

No Dream Denied

A Pledge to America's Children

NATIONAL COMMISSION ON
Teaching and
America's
Future

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REPORT

**NATIONAL COMMISSION ON
TEACHING AND AMERICA'S FUTURE**

HON. JAMES B. HUNT JR.,
CHAIRMAN

THOMAS G. CARROLL, Ph.D.,
EXECUTIVE DIRECTOR

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C O N T E N T S

FOREWORD	3
WHAT STILL MATTERS MOST: COMPETENT, CARING, QUALIFIED TEACHERS IN SCHOOLS ORGANIZED FOR SUCCESS	5
WHAT WE'VE LEARNED: TEACHER RETENTION HAS BECOME A NATIONAL CRISIS	19
STRATEGY 1 SCHOOLS WHERE DREAMS CAN GROW: CREATING LEARNING COMMUNITIES	41
STRATEGY 2 BUILDING DREAMS ON A STRONG FOUNDATION: QUALITY TEACHER PREPARATION, ACCREDITATION, AND LICENSURE	69
STRATEGY 3 FULFILLING THE DREAM OF TEACHING: A PROFESSIONALLY REWARDING CAREER	109
A CONCLUDING NOTE	143
APPENDIX	146
NOTES	148
BACKGROUND INFORMATION FOR FIGURES AND TABLES	156

FOREWORD

In 1996 the National Commission on Teaching and America's Future challenged the nation to provide every child in America with what should be his or her educational birthright: competent, caring, qualified teachers in schools organized for success. The Commission's report, *What Matters Most: Teaching for America's Future*, called for this objective to be met by 2006 and provided a series of action strategies to achieve this goal.

Well-prepared teachers are the most valuable resource a community can provide to its young people. Thousands of communities across the country have responded to the Commission's challenge, by providing their children with highly qualified teachers who are supported with strong professional teaching environments. Their schools deliver an education that ranges from good to world class, and their students are achieving at high levels.

To support these efforts, NCTAF's state partnerships have grown to 20. Through their efforts and the work of countless policymakers and researchers, we have learned a lot about how to provide the nation's children with quality teaching. We review what we have learned, and highlight promising practices that have developed since 1996, in this report.

There is good news here. But we are now more than halfway to 2006, and the fact remains that we are still not providing every child in America with quality teaching. The shortfall is particularly severe in low-income communities and rural areas, where inexperienced and underprepared teachers are too often concentrated in schools that are structured for failure, rather than success. The price paid by students is unacceptable.

We have learned something troubling since 1996. We have found that high rates of teacher turnover and attrition are undermining our efforts to achieve quality teaching for every child. Teacher retention has become a national crisis. We have concluded that "teacher shortages" will never end and that quality teaching will not be achieved for every child until we change the conditions that are driving teachers out of too many of our schools. The first section of this report documents this crisis and the strategies presented in the following sections offer an action plan to reverse this alarming trend.

Every family in America deserves public schools that work. The bipartisan passage of the *No Child Left Behind* Act of 2001 is a clear expression of national will. Its goal is to ensure that all children have an opportunity to learn—regardless of income, background, or ethnic identity. The Act is a pledge that every child will have access to high quality teaching. It is a pledge to America’s children that we must keep.

It is time for our leaders to redouble their efforts to achieve far-reaching education reform by pledging to recruit, prepare, and pay for quality teachers in schools organized for success. We need educational leaders and policymakers who are ready to write their names literally on the bottom line, to assure all of our children that their birthright is secure, that they will have schools staffed with highly qualified teachers where learning can thrive.

In this new era of accountability, our leaders will be judged by their commitment to education. They must focus on clear goals for achieving quality teaching, they must bring knowledge and wisdom to bear on the challenges they face, and they must be resolute and relentless about results.

James B. Hunt Jr.

Former Governor of North Carolina, and Chair,
National Commission on Teaching and America’s Future

WHAT STILL MATTERS MOST: COMPETENT, CARING, QUALIFIED TEACHERS IN SCHOOLS ORGANIZED FOR SUCCESS

“A child, unlike any other, yet identical to all those who have preceded and those who will follow, sits in a classroom today—hopeful, enthusiastic, curious. In that child sleeps the vision and the wisdom of the ages. The touch of a teacher will make the difference.”

Sharon M. Draper
National Board Certified Teacher and
National Teacher of the Year, 1997
*Teaching From the Heart*¹

More than half a century ago, African-American poet Langston Hughes asked the question every visionary must face: “What happens to a dream deferred?”² In response, for two generations, America has spoken from its conscience: “A dream deferred is a dream denied.”

The question of whether dreams will be denied is pointed and penetrating in the context of our schools and what happens there—or does not happen—for all of America’s children. In 1996, in recognition of the importance of a quality education, the National Commission on Teaching and America’s Future challenged the nation to provide every child with what should be his or her educational birthright: “access to competent, caring, qualified teaching in schools organized for success” by 2006.³ To support its challenge, the Commission issued a national report: *What Matters Most: Teaching for America’s Future*,⁴ which made five recommendations:

- 1. Get serious about standards, for both students *and* teachers;**
- 2. Reinvent teacher preparation and professional development;**
- 3. Fix teacher recruitment and put quality teachers in every classroom;**
- 4. Encourage and reward teacher knowledge and skill; and**
- 5. Create schools that are organized for student and teacher success.**

The Commission’s recommendations offer a blueprint for recruiting, preparing, and supporting excellent teachers. The plan calls for a dramatic departure from the status quo—one that would create a new infrastructure for professional learning and an accountability system that would ensure that quality teaching standards are met at every level.

Six years later we have achieved a national consensus that “what teachers know and can do is the most important influence on what students learn.”⁵ Now with the bipartisan passage of the No Child Left Behind Act of 2001, the Commission’s vision has become the law of the land: Every teacher in every classroom must be “highly qualified” by the 2005-06 school year.

The issue of whether the nation’s children will have quality teaching is squarely in the hands of educational leaders at the state and local levels. To help them meet that responsibility, the Commission recommended a chain of accountability composed of accreditation, licensure, and certification requirements. It called for accreditation of all schools of education. It proposed that professional standards boards be established in every state, and it challenged states to enforce high standards for entry into the profession through performance-based licensure that would test subject matter knowledge, teaching knowledge, and teaching skill. It reminded school districts that they have an obligation to ensure that every teacher hired and placed in every classroom is well-qualified to be there. And finally, it proposed using National Board standards as a benchmark for recognizing and rewarding accomplished teaching.

Although progress is being made on all of these fronts, the strength of this chain of accountability will now be tested by the implementation of the “highly qualified” teacher requirement of *No Child Left Behind*. Weak links appear each time shortcuts to teacher preparation are taken, and the chain is broken each time teacher licensure and hiring standards are compromised in ill-founded, short-term fixes to fill classroom vacancies. Our families and communities deserve better. They must have confidence that their educational leaders are staffing their schools with competent, caring, well-qualified teachers.

To ensure that “highly qualified” beginning teachers meet the high standards anticipated by the law, the Commission advocates the following criteria as benchmarks for teacher preparation, licensing, and hiring. These criteria capture an emerging, research-based consensus about what teachers should know and be able to do to support student learning. “Highly qualified beginning teachers” are those who:

- **Possess a deep understanding of the subjects they teach;**
- **Evidence a firm understanding of how students learn;**
- **Demonstrate the teaching skills necessary to help all students achieve high standards;**
- **Create a positive learning environment;**
- **Use a variety of assessment strategies to diagnose and respond to individual learning needs;**
- **Demonstrate and integrate modern technology into curricula to support student learning;**
- **Collaborate with colleagues, parents and community members, and other educators to improve student learning;**
- **Reflect on their practice to improve future teaching and student achievement;**
- **Pursue professional growth in both content and pedagogy; and**
- **Instill a passion for learning in their students.**

As the Commission noted in its 1996 report, these research-based criteria are supported by common sense: “American students are entitled to teachers who know their subjects, understand their students and what they need, and have developed the skills to make learning come alive.”⁶

WHY DOESN'T EVERY CHILD HAVE A HIGHLY QUALIFIED TEACHER TODAY?

If we know that quality teaching makes a difference, why doesn't every child in America have a highly qualified teacher? What stands in the way of meeting the Commission's challenge and the national promise of *No Child Left Behind*? Why should anyone even consider compromising the standards for defining a highly qualified teacher? The common response is that we just don't have enough good teachers to meet the demand. It has become conventional wisdom that the ability to improve schools and instruction is limited by a

The real school staffing problem is teacher retention. Our inability to support high quality teaching in many of our schools is driven not by too few teachers entering, but by too many leaving.

national teacher shortage—a shortage that is driven by growing student enrollments, smaller class sizes, and teacher retirements. In the belief that they face a teacher supply problem, too many policymakers conclude that they must compromise quality for quantity. To recruit a sufficient quantity of teachers, the standards for entry into the profession are too often lowered.

But, the conventional wisdom is wrong. The real school staffing problem is teacher retention. Our inability to support high quality teaching in many of our schools is driven not by too few teachers entering, but by too many leaving. The ability to create and maintain a strong professional learning community in a school is limited not by teacher supply, but by high turnover⁷ among the teachers who are already there—turnover that is only aggravated by hiring unqualified or underprepared individuals to replace those who leave.

Research, discussed more extensively in pages 19-40, shows that with the exception of a few disciplines in specific fields, the nation graduates more than enough new teachers to meet its needs each year. But after just three years it is estimated that almost a third of the new entrants to teaching have left the field, and after five years almost half are gone. No teacher supply strategy will ever overcome this staggering attrition rate. When we read about how many teachers a school district must hire in the fall, we should be asking instead about how many left last spring—and why.

Supplying our schools with well-prepared *teachers* is essential, but it does not guarantee that they can deliver high quality *teaching*. Although recruiting and preparing highly qualified teachers is a central ingredient in the national recipe for school improvement, the recipe is incomplete without a second crucial ingredient. In 1996, the Commission found that the way school systems structure teachers' work makes a critical difference in what they can accomplish.⁸ The complementary, and equally essential, ingredient for achieving quality teaching is ensuring that every school is organized to support successful teaching and learning.

We know that good schools and good teaching are mutually reinforcing. We also know that bad schools can—and do—undermine the work of good teachers. When teachers do not produce the kind of learning we expect, it often is because the systems in which they work do not support their efforts. Under those circumstances *qualified* teachers all too frequently leave teaching early in their careers, well before they acquire the knowledge, seasoning, and experience it takes to become *accomplished* teachers.

With this report the Commission reiterates that we must balance efforts to recruit and prepare high quality teachers with an equal dedication to ensuring that every school becomes a strong learning community in which teachers, as well as their students, can thrive. In most cases poor school performance is being driven not by an insufficient supply of teachers, but by extremely high turnover rates that stem from chronic, unaddressed conditions in the schools.

Too many schools are becoming revolving doors; losing as many teachers as they hire each year. Schools pay a price as high turnover rates force an annual scramble to replace those who leave. Teachers pay a price as their frustrations lead to short-circuited careers. But students pay the highest price of all: diminished learning and dreams denied. As the deck chairs are rearranged in these schools, the students with the greatest challenges are too often left with teachers who are underprepared, teaching out-of-field, provisionally certified, or last-minute substitutes. Teaching quality declines, and student achievement suffers as schools are caught in a downward spiral. In these communities the cycle of educational disadvantage is repeated from one generation to the next.

It is time to break this cycle. If we are to put the dreams of America's children within reach, we must redouble our efforts to provide every child with competent, caring, qualified teachers in schools organized for success. It is vitally important to understand that the demands of a knowledge-based economy and a pluralistic society create new expectations for teaching and learning. To help each child prepare for successful employment and productive citizenship in the 21st century, all teachers must know their subject areas deeply. They must know how children learn and be able to use that knowledge to teach diverse students well. They must be proficient in the use of modern learning technologies and able to work closely with their colleagues to create rich learning environments. To support high quality teaching, schools must become strong, well-focused learning communities. That means ending the era of solo teaching in isolated classrooms. Small professional learning communities can no longer be considered utopian or visionary; they must become the building blocks of school improvement. If we want professional educators in our schools, our schools must become professional workplaces.

NCTAF INDICATORS OF PROGRESS

In 1996, the Commission placed the condition of the teaching profession at the center of the nation's education reform agenda. Reinforced by a broad spectrum of support from national associations, state and local initiatives, business commitments, philanthropic organizations, and government funding, the movement to strengthen the teaching profession has made notable strides. Highlights of this progress are summarized in Table 1 to the right.

The Commission's report *What Matters Most: Teaching for America's Future* built on an earlier set of reports that first drew the nation's attention to the importance of teachers and teaching, including: the Carnegie Forum's *A Nation Prepared: Teachers for the 21st Century*¹⁰ and the Holmes Group's *Tomorrow's Teachers*.¹¹ Since its publication, *What Matters Most* has stimulated more than 2,000 news articles and editorials, numerous

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national reports, dozens of pieces of legislation, and long-term state commitments to quality teaching. As the Appendix shows, dozens of national reports have echoed and extended the Commission's five priorities and 27 recommendations. Those reports, and the work of their affiliated organizations, have all contributed to today's consensus that quality teaching is the single most important factor in a child's education.

Immediately following the Commission's release of its report, seven states stepped forward to join NCTAF in partnerships designed to generate and sustain long-term policy strategies and local initiatives to improve teaching quality. The number of NCTAF state partners has grown to 20, with several more candidates under consideration (see Figure 1). Each state partner has established a set of benchmarks and a comprehensive implementation strategy for moving toward the goal of a competent, caring, qualified teacher for every child in their state (visit: www.nctaf.org).

