for teaching and construct their curriculum, Chapter Five explains how the programs seek to develop and assess this knowledge through performance assessments that connect theory and practice, and Chapter Six illustrates how they construct clinical experiences—tightly interwoven with coursework—that accomplish this.

- Part Three describes how the programs bring it all together: how they help teachers learn to manage the age-old dialectic between subject matter and students (Chapter Seven), teach in ways that promote equity (Chapter Eight), and develop strategies for reaching all learners, including those with learning differences (Chapter Nine).

- The final two chapters (Part Four) address the issues that must be confronted if powerful teacher education is to become the norm, rather than the exception. Chapter Ten examines the change processes these

programs have undertaken to strengthen their work and the institutional challenges that must be confronted within universities. Chapter Eleven takes up the broader policy issues affecting teacher education, arguing for a professional policy agenda to support teachers' access to knowledge and students' access to well-prepared teachers.