TABLE 1

**Progress on
NCTAF Indicators
of Teaching
Quality and
Conditions**

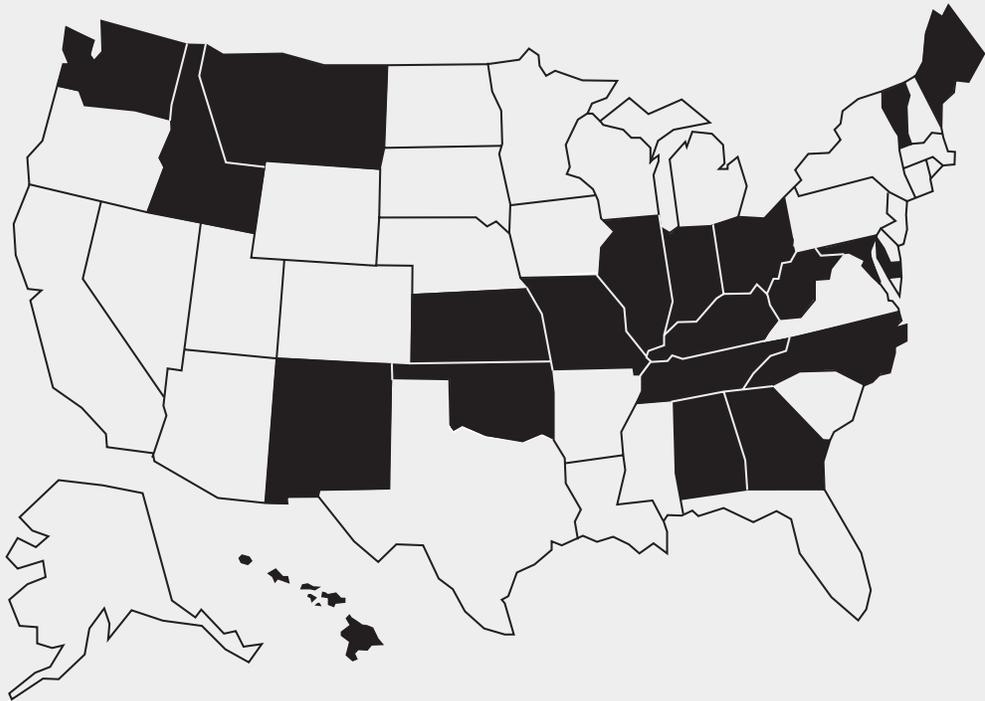
Indicator	1996-97	2000-02
NCATE-accredited institutions	481 (41 institutions were in the process of applying)	548 in 2002 (112 institutions were in the process of applying.)
NBPTS-certified teachers	595	23,930 in 2002 (7,893 newly certified NBCTs in 2002, up from 4,728 in 2000.)
Incentives for NBPTS certification	16 states	48 states (and approximately 430 local school districts) <ul style="list-style-type: none"> • 30 states offer fee support • 28 states offer license renewal/credits • 35 states offer license portability • 33 states offer salary bonuses and supplements
Professional Standards Boards	12 states	9 states with Independent Boards of Standards <i>and</i> Practice 2 states with Independent Standards Boards 2 states with Independent Practice Boards 4 states with Semi-Independent Boards 12 states with Advisory Boards
Mandatory induction policies	9 states	33 states (22 states fund these programs; 29 require mentors in the induction program.)
Eliminating barriers to teacher mobility	32 states and the District of Columbia committed to the National Association of State Directors of Teacher Education and Certification (NASDTEC) Interstate Contract granting license reciprocity among members	As of June 2002, 48 states (including the District of Columbia) had signed the NASDTEC Interstate Contract.
Streamline/modernize recruitment	N/A	27 states had created Web sites for recruitment. 9 states allow candidates to apply online. 3 states have a common application form that can be used in any district in the state.
Teachers salaries	Average teacher's salary in 1996: \$37,564.	Average teacher's salary in 2001: \$43,250

To build a strong profession, quality assurance through teacher education accreditation, initial licensing, and advanced professional certification is essential. The National Council on Accreditation of Teacher Education is making significant progress on this front. The number of accredited teacher preparation institutions has increased over six years to 548 (from 481), and there are an additional 112 institutions in the application process. In addition, 48 states and the District of Columbia and Puerto Rico have partnerships with NCATE to align their state teacher education standards with NCATE standards.

FIGURE 1

NCTAF Partner States: (as of November 2002)

- Alabama
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Kansas
- Kentucky
- Maine
- Maryland
- Missouri
- Montana
- New Mexico
- North Carolina
- Ohio
- Oklahoma
- Tennessee
- Vermont
- Washington
- West Virginia



Source: National Commission on Teaching and America's Future. <http://www.nctaf.org/resourcestates/index.html>

To improve licensing, under the auspices of the Council of Chief State School Officers, 36 states are participating in the Interstate New Teacher Assessment and Support Consortium to create performance standards for beginning teacher licensing.

The number of teachers earning certification as accomplished teachers by the National Board for Professional Teaching Standards has seen a dramatic increase since 1996, as have the number of states offering incentives for practitioners to strive for this benchmark of accomplished teaching. As of November 2002, the number of board certified teachers has reached 23,930. (see figure 14) A total of 11,304 of those teachers achieved their board certification in one of the 20 NCTAF partner states, almost twice the rate of certification found in nonpartner states. (see figure 15) We have seen that certification thrives in those states that support teaching quality through a constellation of policy initiatives that address the recommendations set out in *What Matters Most*.

Other teaching quality indicators include an increase in the number of states that have legislated mandatory teacher induction policies—from nine in 1997 to 33 in 2002—(although only 22 of these programs receive state funding), an increase in efforts to improve teacher mobility, and an expansion of the number of states and districts that are working to modernize and streamline teacher hiring. Professional standards boards, which the Commission also encouraged in 1996, have had more limited growth, but their influence is growing as they provide an important voice for establishing professional teaching standards and requirements for practice within the states in which they operate.

While most of the news is heartening, teacher compensation continues to be an issue of concern for all stakeholders who want to attract and retain qualified candidates into teaching careers, as we discuss in Strategy 3. Teacher preparation programs continue to have much more to do to prepare highly qualified teachers for every classroom, as we discuss in Strategy 2 of this report. Finally, we have seen few indicators of progress on what was the Commission's fifth priority: organizing schools for success. We consider this today's highest priority for ensuring that competent, caring, qualified teachers can provide high quality teaching that leads to student success.

NEXT STEPS

ADDRESSING THE REAL SCHOOL STAFFING CRISIS: TEACHER RETENTION

No Child Left Behind is the right law at the right time. It reaffirms the bedrock assertion of *What Matters Most*: Every child deserves great teachers in schools organized for success. The law provides our nation's leaders with a unique opportunity to renew their commitment to the hard work of quality teacher preparation and real school reform. As a nation, our history is replete with examples of times and places where Americans have risen to meet daunting challenges. We have the knowledge and the resolve to do that again.

The National Commission on Teaching and America's Future is ready to work with education leaders at every level to support a high quality teaching profession in 21st century schools, one that can ensure that our children's dreams are not denied. A three-part strategy for meeting that commitment, which builds on the recommendations we made in *What Matters Most*, is outlined in this report. We invite all stakeholders in American education to join us:

- 1. We must organize every school for teaching and learning success. Although this was originally the Commission's fifth recommendation, it is now our highest priority.**
- 2. We must insist on quality teacher preparation, accreditation, and licensure. Quality preparation pays big dividends.**
- 3. We must develop and sustain professionally rewarding career paths for teachers, from mentored induction through accomplished teaching.**

This report does not merely observe and recommend. It will take more than repeating sound policy in a loud voice to achieve our aims. The only way to get the kind of teaching this report calls for is to make sure that the teaching profession is exciting, gratifying, and rewarding in every school. Great teachers deserve to work in well-run schools. They also deserve to be well-paid for their skills and accomplishments.

The stakes are high. Every day, we wager the future of this country on our teachers. We are daily entrusting the dreams of our young people to those who teach them. Whether those dreams are delayed, denied, or fulfilled is ours to decide. We will continue to offer our own time, effort, and energies as the personal embodiment of a pledge that we here make to America's children and that we invite each reader to make with us:

The Commission calls on states, school systems, institutions of higher education, unions, school boards, business leaders, and the federal government to join us in setting an ambitious goal: **to improve teacher retention by at least 50 percent by 2006**, rewarding schools and districts that achieve this goal, and creating incentives for those moving toward it.

WHAT MUST BE DONE? THREE STRATEGIES

We propose three strategies for meeting this goal. In the sections that follow, we discuss each of these in detail and suggest roles for those who share responsibility in a chain of accountability for improvement.

1. ORGANIZE EVERY SCHOOL FOR TEACHING AND LEARNING SUCCESS

Good teachers are attracted to and thrive in good schools. Their schools are places where teaching and learning prosper because they are structured around what we know about how people (teachers as well as students) learn and grow. The relationship is a simple one to grasp: We will achieve high quality teaching for every child only when we have high quality schools for every child. We invite state leaders, superintendents, school boards, principals, and teachers to join us in a national effort with real-world dimensions, an effort that will:

- **Operate schools according to what research tells us about how people learn;**
- **Reallocate and appropriate funds to provide teachers and other school leaders with the time, flexibility, and resources they need to create and sustain small and well-focused professional learning communities;**
- **Reallocate the resources of large, low performing schools to support the creation of small learning communities, breaking down teacher isolation and student anonymity;**
- **Select, prepare, retain, and reward superintendents, principals, teachers, and other school leaders who demonstrate the vision and skill to build schools that can meet 21st century needs;**
- **Adopt modern technologies and make use of research that enables teachers to diagnose student learning needs and apply appropriate teaching strategies that customize instruction appropriately;**
- **Use Internet-based, networked learning communities that enable teachers and students to participate in high quality learning any time, anywhere; and**
- **Use multiple assessments and accountability indicators that give a clear and continuing picture of progress toward student learning goals.**

2. INSIST ON HIGH QUALITY TEACHER PREPARATION, ACCREDITATION, AND LICENSING

It is time to abandon the futile debate over “traditional” vs. “alternative” preparation for teachers. No matter how or where it may be acquired, we know that high quality teacher preparation is a strong predictor of both teacher retention and good teaching practice. Because all paths lead to the front of the classroom, all routes to teaching ought to meet the same high standards. Quality teacher preparation provides new teachers with the skills, confidence, and competence to begin their teaching careers. Teacher licensure should validate that teachers who enter the classroom are highly qualified to be there.

The most direct route to guaranteeing that schools are staffed with highly qualified teachers is to ensure that (a) they have earned the qualifications needed to teach from an accredited institution and (b) through licensure, they have been measured by performance standards that will ensure the quality of their teaching. States, institutions of higher education, schools, and school districts can join us in ensuring that teacher preparation lays a strong foundation and that licensure guarantees high quality teaching by following the Commission’s recommendations for teacher preparation and quality assurance:

Teacher Preparation

- **Insist on rigorous admission and graduation standards for teacher preparation programs to ensure that all candidates are well-qualified to teach;**
- **Require all preparation programs—“traditional” and “alternative”—to deliver rigorous education designed to develop and instill the attributes of highly qualified teachers;**
- **Develop teacher preparation programs that are based on the six dimensions of strong teacher education;**
- **Create federal, state, and district level incentives to recruit and prepare teachers in high-need disciplines and local areas; and**
- **Establish and fund strong K-16 partnerships in which teacher preparation is closely aligned to the needs of schools and students.**

Teacher Quality Assurance

- **Insist that all teacher preparation programs meet rigorous accreditation standards;**
- **Establish institutionwide and programwide leadership responsibility for the quality of teacher preparation;**
- **Close those programs that are unable to produce high quality teachers;**
- **Establish independent standards boards where they do not exist and create regulatory procedures for implementing the decisions of these boards;**
- **Develop and use widely accepted standards and cutoff scores on licensing exams that are driven by a rigorous definition of teaching quality; develop multiple measures for licensure, composed of rigorous tests of content knowledge, performance based assessments of teaching skill, and portfolios documenting both content knowledge and teaching skill;**
- **Apply sanctions to districts that hire unlicensed teachers and to schools that require teachers to teach out-of-field;**
- **Make data on teacher licensure status and teaching assignments public;**
- **Collect and use data on K-12 student achievement, teacher licensure, and teacher retention to improve the teacher preparation and licensure system; and**
- **Adopt multitiered licensing and advanced certification systems, from entry-level to accomplished teaching.**

3. BUILD A HIGH QUALITY TEACHING PROFESSION

If we expect today's new teachers to become tomorrow's accomplished educators, we must also devote our energy to sustaining teaching as a profession. That means building career paths that give teachers the satisfactions of a rewarding career, from induction to accomplished teaching. To address this challenge, the Commission calls on states, school systems, unions, school boards, and business leaders to:

Staffing Actions

- **Develop data-driven school staffing systems and strategies;**
- **Create federal, state, and district level incentives to hire teachers in high-need disciplines and local areas;**
- **Use modern technology to streamline teacher recruitment and hiring; and**
- **Eliminate barriers to teacher mobility by creating portable licensure and make pension systems more uniform across states.**

Supporting New Teachers

- **Create and support mentored induction programs for new teachers and create peer-assistance programs to provide support for experienced teachers and**
- **Establish outplacement procedures to deal with teachers who continue to perform below par.**

Promoting Teachers' Continuing Growth

- **Provide flexible professional development opportunities for all teachers.**

Recognizing Accomplished Teaching

- **Enact incentives and supports for National Board certification in every school district and state and**
- **Establish pay incentives that reward teachers for improving their practice and create rewarding leadership positions for accomplished educators.**

All Along the Way

- **Provide compensation and working conditions for teachers that respect their professional standing in American society.**

The background is a solid red color with several overlapping, semi-transparent geometric shapes. There are two large circles and one large square, all in a lighter shade of red, creating a layered effect. The text is centered in the upper half of the image.

**WHAT WE VE LEARNED:
TEACHER RETENTION
HAS BECOME A
NATIONAL CRISIS**

C O N T E N T S

The Conventional Wisdom is Wrong	21
Teacher Supply is Generally Adequate to Meet the Demand	23
Teacher Turnover and Teacher Attrition Are Bad—and Getting Worse	24
It's Not About Retirement	27
APPARENT SHORTAGES ARE DISTRIBUTION PROBLEMS	29
Distribution Inequities by Field	31
HIGH TEACHER TURNOVER HAS HIGH COSTS	32
Costs for Schools and School Systems	32
Costs to Students	33
THE ROAD AHEAD: ADDRESS THE CAUSES OF HIGH TURNOVER	36
Box 1: Tennessee Looks at Teacher Attrition	38
Box 2: North Carolina Looks at Working Conditions for Teachers	39
THE THREE-PART STRATEGY	40

WHAT WE VE LEARNED: TEACHER RETENTION HAS BECOME A NATIONAL CRISIS

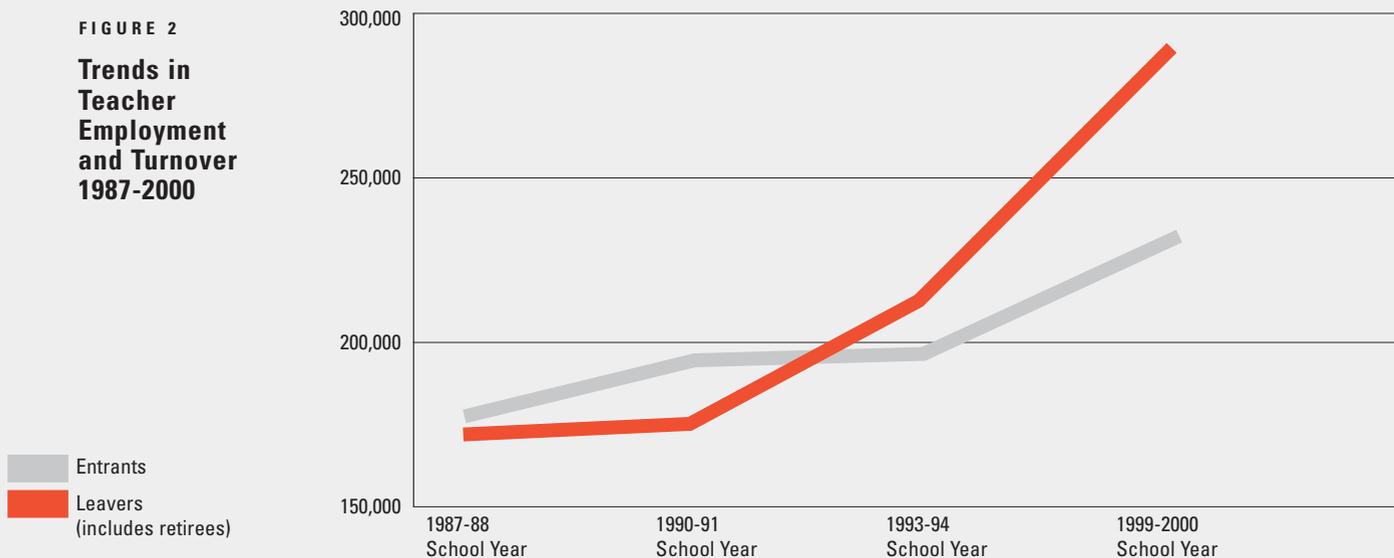
The Conventional Wisdom Is Wrong

The opening section of this report asks: If we know that competent, caring, qualified teachers are at the heart of good schools, why doesn't every child have that kind of teacher today? The question is pointed. But for too long, it has pointed in the wrong direction. The common perception, widely reported in the media, is that student learning suffers because we just don't have enough teachers, especially good ones, to go around—as if the quality problem could be solved with a quantity answer. But as often happens, this piece of conventional wisdom turns out to be too conventional and too little wisdom. Our inability to support high quality teaching is driven not by too few teachers coming in, but by too many going out, that is, by staggering rates of teacher turnover.¹ It is as if we were pouring water into a bucket with a fist-sized hole in its bottom.

The fact is that an alarming number of teachers are leaving their schools during their first few years. Some are moving from one school to another for more attractive teaching positions or better pay. Until recently these "movers" made up the majority of those counted in teacher turnover statistics. Movers leave vacancies behind that must be filled through constant recruitment and hiring efforts, but they do not deplete the total pool of active teachers. In far too many cases, however, when teachers leave, they leave the field altogether, and that trend is increasing. The most recent data from the National Center for Education Statistics show that the number of "leavers" began to exceed the number of "movers" during the early 1990s, and the rate of attrition appears to be rising.

Figure 2 plots the number of teachers entering the field (including newly qualified, delayed entry, and reentrants) against the number leaving teaching. It is clear from this chart that in the late 1980s and early 1990s the supply of entrants consistently offset the number of leavers. But by the 1993-94 school year this pattern began to change. The rate of leavers began to exceed the number of entrants at an accelerating rate, with the most recent data for the 1999-2000 school year showing that leavers were outpacing entrants by more than 50,000 (see Table 2).

FIGURE 2
Trends in
Teacher
Employment
and Turnover
1987-2000



Source: Richard M. Ingersoll, adapted for NCTAF from "Teacher Turnover and Teacher Shortages: An Organizational Analysis." *American Educational Research Journal*. 38 (fall 2001): pp. 499-534.

It has become common to think that “teacher shortages” are driven by such factors as increasing student enrollments, smaller classes, and retirements and that the supply of new teachers is insufficient to keep up with these forces. But in fact, we dramatically increased the supply of teachers during the late 1990s (see Table 2). The problem is that the teacher attrition rate has been increasing even faster. We are losing teachers faster than we can replace them. Teacher retention has become a national crisis.

The economy may influence these trends. During the boom economy of the ‘90s, the number of attractive employment alternatives offering better pay and conditions enticed some teachers away from their schools. More recently, during the 2002-03 school year, this trend appears to have slowed in the wake of a downturn in the economy. For that school year, many districts are reporting more success in recruiting qualified teachers, and in some states turnover appears to be leveling off as fewer teachers choose to move or leave for other jobs or retirement. This is likely to be a short-term windfall for the nation’s schools. What some schools are learning is that during a slow economy, they can successfully recruit teachers. The real test will be whether they can keep them when the economy rebounds. The trends are not in their favor (see Figure 2).

Addressing these challenges is the focus of this report. The Commission has called upon the nation to provide every child with competent, caring, qualified teachers in schools organized for success, and the *No Child Left Behind* Act of 2001 has stimulated a national effort to find highly qualified teachers for every classroom. But no teacher supply strategy will ever meet these objectives if we do not reverse the debilitating rates of teacher turnover that are undermining teaching quality in so many schools.

Teacher Supply Is Generally Adequate To Meet the Demand

The question: “How can we find and prepare more teachers?” focuses on the symptom rather than the problem. Or perhaps more accurately, the teacher “shortage” turns out to be just the visible side of a coin whose underside is high turnover with increasing attrition rates. It is time to ask a better question: “How can we keep the good teachers we have already recruited, hired, and trained long enough for them to become accomplished educators?” A closer look at the numbers will help us understand the extent of the problem and the importance of the response.

The data on the nation’s teaching supply reveal a surprising fact: Overall, the United States produces enough new teachers to meet its needs each year (see Table 2). The nation’s teacher preparation system has been responding vigorously to the increased demand for teachers over the past decade. For example, between 1984 and 1998 the number of institutions preparing teachers increased from 1,287 to 1,354. During those years the annual number of graduates with bachelor’s and master’s degrees in education increased by more than 50 percent (to 220,000) by the 1999-2000 school year.² In 1999, approximately 160,000 of those graduates were new teachers with initial licenses, yet only 85,000 newly prepared teachers were hired that year.³ Overall the nation dramatically increased its supply of teachers during the 1990s and generally produces enough teachers to meet each year’s new needs. With the exception of the specific fields of mathematics, science, special education, and bilingual education, the teaching supply is adequate to meet the demand.

Furthermore, there is a large national pool of individuals who have taught before, along with those who prepared as teachers but never entered the profession. The most recent data from the U.S. Census Bureau suggest there were more than 6 million individuals holding bachelor’s degrees in education in 1993. There were many more with a major in another field plus a minor, master’s degree, or some other credential in education. Thus, not counting approximately 3 million active teachers, at least 3 million more people in the United States were trained to teach but are not currently teaching.⁴ Plus, over the years, thousands of teachers have entered the classroom through alternative pathways. It is likely that almost every state has a reserve pool of teachers that is larger than the number of teachers who are actually in the classroom. Supply is not the problem.

What, then, is the problem? Too few of the teachers we have prepared are choosing to enter the schools, and too many of those who are hired don’t stay long enough to join their colleagues in developing a quality teaching environment once they are there. Newly prepared teachers, and those with as many as five or more years of experience, are leaving their schools in growing numbers; they are leaking out of the bucket faster than we can replace them. The response has been to try to keep the bucket full by pouring in more inexperienced teachers, and under prepared individuals, at a faster rate, but this has destructive consequences for the quality of teaching in many schools. Why? Because these novice teachers flow through the schools so fast that they aren’t in their jobs long enough to become good at them.

Teacher Turnover and Teacher Attrition Are Bad—and Getting Worse

The leak in the bucket has been getting worse. In 1987-88 teacher entrants exceeded leavers by 3 percent, but in 1999-2000 the trends had changed, and leavers exceeded entrants by 23 percent (see Table 2 and Figure 2.)

Teacher turnover exceeds the turnover for many non-teaching occupations (see Figure 3). And the figures for teacher attrition, those leaving the field altogether, are particularly troubling. Based on analysis of the most recent estimates (1999-2000) from the National Center for Education Statistics, approximately a third of America's teachers leave teaching sometime during their first three years of teaching; almost half may leave during the first five years (see Figure 4). While anywhere from 20 percent to 25 percent of those who leave teaching may return to the classroom at some time in the future, these departures and returns still contribute to the churning turnover in schools that undermines teaching quality.⁵ Not surprisingly, attrition is highest in low-income urban schools. In fact, the overall turnover rate for teachers in high poverty areas is almost a third higher than it is for all teachers in all schools (see Figure 5).

TABLE 2
Trends in
Teacher
Employment
and Turnover
1987-2000

	1987-88 School Year	1990-91 School Year	1993-94 School Year	1999-2000 School Year	
Total Teaching Force	2,630,335	2,915,774	2,939,659	3,451,316	
Entrants¹	178,344	191,179	192,550	232,232	
Movers from other schools	183,305	196,628	184,585	302,629	
Total Hires	361,649	387,807	377,135	534,861	
Movers to other schools	218,086	208,885	204,680	252,408	
Leavers from teaching (includes retirees)	172,645	173,994	212,908	287,370	
(Retirees)	(35,179)	(47,178)	(50,242)	(80,000 ²)	
Total Departures (during subsequent year)	390,731	382,879	417,588	539,778	

Notes:

1 Entrants includes new, delayed and re-entrants and refers to those who did not teach the prior year. Some did teach in the past.

2 This projection is based on trends in previous Schools And Staffing Survey data. Current data not presently available.

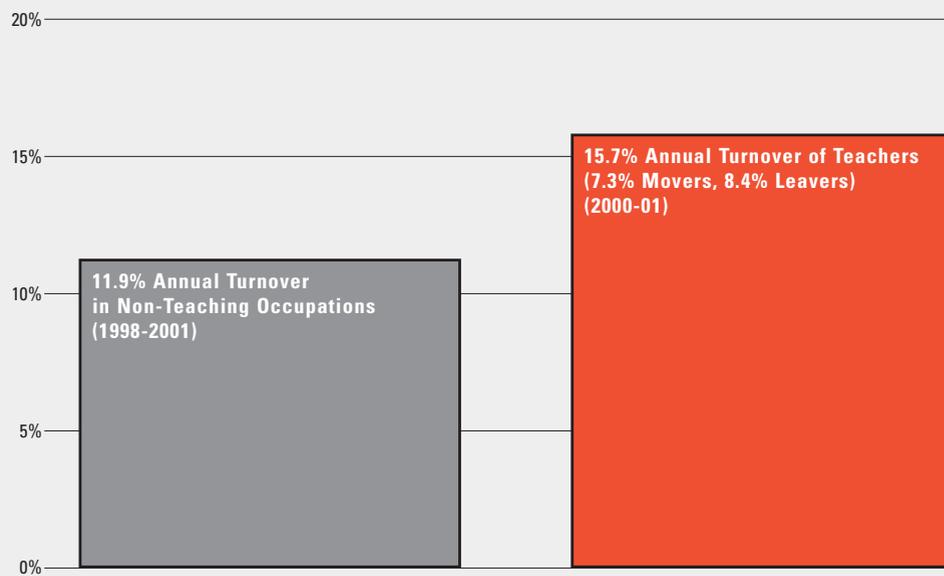
Source: Richard M. Ingersoll, adapted for NCTAF from "Teacher Turnover and Teacher Shortages: An Organizational Analysis," *American Educational Research Journal*, 38 (fall 2001): pp. 499-534.

Despite their best efforts to recruit new teachers, many schools wind up with a net loss in teaching staff each year. In 1999-2000, for example, the nation's schools hired 232,000 teachers who had not been teaching the year before (that is, teachers entering the system who were not simply changing schools). But one year later, the schools lost more than 287,000 teachers—55,000 more than the 232,000 that they hired, for a net loss of 24 percent (see Table 2). When we read the cries of alarm over how many teachers need to be hired this fall, and the laments about where they will come from, we should be asking a more useful question: "How many teachers left last spring—and why?"

The teacher retention problem manifests itself, to a greater or lesser extent, in every state and region. Texas, for example, which is one of the more dramatic cases, recently conducted a study of their teacher retention data. They found that, of more than 63,000 teaching positions in the state that needed to be filled in the 1998-99 school year, 74 percent of the openings (about 46,600) were due to teachers having left the profession before retirement. In comparison, 17 percent (about 11,000) of the vacancies resulted from teacher retirements, while only 9 percent (about 5,700) of these positions were newly created to accommodate increasing student enrollment. Crucially, many of the teachers who left the profession had not been teaching for very long. Between 1993 and 1996, nearly one of five (19 percent) of Texas's new teachers left the profession after their *first year*.⁶ This may not be surprising, given the high proportion of untrained teachers in Texas at that time. According to SASS data in 1993-94, 20 percent of new entrants to teaching in Texas lacked certification in their field, one of the highest rates in the nation.⁷

FIGURE 3

Teacher Turnover is High Compared to Many Other Occupations

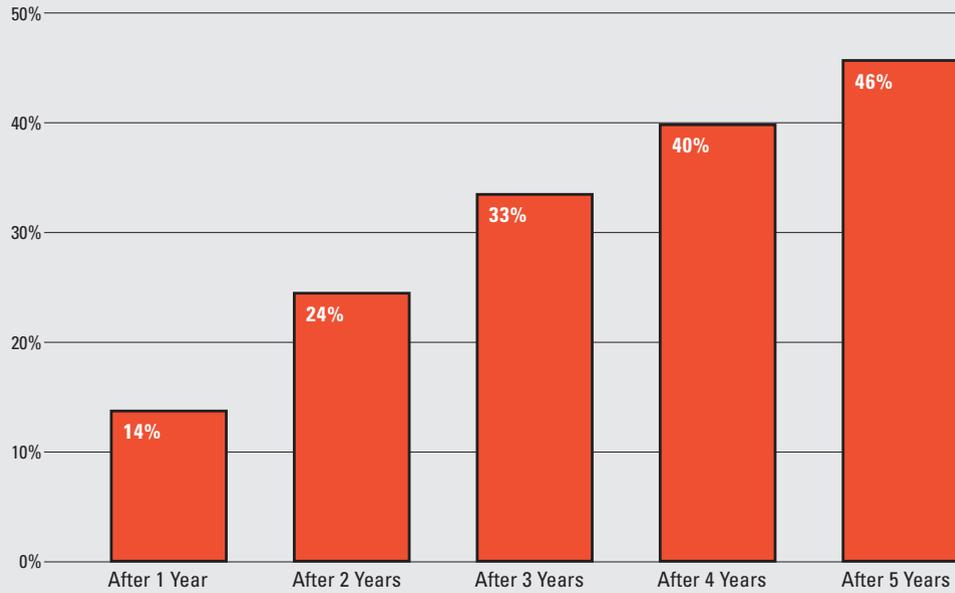


Source: Richard M. Ingersoll, adapted for NCTAF from "The Teacher Shortage: A Case of Wrong Diagnosis and Wrong Prescription," *NASSP Bulletin*, 86 (June 2002), 16-31.

FIGURE 4

Beginning Teacher Attrition Is a Serious Problem

Cumulative Percent of Teachers Leaving Teaching Each Year (Approximate)



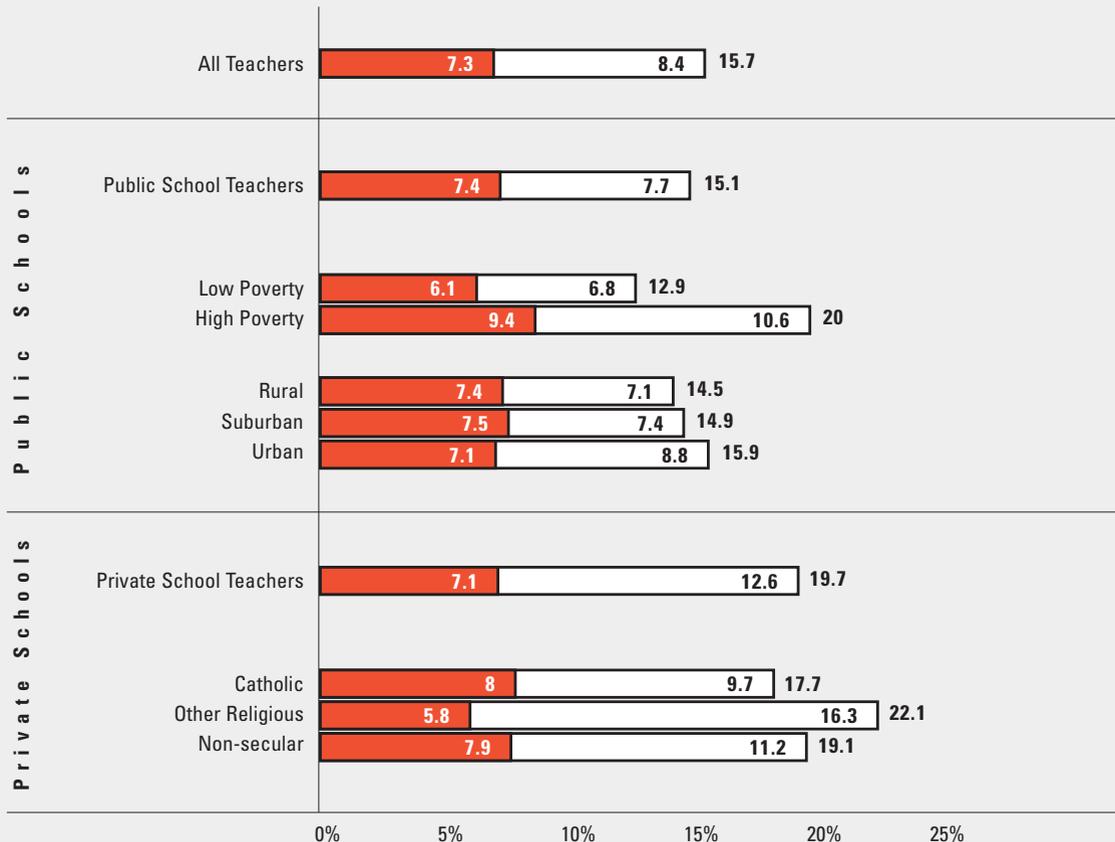
Source: Richard M. Ingersoll, adapted for NCTAF from "The Teacher Shortage: A Case of Wrong Diagnosis and Wrong Prescription" NASSP Bulletin 86 (June 2002), pp.16-31.

FIGURE 5

Annual Teacher Turnover 2000-01

Teacher turnover affects every sector of education. In almost every case leavers exceed movers.

■ Movers
 Leavers



Source: Richard M. Ingersoll, adapted for NCTAF from "Teacher Turnover and Teacher Shortages: An Organizational Analysis," *American Educational Research Journal*, 38 (fall 2001), pp.499-534.

It's Not About Retirement

The skeptical often ask: But don't high retirement rates contribute to the high rate of teacher attrition? Not as much as we might think. More people are leaving teaching for non-retirement reasons (see figure 6) and available new entrants could easily offset the number of retirees if teacher turnover and attrition were not so high.

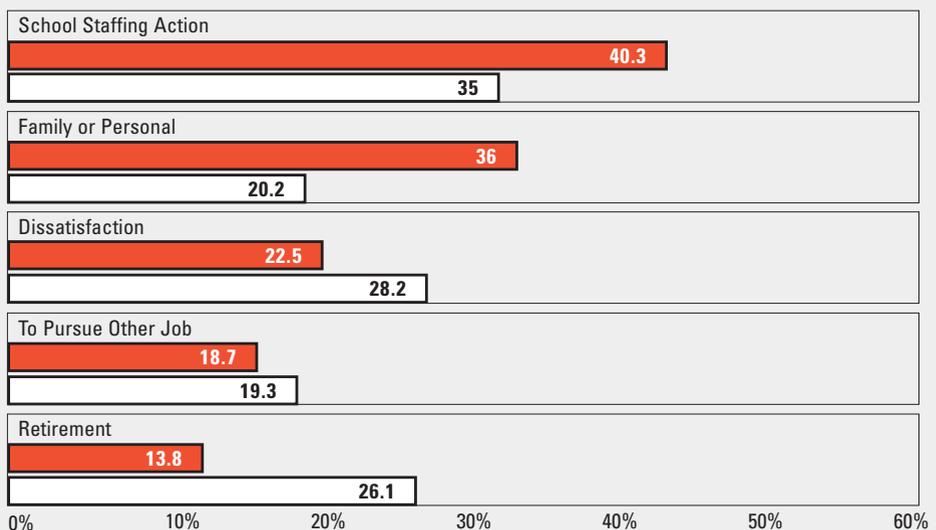
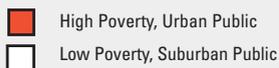
It is true that a large number of teachers currently in the classroom were hired in the late 1960s and the 1970s and that they are now approaching retirement. It is also true that retirement rates have been increasing each year. But the number of retiring teachers is far below the total number of teachers hired into our schools from all sources (see Table 2). Over the next 10 years, about 700,000 teachers are projected to retire, accounting for about 28 percent of hiring needs during that period.⁸ Teachers leaving the profession for reasons other than retirement (e.g., low pay, lack of professional support, poor school leadership) outnumber those retiring by almost 3-to-1. These reasons also drive some experienced teachers into early retirement.

In the end, the combined number of new entrants and reentrants greatly exceeds the retirement rate. Even without drawing on potential reentrants from the reserve pool of former teachers and those with teaching degrees who never entered teaching, our teacher-preparation system could easily accommodate the current retirement rate. It is the high attrition rate among those who are not retiring that is fueling the teacher shortage.

FIGURE 6

Retirement is Not the Most Significant Factor Driving Teacher Turnover

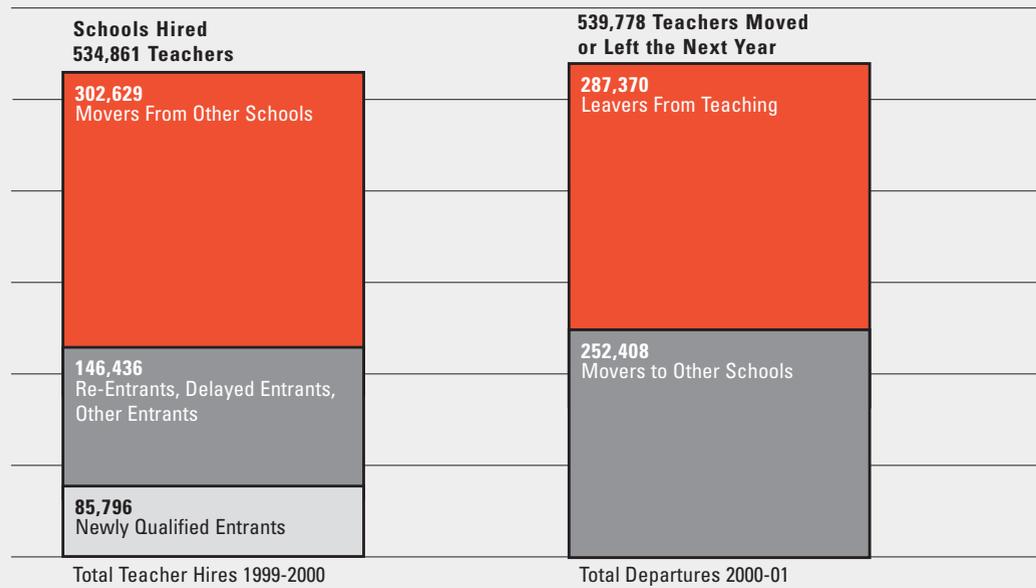
Percentage of Teachers Giving Reason for Moving or Leaving Teaching(1994-95)



Source: Richard M. Ingersoll, adapted for NCTAF from "Teacher Turnover and Teacher Shortages: An Organizational Analysis" American Educational Research Journal 38 (fall 2001), 499-534.

FIGURE 7

America's Schools Lose About the Same Number of Teachers as They Hire Each Year

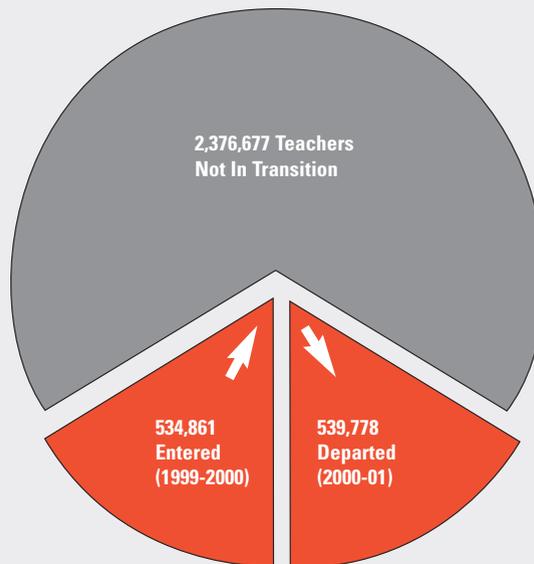


Source: Richard Ingersoll, Adapted from "Teacher Turnover and Teacher Shortages: An Organizational Analysis," *American Educational Research Journal* 38 (fall 2001): pp. 499-534.

FIGURE 8

Teacher Turnover: A Revolving Door

In the 1999-2000 school year the total teaching force in America was 3,451,316. Thirty percent of this teaching force was in transition.



Source: Richard M. Ingersoll, adapted for NCTAF from "Teacher Turnover and Teacher Shortages: An Organizational Analysis" *American Educational Research Journal* 38 (fall 2001), pp. 499-534.

APPARENT SHORTAGES ARE DISTRIBUTION PROBLEMS

If the United States is generally producing a sufficient number of individuals prepared for teaching, why are so many schools having difficulty staffing their classrooms, and why are there so many underqualified teachers in America's schools—especially in the cities? These “shortage” problems may better be understood as problems of teacher attraction, distribution, and retention. Unless we change the factors that influence the distribution and retention of teachers, just increasing the supply will not help those schools and districts that are experiencing chronic teacher turnover and shortages.

The data portray a teaching force that has more than a million teachers entering and departing the schools annually. Teaching is increasingly “a revolving door occupation with relatively high flows in, through, and out of schools”⁹ (see Figures 7 and 8).

While shortfalls certainly exist in some states and districts, there are often surpluses in others, even when they are in close proximity or even adjacent to each other. The American Association of Employment in Education reports surpluses of teachers in most fields in the Northwest, Rocky Mountains, Northeast, and some Middle Atlantic states, but shortages of teachers in many fields in Alaska, the West, and the South. In general, states that offer higher salaries, in conjunction with school district policies that are supportive of quality teaching, and states that have a greater number of teacher preparation institutions, have fewer problems hiring teachers.¹⁰ Predictably, wealthy school districts often have surpluses of teachers, while poorer districts that offer lower salaries and less attractive working conditions have hiring difficulties. Staffing shortages are most common in inner cities and in the rapidly growing South and West.

At the local level, many qualified teachers do not find their way into, or stay in, jobs where they are most needed. The best-qualified teachers are typically “recruited out” to better-funded schools or districts with better support and higher pay. Increasing teacher production will not solve chronic turnover and attrition problems—it only masks them—especially those experienced by schools in disadvantaged areas where salaries are low and working conditions are often unacceptable.

In some states and districts the shortage is self-induced. The Commission found that, in many communities, apparent shortages and the consequent hiring of underqualified teachers were less a function of inadequate supply in the labor market than of cumbersome hiring practices that prevented efficient and timely hiring and chased away good candidates. For example, some school districts have multistep hiring processes that involve a time-consuming labyrinth of inefficient procedures. An employment process that takes months to complete, with reams of forms and paperwork, discourages many qualified applicants who are, understandably, unwilling to wait (see Box 24: “A Tale of Two Districts”). Similarly, many states require that fully qualified and credentialed candidates from other states meet redundant criteria for teaching certificates, forcing them to repeat their training when they could be deepening their skills. Other barriers include: late budget decisions on the part of state legislatures and local school boards that retard a smooth hiring process, teacher-transfer provisions that push new hiring decisions into August or September, the lack of pension portability across states, and the loss of salary credit for teachers who move.

Some shortfalls also result from distribution problems created by federal policies that still treat teaching as strictly an ad hoc, local enterprise. While education in this country is a state and local responsibility, distribution inequities create national consequences. At the national level, there are few policies aimed at luring prospective teachers from fields and locations where there is an oversupply into those that are increasingly hard to staff. In contrast to medicine, where the federal government actively helps to offset spot shortages by funding training slots in medical schools and offering scholarships to candidates in shortage fields, there is no parallel, national policy to help manage the labor force in teaching.¹¹ The national policies that helped ameliorate teacher shortages in the 1960s and 1970s were rescinded in the early 1980s and have yet to be replaced.¹²

Supply and demand are unequal across states. By 2007, for example, enrollments are projected to increase by more than 20 percent in California and Nevada while enrollment declines are anticipated in most parts of the Northeast and Midwest. Some states have a large number of teacher education institutions regularly producing more teachers than the local districts need; these are serving as teacher export states, supplying other states over and above their home state needs. Other states, with a more limited teacher preparation infrastructure, prepare relatively few teachers, despite their rapidly growing student enrollments. They are in particular trouble if they have not developed the aggressive recruitment strategies and reciprocity arrangements needed to honor teaching licenses awarded by other states. Inadequate national and regional information about vacancies, the lack of licensing reciprocity, and inadequate incentives for recruiting teachers to high-demand locations all contribute to the problems of getting teachers from where they are prepared to where they are needed.

Distribution Inequities by Field

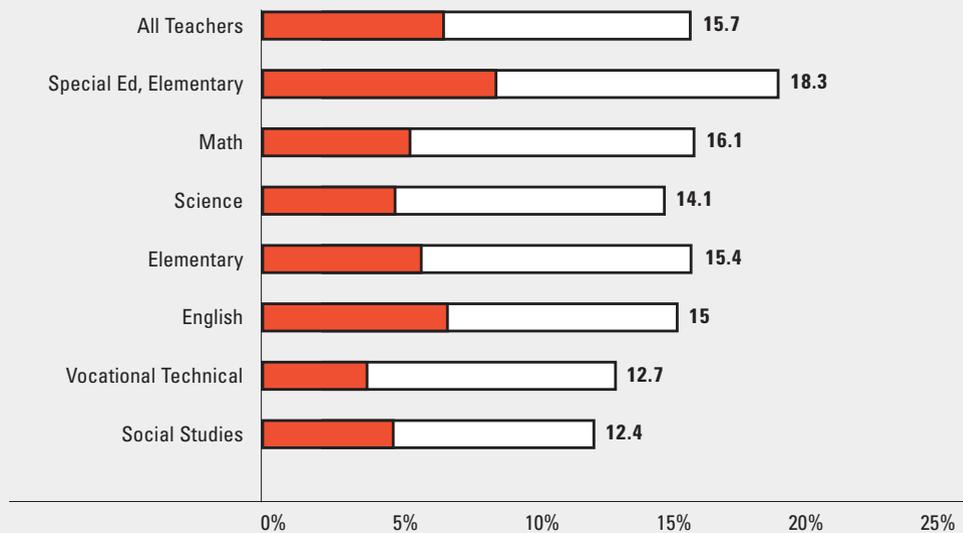
Teacher shortages are also more severe in some fields than others. The data suggest, for example, that there are too few candidates to meet the demand for teachers in mathematics, the physical sciences, special education, and bilingual education. Subject area shortages are likely to be worse in states that have not enacted specific programs and incentives to recruit and prepare teachers in these fields.

Subject-specific shortages may also reflect a lack of market responsiveness among teacher preparation programs that continue to produce a surplus of elementary education teachers, while they recruit and prepare too few teachers in high need fields such as mathematics and sciences.

Teacher attrition in some of these fields is especially high (see Figure 9). For example, attrition rates for special education teachers are approaching 20 percent a year on a national basis, and they can be much higher in some states and districts. These high attrition rates are an indication that supply side strategies alone will not be sufficient to meet the need. Some states are making inroads on field-specific shortages by creating significant new recruitment and preparation programs and by offering substantial service scholarships and forgivable loans. But, if states are to reap the full benefit of their targeted investments in high-need teacher preparation recruitment, they would be well advised to reinforce their efforts with initiatives to reduce the exceptionally high attrition rates in these fields.

In short, continued high turnover rates and the chronic attrition of beginning teachers drive a constant pressure for more hiring. The goal of “a competent, caring, qualified teacher for every child” will be an unattainable goal so long as nearly half of all new teachers leave the profession before their fifth anniversary as teachers (see Figure 4).

FIGURE 9
Percentage Annual Teacher Turnover, By Field (2000-01)



Source: Richard M. Ingersoll, adapted for NCTAF from "Teacher Turnover and Teacher Shortages: An Organizational Analysis." *American Educational Research Journal* 38 (fall 2001), 499-534.

HIGH TEACHER TURNOVER HAS HIGH COSTS

Costs for Schools and School Systems

Some turnover is to be expected as individuals leave to start families or pursue better employment opportunities, and turnover can be good when it brings new life to organizations, especially if those leaving have not been effective. But excessive teacher turnover, particularly in low-income urban and rural communities, saddles our schools with huge financial costs.

For the 1999-2000 school year, our schools hired 534,861 teachers, almost 16 percent of the national teaching force. But by the start of the next year a total of 539,778 teachers had left their schools. Nearly a third of the teachers during that year were in transition—either entering a new school, with new colleagues and students, or preparing to leave their current school by the end of the year (see Figure 8). The day-to-day reality for a school losing personnel at this rate—whether the teachers are lost to a school across town or drop out of teaching altogether—is the same: disruption of the coherence, continuity, and community that are central to strong schools. This churning staff turnover keeps school administrators scrambling to find replacements.

We can, and should, put a price tag on the cost of turnover. To begin with, a realistic assessment of high turnover would likely suggest that a huge public investment in tuition and tax support for teacher preparation is being undercut through chronic inattention to school conditions that could—and indeed must—be changed, if we are to improve teacher retention rates and promote quality teaching and learning.

We must also put a dollar price tag on the cost of turnover at the school district level. Preliminary estimates of the financial cost of running our teachers through this revolving door every year are astronomical. A recent study in Texas, for example, estimated that the state's annual turnover rate of 15.5 percent of its teachers, which includes a 40 percent turnover rate for teachers in their first three years, cost the state a "conservative" \$329 million a year. If the organizational costs of termination, substitutes, learning curve loss (for teachers), and new training are included, then the estimated price tag could go as high as \$2.1 billion a year.¹³ This study used research models from industry that have not been widely adopted in education, so we cite these figures as a challenge: It is time for each state and district to accurately track and assess the real costs of teacher turnover and attrition. High turnover and attrition can no longer be accepted as normal operating costs.

High turnover also diminishes the sense of community, continuity, and coherence that are the hallmark of strong schools; this erosion seriously undermines our ability to build and sustain professional teaching communities in our schools. Such high flow-through (see Figures 7 and 8) has the potential to seriously subvert the positive sense of community among families, teachers, and students that has long been held by education researchers to be one of the most important indicators and aspects of successful schools.¹⁴

And, lest we forget, the inability to sustain strong learning communities in high turnover schools undercuts school reforms. No price tag has yet been placed on this loss, but substantial investments in instructional improvement are wiped out by high rates of teacher turnover. Schools are robbed of their ability to build the all-important capacity to sustain school improvement when teachers depart before reforms can become established practice. This is especially true in beleaguered schools, where an enduring sense of “not yet” can lead from demoralization to outright cynicism about reforms.

Costs to Students

The most serious consequence of high teacher turnover is that it erodes teaching quality and student achievement. Inexperienced teachers (that is, those with less than two to three years of experience) are often found to be noticeably less effective than more senior teachers.¹⁵ The American Association of School Administrators has found, for example that the “overwhelming majority of high school principals are convinced that teacher experience matters. Seventy percent report that in their schools, teachers with more experience are more knowledgeable about curriculum, assessment, and instruction.”¹⁶ Concentrations of underprepared and inexperienced teachers create a drain on school finances and human resources. New teachers thrown into schools with high turnover and limited opportunities for mentoring by accomplished teachers feel “lost at sea.”¹⁷

Schools with high turnover must continually pour money into recruitment efforts and professional support for new teachers, without reaping returns in the dividends of student achievement. Other teachers, including the few who could serve as mentors, are stretched thin; they feel overburdened by the needs of their colleagues as well as those of their students. Instead of using funds for needed academic improvements, monies are spent reteaching the basics of educational practice each year to new teachers who too often leave before they become skilled. Teachers who benefit from the staff-development investments of low-performing schools often end up leaving the profession or moving on to more “desirable” teaching positions in more affluent communities, creating a continuing drain on our most troubled schools.¹⁸

As usual, it is the lowest-income students who suffer most. Young people need stability in their lives. When school staff come and go in a parade of changing faces, children’s emotional and social development suffer the consequences.¹⁹ Excessive teacher turnover in low-income urban and rural communities is undermining teaching quality and student achievement. Typically, large urban schools with the highest percentages of poor and minority students have the highest turnover rates; they have the highest percentages of first-year teachers, the highest percentages of teachers with less than five years of teaching experience, and the lowest percentages of veteran accomplished teachers.²⁰ In California for example,

FIGURE 10a

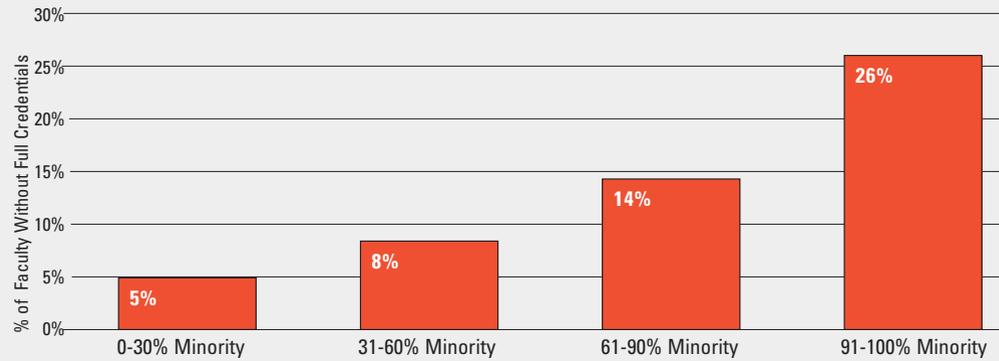
Distribution of Underprepared California Teachers, by Student Poverty Level, 2000-01



Source: *Teaching and California's Future: The Status of the Teaching Profession 2001*. Center for the Future of Teaching and Learning, www.cftl.org.

FIGURE 10b

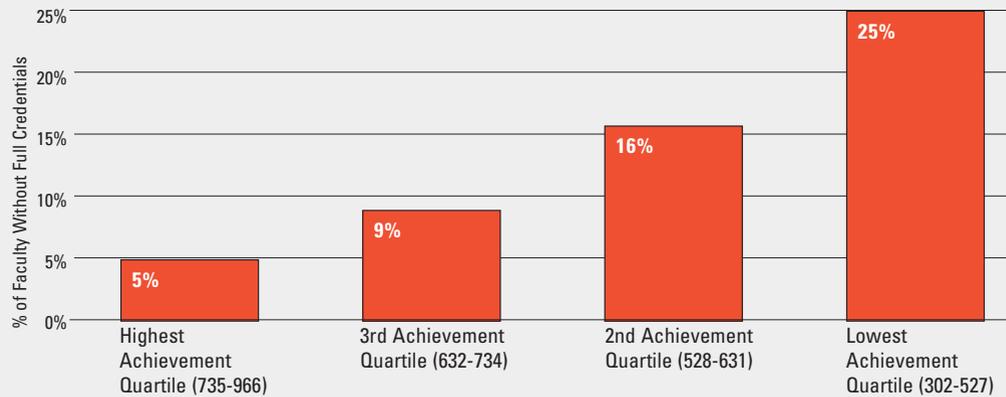
Distribution of Underprepared California Teachers, by Percentage of Minority Students, 2000-01



Source: *Teaching and California's Future: The Status of the Teaching Profession 2001*. Center for the Future of Teaching and Learning, www.cftl.org.

FIGURE 10c

Proportion of Underprepared California Teachers, by School-Level API Score, 2000-01



Student Achievement Level (School Score API Score)

Source: *Teaching and California's Future: The Status of the Teaching Profession 2001*. Center for the Future of Teaching and Learning, www.cftl.org.

schools with high percentages of low-income and minority students are consistently staffed with higher numbers of underprepared teachers (see Figures 10a, 10b, and 10c). The National Center for Education Statistics recently reported that more than half of the nation's middle school students and a quarter of its high school students are learning core academic subjects from teachers who lack certification in those subjects, or who did not major in them in college, or both.²¹ This pattern of out-of-field teaching is, again, particularly severe in low-income communities. Teachers in these schools are too often treated like interchangeable parts, who can be swapped from one teaching field to another.²² Under these circumstances it is likely that children with the greatest learning needs will experience year after year of teaching by unqualified instructors.

Conditions in these schools simply do not support quality teaching. For example, a California survey found that teachers in high-minority, low-income schools report significantly worse working conditions—including poorer facilities, less availability of textbooks and supplies, fewer administrative supports, and larger class sizes—and that teachers are significantly more likely to say they plan to leave a school soon because of these poor working conditions.²³ A subsequent analysis of these data confirmed that turnover problems are more strongly influenced by school working conditions and salary levels than by student characteristics in these schools.²⁴

The impact of high turnover in low-income and high-minority schools falls most directly on students because, for them, their teacher's departure creates a true no-win situation. Having lost their teacher, they are forced to sit in classrooms taught by the latest unqualified replacement or substitute, even as their chances of achieving a quality education diminish daily. In one widely noted Tennessee study, children who had the least effective teachers three years in a row posted academic achievement gains that were 54 percent lower than the gains of children who had the most effective teachers three years in a row.²⁵ Similar studies in Boston and Dallas have had comparable findings.²⁶ The Education Trust has found that: "The implication is that not only does teaching quality matter—it matters a lot. Students unfortunate enough to face several bad teachers in a row face devastating odds against success."²⁷

Taken together, at every level, the perpetual churning of staff in our schools has high costs. As a result, too many schools are riding a downward spiral that diminishes the dreams of both our teachers and students. Finding a way to break out of this tailspin is imperative. We must balance our teacher preparation and recruitment efforts with stronger efforts to retain and reward the teachers we have. Simply replacing those who leave with short-term quick fixes serves only to keep the revolving door spinning.

THE ROAD AHEAD: ADDRESS THE CAUSES OF HIGH TURNOVER

The nation will not effectively address the teacher retention crisis until it tackles the root causes of high teacher turnover:

- **Teaching conditions: Schools must be organized to support quality teaching in professional learning communities.**
- **Teacher preparation: All teachers must be well-prepared and licensed to ensure quality.**
- **Teaching as a profession: Rewarding career paths for teachers from induction to accomplished teaching must be developed with pay and pay systems that recognize teachers as professionals.**

To address the teacher retention crisis we must respond to the causes of high turnover and attrition. Many factors influence teachers' reasons for leaving a school (see Figures 6 and 11). Working conditions and salaries are both significant reasons for leaving teaching, but the relative importance of these features varies, depending on the specific teacher's experiences. For example, poor administrative supports, lack of influence, classroom intrusions and inadequate time are mentioned more often by teachers leaving low-income schools where working conditions are often more stressful. Salaries are mentioned somewhat more often by teachers leaving more affluent schools. Pay matters, and it is discussed in Strategy 3 of this report. Working conditions, which many teachers report as equally important, are discussed in Strategy 1.

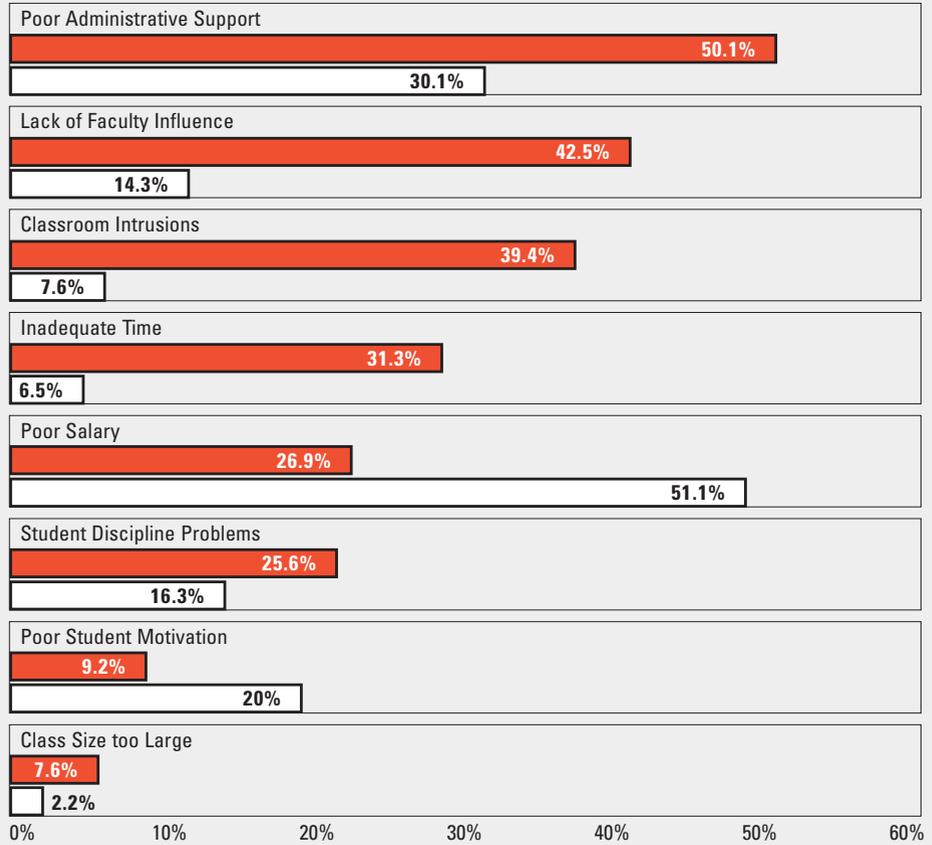
Quality teacher preparation and well-designed mentored induction also make a difference. Approaches that bypass strong academic preparation, student teaching, and the mentoring that enables recruits to learn from skilled veterans typically breed a sense of failure and early burnout. An approach to recruitment that emphasizes ease of entry over quality preparation is often penny-wise and pound-foolish. It makes the revolving door turn faster and undermines a school's ability to sustain a stable teaching force. In fact, attrition rates for beginning teachers who have not had strong teacher preparation programs are double those of their better-prepared colleagues (see Figure 12 in Strategy 2). Quality preparation and licensure are discussed in Strategy 2.

There is also emerging evidence that developing rewarding career paths, that begin with mentored induction by expert colleagues and lead to professional recognition and rewards for accomplished teachers contributes to teaching quality and teacher retention. Professional career paths are discussed in Strategy 3.

FIGURE 11
School Conditions are the Greatest Factor in Dissatisfaction-Related Teacher Turnover

Percent of Teachers Giving Reason for Dissatisfaction-Related Turnover (1994-1995)

■ High Poverty, Urban Public
 Low Poverty, Suburban Public



Source: Richard M. Ingersoll, adapted for NCTAF from "Teacher Turnover and Teacher Shortages: An Organizational Analysis" American Educational Research Journal 38(fall 2001), 499-534.

Some states are taking a close look at their overall turnover and attrition data and on that basis have begun to take action accordingly. The box below describes the study of teacher attrition in Tennessee.

Box 1: Tennessee Looks at Teacher Attrition

In Tennessee, a primary area of concern is the significant number of teachers who stop teaching early in their careers. The state has good data regarding the dynamics of teaching supply and demand, published periodically in cooperation with the Southern Regional Education Board. This data show that 42 percent of new teachers in Tennessee stop teaching within the first five years, a percentage similar to that in national studies. Only 20 percent of those who leave ever return to teach in Tennessee.

In order to answer the question, “Why are teachers leaving our classrooms?” the Tennessee P-16 Council (in cooperation with Tennessee Tomorrow Inc., the Tennessee Department of Education, the State Board of Education, and the Higher Education Commission) undertook a study of teachers who left Tennessee public schools with 10 or fewer years of experience.

Key findings of this study are:

- **Almost 63 percent of former teachers indicated that they would “more than likely choose to become a teacher again” (although the state data noted above indicate that only 20 percent ever do return to teaching in the state).**
- **The top three reasons given for leaving teaching are child rearing/pregnancy, lack of support from administration (including support for mentoring), and dissatisfaction with salary and benefits.**
- **More than 93 percent of respondents rated both their teacher preparation course work and practical training (field experiences and student teaching) as “very effective” or “somewhat effective”—a finding that reflects the considerable effort that Tennessee has made to improve teacher education.**
- **Respondents rated both their professional development and mentoring as somewhat less effective than their teacher preparation. In addition, 76 percent of respondents reported having received professional development, and 51 percent were provided with a mentor as a beginning teacher.**

Tennessee is using the findings of the study to determine how to strengthen support programs for new teachers to encourage them to stay.

Source: Teacher Attrition in Tennessee (P-16 Council, 2002,) www.tntomorrow.org.

North Carolina has gone a step further, with a statewide study of teachers' views of how working conditions impact their satisfaction with teaching and how this translates into teacher retention.

Box 2: North Carolina Looks at Working Conditions for Teachers

The North Carolina Professional Teaching Standards Commission heard a common response to the standards for teachers adopted by the State Board of Education: "These are wonderful standards, but of course we can't implement them. We can't even fill our vacancies as it is." The commission began to examine issues of teacher recruitment and retention and found that, if the 14 percent annual turnover rate for North Carolina teachers could be lowered to a rate closer to the average turnover for all professions (11.8 percent), their teacher supply and demand numbers could be balanced.

Believing that working conditions have a major impact on teacher satisfaction and turnover, a "working conditions survey" was created to help the commission answer the question, "What conditions in schools would allow highly qualified teachers to do their best work and help them be satisfied with their jobs?"

The commission undertook this initiative with four goals: 1) to highlight best practices in schools that received high working conditions ratings; 2) to provide administrators and school improvement teams with detailed feedback on major working conditions issues in their schools; and 3) to provide successful schools with a recruiting tool they could use to advertise their status as a great school to work in; and 4) to provide a systematic way to attack and resolve working conditions issues in schools on a statewide basis.

The North Carolina commission developed 30 working conditions standards for schools. These standards fell in the categories of use of time, school facilities, school leadership, teacher empowerment, and quality professional development. After a pilot study in the winter of 2002, this survey was distributed to every school in the state. Approximately 42,500 teachers responded, representing over 45 percent of the teachers in the state.

The commission is now analyzing the results, and each of the 1,471 schools represented in the responses will receive a school report. School reports will also be compared to district and state averages. Results will also be presented to the State Board of Education, with correlations examining relations between perceptions of working conditions at the school and district level and factors such as teacher turnover, student achievement, and district wealth.

While the surveys are still being analyzed at the time of this writing, the results clearly validate what for years has been a concern among teachers: they do not have adequate time to do their jobs and to plan and collaborate. While there are some obvious implications from the statewide data, there will also be many specific areas where individual schools and systems can target their resources to improve working conditions for teachers, according to the North Carolina's Governor's office.

Source: Tom Blanford, formerly with the North Carolina Professional Teaching Standards Commission; Ann McArthur, North Carolina Office of the Governor; Caroline McKinney, president, NCAE.

THE THREE-PART STRATEGY

And so, to stem the flow of good teachers from America's schools and ensure high-quality teaching for all, we return to the three-part strategy noted in the opening of this report:

STRATEGY 1

SCHOOLS WHERE DREAMS CAN GROW: CREATING LEARNING COMMUNITIES

Page 41

STRATEGY 2

BUILDING DREAMS ON A STRONG FOUNDATION: QUALITY TEACHER PREPARATION, ACCREDITATION, AND LICENSURE

page 69

STRATEGY 3

FULFILLING THE DREAM OF TEACHING: A PROFESSIONALLY REWARDING CAREER

Page 109

S T R A T E G Y 1

**SCHOOLS WHERE
DREAMS CAN GROW:
CREATING LEARNING
COMMUNITIES**

S T R A T E G Y 1

SCHOOLS ORGANIZED FOR SUCCESS ARE LEARNING COMMUNITIES	43
WHAT WE HAVE LEARNED ABOUT LEARNING	44
Successful Schools Are Learner-Centered	44
Successful Schools Are Knowledge-Centered	45
Successful Schools Are Assessment-Centered	45
Successful Schools Are Community-Centered	46
MAKING SCHOOLS INTO LEARNING COMMUNITIES	47
Box 3: Roosevelt Elementary School, Houston Independent School District	48
Encouraging Teacher Collaboration and Differentiated Staffing	49
Sharing Instructional Leadership	50
Box 4: Vermont’s Professional Development Regional Collaboratives	51
Box 5: Redesign by Design: Idaho’s Cascade Junior-Senior High School	52
Redesigning and Resizing Schools To Create Community	53
Social and Emotional Development for Academic Success	54
Box 6: The Comer Project in Springfield, MO	54
“New Village Schools”	56
Box 7: Design Principles for “New Village Schools”	57
Support for Small School Designs	58
Box 8: A New Charter School Brings Quality Teaching Where It’s Needed Most	58
Small Schools Encourage Effective Learning Communities	59
Box 9: Benefits of Small Schools: What the Research Says	60
Cost Implications	62
Box 10: Designs for Learning at the School of Environmental Studies	63
Expanding the Reach of Small Schools	64
Supporting the Vision With Technology	64
Technology Supports Powerful Explorations of Knowledge To Improve Learning	65
Technology Presents Content in Powerful Ways	65
Technology Supports Just-in-Time Assessment and Personalized Learning	66
Technology Supports Teachers	66
Box 11: Online Mentoring Support for New Teachers	66
ACTION STEPS	67

SCHOOLS ORGANIZED FOR SUCCESS ARE LEARNING COMMUNITIES

In 1996, in *What Matters Most*, the Commission set out a challenge: Create schools organized for student and teacher success. We suggested that this could be done by making schools genuine learning organizations that, for both students and teachers, respect learning, honor teaching, and teach for understanding. We called for initiatives to restructure time and staffing so that teachers have regular opportunities to work with one another and shared responsibility for groups of students. We challenged policymakers to flatten hierarchies and reallocate resources to send more dollars to the front lines of the schools: investing more in teachers and technologies and less in non-teaching personnel and

The best efforts at recruiting highly qualified teachers into the profession fall apart when they enter schools that do not support quality teaching.

resources. And we proposed that school systems select, prepare, and retain principals who understand teaching and learning and who can lead high performing schools as learning communities.

Of all the Commission's original recommendations, those directed at organizing schools for success have proved the most difficult to implement. The consequences are serious. Until every school becomes a strong learning community, student academic performance will continue to suffer; achievement gaps across racial, ethnic, and economic groups will persist; and as we have documented throughout this report, high teacher turnover will be a chronic problem standing in the way of providing every child with a competent, caring, qualified teacher. The best efforts at recruiting highly qualified teachers into the profession fall apart when they enter schools that do not support quality teaching.

Yet we are encouraged by the fact that there are many schools that have been organized for success, and they serve as beacons that guide our efforts. In these schools, teaching is still hard work, but it is satisfying work; worthwhile teaching challenges are set and met. These schools are able to attract highly qualified teachers who are provided with the resources and support they need to teach to their fullest potential. In short, in these schools the dreams of children grow and thrive. When that happens the dreams of their teachers also become a reality. In this chapter, we examine progress and what we have learned about schools that become true learning communities.

WHAT WE HAVE LEARNED ABOUT LEARNING

It seems simplistic to say that schools should be designed around what we know about learning, but the fact is, too many of our schools still cling to an older model of educational practice that does not take into account what research has taught us about how people learn. Research conducted over several decades and summarized by the National Academy of Sciences has identified four essential elements of educational environments designed to support learning: a learner-centered focus, a strong knowledge base, emphasis on assessment, and a sense of community.¹ Each of these four ingredients is essential for successful learning, which is what schools organized for success are all about. These dimensions are equally applicable to the learning of students and the continuing growth of teachers. High quality teachers are attracted to, and stay with, schools organized for success. The bottom line is what we all seek: good student achievement.

Below, we examine what is known about how people learn, for we believe that these four principles are the core elements for turning schools into effective learning communities.

Successful Schools Are Learner-Centered

In learner-centered schools teachers know and attend to the knowledge, skills, beliefs, and backgrounds each child brings to the classroom. The time it takes a child to master new knowledge varies with each child, as does the style of learning that works best. Cultural differences also affect the background information a child brings to school and the ways they are most comfortable learning.² When those variations are respected, every child is taught to his or her strengths, at a pace and style that is adjusted to the child's developing knowledge and skill.

This perspective on learning is very different from the "one size fits all" factory model of education that pervades much of schooling today. That model assumes that when the same content is delivered to all children in a class at the same time, and at the same speed, all children will learn pretty much the same thing at the same rate. That model further assumes that all learners in a class start at the same point and will finish at the same time, having learned what they need to know some 180 days later. This assembly line model of schooling, while administratively efficient, is in fact ineffective and ultimately inequitable. Why? Because it requires that all children adapt to the mean, irrespective of their backgrounds, needs, strengths, and learning styles. Those who do not learn at the required speed lose out or drop out, while those who could learn more are impeded by a system that ultimately fails to challenge them.

Because this principle also applies to how teachers learn, it means that one-size fits all professional development is an ineffective approach to supporting teacher growth. Instead of expecting all teachers to attend prearranged workshops, schools designed as learning communities involve the teachers in planning their own learning opportunities designed around the existing skills and knowledge of each teacher and the needs of the students with whom they work.

Successful Schools Are Knowledge-Centered

A focus on the learner does not mean that content is ignored. When teaching and learning are knowledge-centered, full attention is given to mastering what is taught. The subject matter, how it is taught, special skills needed to master it, and what constitutes mastery are all a focus of learning. Whether it is mastery of ratios, fractions, and algebra as core concepts for building mathematical understanding; or an understanding of ecological systems in biology; or the proper use of grammar, diction, and tone in writing, each school subject has its own content standards, tools, and skills that form the basis for quality instruction. These knowledge components are set out in today's content standards created by states and districts as a way of formalizing this core knowledge.

Teaching in knowledge-centered schools must go beyond the mastery of facts and figures. It includes developing each student's ability to make sense of what is known in a field of knowledge. Here, the focus is on helping students build and apply their emerging analytical skills—that is, their ability to reflect on their own thinking—how they know when new information makes sense, how it relates to what they have learned before, and how it can be used. These analytical skills are increasingly important in the information age, when students are presented with information from sources far beyond the textbook and teacher. Information literacy—the ability to find, interpret, and evaluate, as well as create and share information with others—has become a critical part of knowledge-centered learning in the 21st century.

Knowledge-centered learning for teacher professional development means focusing on the *what* and *why* of teaching concepts. Too often ideas are introduced as a part of a reform effort (e.g. teaching with technology, cooperative learning, writing across the curriculum) without giving teachers the opportunities to understand why they need these skills and how they might be applied in their classroom practice. But when knowledge is linked to the curriculum for which they are held accountable, it takes on relevance and authenticity that motivates teachers to improve their practice.

Successful Schools Are Assessment-Centered

In schools that are effective learning communities, teachers proficient in the use of well-designed assessment tools and strategies make learner-centered instruction possible. Sound assessment approaches provide continuous feedback on what is being learned, so that revisions in teaching activities can be made as needed. "Just in time learning," becomes the norm as formative assessments make the progress of students visible, showing what is understood and where stumbling blocks occur. These tools help teachers, and the students themselves, monitor learning in progress so that extra effort or new strategies can be tried before it's too late. While end-of-course or end-of-year tests and summative assessments have a role to play, they may come too late in the educational cycle for the teacher to make the instructional changes necessary to ensure the child is acquir-

ing the needed content and developing the desired skills. Formative and summative components are both important parts of an assessment-centered learning environment, but the former hold the most power for adapting instruction to the learner. Yet, effective use of formative assessment is often ignored in schools.

Feedback is equally important for teacher learning. Teachers need opportunities to observe, record, and reflect on their instruction and its impact on the students with whom they work, with input from peers and principals when appropriate, so that the learning community as a whole benefits.

Successful Schools Are Community-Centered

A learner-centered learning environment does not imply that students or teachers learn and work alone. Rather, learning and quality teaching are dependent on reflection that arises from discussion, collaboration, sharing, and building knowledge in a community of learners. Students need opportunities to work with and share their knowledge with peers. Teachers need time and opportunities to work with school colleagues, mentors, and others who can

Students need opportunities to work with and share their knowledge with peers. Teachers need time and opportunities to work with school colleagues, mentors, and others who can support the learning community.

support the learning community. Every successful school has developed its own set of learning community support networks and norms. The coherence of these norms and the quality of the school's learning community will greatly affect the school's ability to reach its goals for student learning. Knowledge is individually processed but socially supported.³

The power of community-centered learning extends beyond the boundaries of the school. Students spend a small percentage of their time in school (during a calendar year only about 14 percent of a student's time is spent in school, with 53 percent of time spent at home and in the community, and 33 percent of time spent asleep);⁴ clearly any effort to increase student learning also must draw on time spent outside the school. Today's students spend an increasing amount of non-school time surfing the Internet or chatting with friends online, for example. Successful, community-centered schools will find ways to ensure that the learning that happens in non-school time amplifies what students do in the classroom. The greater the school's link to the home and the community, the more opportunities there are for building links for learning. For example, many schools are using school or class Web sites as a way to help parents become more engaged in their students' day-to-day learning activities.

Similarly, teacher learning and professional development should not be conducted in isolation; it should thrive and grow through continued contact with the community of co-learners both in and out of school. Technology creates opportunities to create new forms of community for teachers, whether they take courses online and continue to connect with virtual peers or engage in informal learning through collaboration with colleagues online.

MAKING SCHOOLS INTO LEARNING COMMUNITIES

Schools that form learning communities built on these principles are beating demographic and socioeconomic odds that too often predict low achievement and high teacher turnover.⁵ The nation's governors, meeting in 2001, identified common characteristics of schools that have been successful at closing student achievement gaps.⁶ The factors they identified track closely to the learning community characteristics described above. The governors' list includes:

- **A relentless focus on academic performance for all students;**
- **A shared sense among faculty and staff that they are collectively responsible for the learning of every student;**
- **Frequent and regular assessment of student progress for diagnostic purposes;**
- **Principals who become true instructional leaders collaborating with teacher leaders; and**
- **A flexible use of time to modify and extend the school day and year as needed.**

The National Center for Educational Accountability in Austin, TX, has studied more than 100 high performing school systems, many in low-income communities, and has found patterns of practices at the district, school, and classroom levels that reflect the learning community characteristics defined above. The box on the following page portrays one such school.

Box 3: Roosevelt Elementary School, Houston Independent School District

For Charlotte Parker, the principal of Roosevelt Elementary in Houston, TX, there's no secret to helping students achieve: "You can increase time on task. You can increase the quality of teaching. You can increase the motivation of students. At Roosevelt, we do all three."

And Roosevelt does them with great success: In a neighborhood where 84 percent of students come from low-income families, the school helps 90 percent or more of its students score at the proficient level on the 5th grade state tests in reading and mathematics.

"We have an accountability to make a difference in these kids' lives. Otherwise we have no right to take taxpayer dollars," explains Parker. "We cannot leave children behind or blame children for the things adults aren't doing. My school has the same problems as any other urban school. But we're willing to do what it takes to educate these children. We focus on solutions."

Roosevelt's solutions begin with a clear instructional strategy for the school and a clear plan for every child. "We use assessment to determine very early where kids are, especially in reading," Parker says. "We identify kids that need intensive care." Extra assistance for those who are struggling in reading, for example, includes one-on-one tutoring during the school day, reading in small groups with a specially trained reading teacher, and an after-school session three days a week. In other words, students who need more learning time get more time.

Roosevelt's faculty also gives attention to instructional quality. Parker spends her time in the classroom—"not in an ivory tower," she says. "I know what is happening in each classroom." She demonstrates good teaching practices, meets with grade-level faculty each week, and goes out to observe other schools that are successful. Parker also makes sure the school has rich teaching materials and resources, including lots of children's literature.

"People want you to point out one single thing they can do to improve. It's not like that. There are no miracle cures and no holy water," reflects Parker. "It's having a plan, implementing the plan, making people accountable for what they do, and not making excuses."

Source: Just for the Kids, *Promising Practices*, p. 10, used with permission, www.just4kids.org/US/pdf/PP_0Summary.pdf.

We present below five key elements for change. We believe that if states and school districts adopt these strategies they will support the kinds of learning communities we called “schools built for success” in *What Matters Most*. Such schools, we believe, increase teacher retention, strengthen teaching quality, and improve student achievement and overall success. We recommend:

- **Encouraging teacher collaboration and differentiated staffing;**
- **Sharing instructional leadership among teachers and principals;**
- **Redesigning and downsizing schools into small learning communities;**
- **Supporting the vision with technology; and**
- **Preparing new teachers in close collaboration with these schools and supporting their continuous professional development.**

We examine the first four of these elements below and provide more detail on teacher preparation and professional development in subsequent sections.

Encouraging Teacher Collaboration and Differentiated Staffing

It's time to call an end to the era of solo teaching in isolated classrooms. If we know learning improves when it is community-centered, we should put this principle into action by creating supportive learning environments made up of teams of teachers and school leaders working together toward student success. Teachers need regular opportunities to work with their colleagues in examining student performance and the success of their

It's time to call an end to the era of solo teaching in isolated classrooms.

personal and schoolwide instructional activities and approaches. Professional learning communities, where collegial interchange replaces isolation, and where every member has a voice, provide a foundation of support for this skill-building work. If we want professional educators in our schools, we must make our schools professional workplaces.

Differentiated staffing means breaking out of the one teacher/one class cookie-cutter designs for school staffing. It means giving teachers different levels and kinds of responsibilities based on their experience and expertise. The best teachers in the school or district should be encouraged to become lead teachers who can mentor and advise novice teachers during the critical first years of teaching. Schools know who their best teachers are, and they should give them opportunities to share their expertise and expand their reach. Working in teams with colleagues, these lead teachers can better ensure that their school's professional development strategies focus on meeting the specific learning needs of students in a timely way.

This also means taking an approach to professional development that is built on research on effective practice: “Professional development that results in significant changes in practice will focus explicitly on student learning needs, engage teachers in analysis of their own practice, and provide opportunities for teachers to observe experts and to be observed by and to receive feedback from experts.”⁷

Teachers should also have the opportunity to collaborate with their colleagues in higher education, to link the academic knowledge and resources of the university with the practical expertise they have developed in the schools. But the expertise available to teachers is no longer bound by geography. Even when a school is too small to support its own mentors or is located far from other schools or higher education institutions, telecommunications and information technologies make it possible for teachers to share and expand their expertise through regular, online interaction with mentors, colleagues, and leaders in the profession anywhere. When bolstered by this community, teachers can find solutions to immediate problems and envision a future career path in which their own growth is enriched by a range of role models.

Box 4 to the right and Box 5 on the following page describe approaches to building learning communities that help to overcome limitations faced by small schools and districts.

Sharing Instructional Leadership

If the era of solo teaching is ending, so too are the days of the principal as the “Lone Ranger” of school improvement.⁸ Classical top-down leadership, designed for factory-era schools, collides with the needs of 21st century learning places. Single-person leadership conceals and ultimately wastes the leadership talents of teachers. More seriously, when teacher leadership remains undeveloped, reforms wither if the high-wattage principal leaves, and teacher turnover is aggravated when educators become frustrated by a déjà vu parade of new leaders introducing their own versions of reform.

In contrast, schools succeed when led by a principal who works with the members of that school community in building and supporting a shared vision of success. Distributed leadership brings the learning community together in a common commitment and shared responsibility for sustaining improvement. Projects like the Annenberg Institute for School Reform and the Gates Leadership Institute are working to help build models of collaborative leading and learning in schools. In the best-case scenarios, effective instructional leadership forms a solid base on which a school learning community works, learns, and thrives.⁹

Box 4: Vermont's Professional Development Regional Collaboratives

In a time of scarce resources and high expectations for schools, Vermont has designed a structured support system that enables schools to stay connected as they work to enhance educator quality. Funded by a federal Teacher Quality Enhancement state grant in 1999, Vermont has created five regional "Teacher Quality Networks," a partnership of schools, communities, businesses, professional development providers, and institutions of higher education, to share ideas for school improvement plans, professional development, and curriculum, instruction, and assessment.

The collaboratives enable a number of districts to work together on programs in which all have an interest, such as designing and implementing a mentoring program. They create regional learning communities to support school improvement, including the development of shared missions, visions, values, and goals, collaborative inquiry, and continuous improvement. Network coordinators map development and training initiatives taking place in schools within each region. Their reports help school developers learn from one another, benefit from the expertise of others, and create multidistrict working teams to avoid re-creating the wheel and to identify gaps within the region.

According to grant director Edith Beatty, Vermont requires all schools to have action plans and beginning teacher mentoring programs, and all teachers must maintain individual professional development plans. "In Vermont, where schools and districts are small, the notion of creating such associations was a natural response to multiple high needs," says Beatty. In 1999, a third of the districts in the state had the opportunity to become involved with such a collaborative. Now all of the more than 60 districts have access, and almost all choose to participate.

As a result of the collaboratives' work, there are 180 trained mentor teachers, 30 of whom are mentor-trainers. By August 2003, all schools will have an opportunity to have trained mentors to support their teachers through induction. More than 100 teachers and administrators have been trained to create colleague support networks within schools to extend throughout the career continuum. As an example of a model regional program, network coordinators have worked with school personnel to design a data collection system to determine characteristics of newly hired teachers for purposes of informing future teacher recruitment efforts. Grant funds to support state and regional staff and other resources for the collaboratives total approximately \$800,000 per year for three years. As a result of their success, it is likely the regional networks will be sustained by local funds and statewide projects after the federal grant ends.

"This model is significant in Vermont, and seems a model for national replication, because Vermont educators have created regional learning communities comprising school-based learning communities," Beatty says. "Just as great teachers do not become so in isolation, strong schools benefit from learning together with other schools and sharing work and resources with one another."

Source: Edith Beatty, Vermont Teacher Quality Enhancement Project, www.sseppd.org.

Box 5: Redesign by Design: Idaho's Cascade Junior-Senior High School

During the early 1990s, Cascade Junior-Senior High School in Cascade, a small rural community in central Idaho, began to rethink its school practices and policies that had been in effect for many years. Data indicated that significant change was needed if school leaders were to produce the results they wanted. In 1997, using funds from a three-year grant from the J.A. and Kathryn Albertson Foundation totaling \$300,000, the district invited experts to the school to help implement their school redesign model.

The school model is centered on creating an enriched learning environment. Major changes have been initiated because of this new paradigm. Block scheduling of 95-minute class periods gives teachers more time to meet the students' different learning styles. Students choose one of six career paths, allowing the school to better align a student's course of study with career goals. Additionally, students can seek one of three diploma options: a 43-credit Basic, a 48-credit Standard, and a 58-credit College Prep Diploma, depending on their emphasis of study. (Two-thirds of the students have graduated with the College Prep Diploma.) Every student has a learning profile, and students with unique abilities and talents are given the opportunity to study independently with a mentor if they choose and it fits their schedule.

The school has Internet access in every classroom. Technologies are integrated into all curricular areas and are a major part of the learning environment. A wireless laptop program for teachers and students lets students check out a laptop just as textbooks are checked out to students in more traditional schools, and three-fourths of the high school students have taken advantage of this option. All teachers and administrators have wireless connections to the local network, as well as the Internet. Teachers use districtwide administrative software to enter daily attendance and lunch counts, complete grades and report cards, and make weekly progress reports to parents. Data on discipline, scheduling, and individual student achievement on all state standards are recorded into the system.

Bill Leaf, principal of Cascade Junior-Senior High School, says, "If a school has evaluated its own data and finds that it does not like what it has, then the groundwork is set for new direction. I believe that before a school endorses any particular model, those involved should evaluate the needs of the students and school and then identify or create a model that will meet those needs." The re-creation of Cascade Junior-Senior High School has produced positive results, despite difficult economic times in the community. The percent of at-risk students at the school increased from 33 percent in 1985-86 to nearly 72 percent in 1999-2000; yet average ACT scores increased from 20.1 in 1985-87 to 22 in 1999-2000.

Leaf also notes that his school has little staff turnover, averaging less than one new teacher each year for the past 10 years, and most of these new teachers were hired to expand curriculum offerings, not replace former teachers. As one of Cascade's teachers notes, "When we began applying the principles of learning styles and quality school concepts, discipline problems in my classes disappeared, and teaching began to be a pleasure and joy instead of having to deal with student issues all of the time."

Sources: Bill Leaf, Cascade Junior-Senior High School, and Patricia Toney, Idaho State Board of Education, www.cascadehs.csd.k12.id.us.

A recent report of the National Association of Elementary School Principals advances six guiding standards that characterize effective instructional leadership.¹⁰ These characteristics correspond closely to the effective school elements noted by the National Governors' Association elsewhere in this report. School leaders should do the following:

- **Lead schools in a way that places student and adult learning at the center;**
- **Set high expectations and standards for the academic and social development of all students and for the performance of adults;**
- **Demand content and instruction that ensure student achievement of agreed-upon academic standards;**
- **Create a culture of continuous learning for adults tied to student achievement and other school goals;**
- **Use multiple sources of data as diagnostic tools to assess, identify, and apply instructional improvement; and**
- **Actively engage the community to create shared responsibility for student and school success.**

Today's principals need to master a sophisticated set of skills and technologies if they are to orchestrate learning communities. Key among them is assessment literacy; that is, the expertise needed to extract instructional meaning from data about student and school performance.¹¹ These data are critical in guiding school teams as they reevaluate basic areas of school organization, such as the use of time and resources, roles and interactions among staff, instructional approaches and measurements, interactions with parents and the community, and overall school culture. Internet-based assessment and instructional databases can now support a complex, student-oriented information system based on regular and multiple analyses of testing and other assessment data. Drawing on these assessment databases, school leadership teams can better understand where student learning founders, where it is successful, and how to work together in applying strategies that work.

Redesigning and Resizing Schools To Create Community

Learning communities must confront the problems of scale. Many schools, especially at the middle and high school levels, have been allowed to expand far beyond the numbers of students for which they were originally designed. Some rural communities bring students from points far from their homes with expanded consolidated districts. And, at the other extreme, some schools are so small that they cannot provide the levels of support teachers and students need. What matters most is organizing on a scale that involves teachers, parents, and those in the broader community in continuing conversations about what they want their children to know and become, and what they want their schools to be able to do to support these goals. These conversations often have at their core parental concerns about addressing the emotional and developmental needs of students to help them meet their fullest academic and social potential. They also lead to considerations about how space, time, curriculum, staffing, and resources can be redesigned and redeployed to support these goals, as illustrated in the box on the previous page.

Social and Emotional Development for Academic Success

Social and emotional supports are now seen as essential foundations for academic growth. We know that schools should provide stability and security in the lives of children and that the secure anchor of a school community is important for all children, most especially those designated to be “at risk.” The “Comer method” takes as its core a focus on the whole child to support every child’s fullest social, emotional, and academic growth (see box below).

Box 6: The Comer Project in Springfield, MO

It’s unlikely that many parents of students in three Springfield, MO, schools have heard of the “Comer Project.” But they do know that their children’s achievement scores have gone up, school violence has ebbed, and students have learned a way to work collaboratively on solving problems with one another.

The Comer Project employs the principles of school design originated by James P. Comer, Founder of the School Development Program at the Yale University Child Study Center. The Comer method simultaneously addresses school climate, student behavior, and academic achievement. “Everything that goes on in a Comer school is centered on the development of the child. Children who are developing well will learn well,” according to Comer.

In the mid-1990s, three Springfield schools (Boyd-Berry Elementary, Pipkin Middle, and Central High) were among the lowest-performing in the district. According to Loleta Sartin, the director of the Springfield Developmental School Program at Drury University, between 35 percent and 40 percent of Boyd-Berry Elementary students live in homeless shelters at some point during the school year. Because of this, the mobility rate of Boyd-Berry students is 126 percent.

Drury, along with the Yale School Development Program and the Springfield Public Schools, form the three-way “Comer Partnership” that has shown measurable benefits to Springfield’s public school students.

Participation of teachers, parents/guardians, school counselors (including school nurses and psychologists), administrators, and the greater community are all galvanized in the process. Yale provides the guidance, support, and training for the partnership. Drury University provides faculty and student teachers from its Developmental School Program, working closely with the schools to keep the initiative on track. The participation of community leadership and parent groups helps facilitate progress as well.

The Comer principles provide a structure for creating a school culture that promotes student development and academic achievement, monitors results, and makes adjustments to support further improvements. Its basic organization consists of nine core elements, made up of guiding principles, operational systems, and organizational mechanisms.

Guiding Principles

- *Consensus:* All decisions are made by consensus, rather than by majority vote.
- *Collaboration:* Principal, staff, and parents work in a cooperative and coordinated way.
- *No-Fault:* The focus is on problem solving rather than on blame.

Operational Systems

- *Comprehensive School Plan:* Establishes academic and social goals and strategies in the curriculum, instruction, student assessment, and school and community interaction areas.
- *Staff Development:* Creates programs to help staff better meet the needs identified through the assessment process.
- *Assessment and Modification:* Allows for orderly change and adjustment.

Organizational Mechanisms

- *School Planning and Management Team:* Develops and monitors the Comprehensive School Plan. Includes parents, teachers, administrators, and support staff.
- *Student and Staff Support Team:* Helps improve the school's social climate and coordinates support for individual or small groups of students with special needs. Includes social workers, counselors, special education teachers, and other staff members with human development and mental health backgrounds.
- *Parent Team:* Promotes parent involvement in all areas of school life.

Drury University's Loleta Sartin notes that:

- After two years of the Drury/Comer Partnership with Boyd-Berry Elementary School, 47 percent of the 2nd graders scored in the top 40 percent on state standardized tests, up from 25 percent. After three years, 67 percent of 2nd graders scored above the 40th percentile in math testing (an increase from 70 percent of 2nd graders scoring below the 40th percentile). Teacher turnover has significantly decreased.
- Since the Drury/Comer Partnership with Pipkin Middle School began in 1999, students' standardized test scores have climbed, attendance is up, and suspensions are down 50 percent.
- Since the implementation of the Comer Process at Central High School began in 1999, the dropout rate has dropped by 50 percent. The fall 2002 enrollment of 1,335 is the highest in at least a dozen years. Attendance and extracurricular participation has climbed. ACT scores have risen in every subject area.

The Comer principles address a cultural misconception about the abilities of children in difficult socioeconomic circumstances. Children in low-income districts—even where the majority of students are moving in and out of homeless shelters—can experience significant academic achievement when the whole school is organized to help each child succeed, where respect and collaboration are foremost, and where scientific knowledge about child and adolescent development is applied in a systematic, hands-on way.

Source: Interviews with James P. Comer, Yale University Child Study Center (June 2002), and Loleta Sartin, Drury University (August and November 2002).

Large, impersonal high schools are ill-equipped to support the developmental needs of adolescents. Most of America's high school students attend large high schools—approximately 70 percent are in schools with 1,000 or more students, and 50 percent attend schools with more than 1,500 students.¹² Far too often in such schools, teachers see their students in short chunks of time and have little opportunity to know them as individuals or interact with them in sustained, meaningful ways. The most vulnerable students are the most common victims of this intellectual and social anomie; far too many quietly slip away to join the ranks of the nation's school dropouts. The data speaks for itself: Less than 75 percent of all 8th graders graduate from high school in five years. In some urban areas, graduation rates are below 50 percent, especially for low-income African-American and Latino students.¹³

Even for those who remain in school it is more often sports, arts programs, extracurricular activities, and social life that are likely to engage students and keep them coming back. Increasingly, students report that school itself is irrelevant, boring, and not worth the intellectual effort. A study published by the Aspen Institute found that “about 40 percent of high school students were just going through the motions in school; over one-third of the students surveyed said they got through the days ‘goofing off’ with their friends and that they neither tried hard nor paid attention when in class.”¹⁴

These concerns have led educators and policymakers to create alternatives in the form of smaller learning centers in large schools or totally redesigned small schools. In smaller schools (typically 300 to 600 students), more flexible staffing, use of time, and learning designs can be structured to ensure that teachers and administrators get to know their students well and serve as their champions throughout their school careers. Many prominent examples exist in New York City, where more than 200 new small schools were created during the 1990s, many of them on the model of older successfully redesigned schools like Central Park East Secondary School, the Urban Academy, and International High School. These schools, and their second-generation progeny, serve high-poverty, high-minority student bodies and, in a city that graduates only about half of its students, many of these small schools graduate more than 90 percent and send more than 90 percent to college. Among these carefully designed new schools, there is evidence of substantially better attendance; lower rates of violence and misbehavior; stronger gains in reading, especially for limited-English-proficient students; better performance on writing assessments; higher graduation rates; and higher college-going rates than the former large schools produced.¹⁵

“New Village Schools”

Harvard researcher Tony Wagner has distilled the factors he believes motivate high student achievement at successful secondary schools he has studied. He calls these learning communities: “New Village Schools.”¹⁶

Box 7: Design Principles for “New Village Schools”**Teachers must know their students well.**

Teachers must know their students in order to individualize the instruction, build on each student's needs and experience, and ensure that none fall through the cracks. Wagner recommends that New Village Schools consist of “houses” of 75-80 students, with four teachers who work with the same group of students over two years.

All staff work with students directly; there are no non-teaching personnel.

The curriculum must be engaging and intellectually challenging.

Competencies should be the goal, rather than curriculum coverage. Students are motivated by what is relevant to them; nonetheless, all students should be held to high standards and expectations. “Respect and rigor, caring and competence” are the watchwords.

Student “voice” must be encouraged.

All students have powerful ideas, and they should be given the opportunity to express them and build on them. It has been more than 50 years since Jean Piaget said, “To understand is to invent.” The construction of knowledge is a core concept in learning theory today.

Students must have opportunities for real-world learning.

Community service, carefully selected to meet real needs in the community and match student interest, can be a powerful way to help students learn skills necessary for success outside the school walls. When students establish a tradition of volunteerism, long-term benefits to the community are enhanced.

Students must have an emotional support system.

In Central Park East Secondary School, for example, all students spent an hour a day with their advisory group, a combined tutorial, seminar, counseling, and study session. Supportive peer groups, led by wise and caring adults, build a support system that extends the reach of busy or broken families. Attending to the whole child, giving equal weight to the social, physical, and intellectual sustenance needed for healthy development, does not end with the young child, but is equally critical for adolescent growth and development.

Schools must forge close ties with parents.

Too often school/parent connections are frustrating, stressful, and difficult for both sides, especially when parents have had negative experiences in their own school careers. Frenzied back-to-school nights, in which parents dash from class to class, give parents little sense of their child's personal learning successes and problems. By contrast, when a student has the same adviser for more than one year, and multiple conferences are scheduled throughout the year, it is possible to build trust and better lines of communication among all involved.

Schools must provide a safe, respectful environment.

When all students in a school are known, the dangers spawned by anonymity are minimized. Involving students in the establishment of school traditions, policies, and norms of behavior through their peer advisory teams creates an atmosphere of respect—for teachers, fellow students, the school, and for oneself.

Source: Tony Wagner, *Making the Grade: Reinventing America's Schools* (New York: RoutledgeFalmer, 2001). Adapted from pages 88-96.

Support for Small School Designs

In the past 15 years, more than 300 downsized schools have been created in the New York, Chicago, and Philadelphia school districts. The federal government and several foundations have given financial support to the downsizing movement. In 2000, the U.S. Department of Education created the “Smaller Learning Communities Program,” with grants to large schools to assist them in creating learning communities of 600 or fewer students. Although Congress appropriated \$142 million for this program in fiscal year 2002, the Administration’s 2003 budget eliminated funding for this program. Foundations (e.g. the Annenberg Institute, the Carnegie Corporation, the Ford Foundation, and the Kellogg Foundation) have invested substantially in small school designs. Over the past several years, the Bill & Melinda Gates Foundation has undertaken a major initiative to support small schools, investing \$350 million in grants nationwide to encourage the creation of small high schools and the transformation of large schools into smaller learning communities.¹⁸ Other redesigned schools are the result of creative partnerships between higher education and local school districts, like the one noted in the box below.

Box 8: A New Charter School Brings Quality Teaching Where It’s Needed Most

The newly founded East Palo Alto High School (EPAHS), the first public high school to serve East Palo Alto and east Menlo Park in 26 years, is a combined charter school, small high school, professional development school, and a bold opportunity to bring the highest caliber of teaching to a community whose students have been underserved for decades.

EPAHS is taking shape in California’s Ravenswood City school district, where the last high school was closed by a desegregation order in 1976. The school is a partnership among Stanford University, Aspire Public Schools, and the Ravenswood district. NCTAF’s founding executive director, Linda Darling-Hammond, and Don Shalvey of Aspire co-founded EPAHS. Their work focuses on creating a school that demonstrates what is possible when the principles of effective, small-school design are combined with strong teaching quality and a collaborative environment.

The distinction setting EPAHS apart from virtually all other schools is that its teachers have either earned certification from the National Board for Professional Teaching Standards or are committed to pursuing Board certification within five years.

The school features a project-based curriculum tied to rigorous standards and performance assessments, focused on college preparatory academics and the students’ own interests. Students are offered the opportunity to study college courses online and through community service internships with local businesses and organizations. Teachers work in teams, with three teachers sharing a common group of about 26 students over two years. The demographic profile of the student body is representative of the district: 30 percent are African-American, 60 percent are Latino, and 10 percent of students are of Pacific Islander origin.

In keeping with its mission to promote and demonstrate teaching excellence, EPAHS serves as a professional development school for the Stanford Teacher Education Program and trains student teachers in collaboration with Stanford University’s School of Education. Stanford faculty helped design the new EPAHS, and they support teacher development, curriculum development, and research in the school.

EPAHS was designed to promote teacher collaboration and professional development, as well as to train new teachers in a school where everyone has access to the best the profession has to offer—small classes, transparent technology, a standards-based curriculum, and most important, competent, caring, and truly qualified teachers.

Source: Interview, Linda Darling-Hammond, Stanford University (June 2002).

Small Schools Encourage Effective Learning Communities

When we look at efforts across the nation to reorganize middle schools and high schools in ways that foster success, we find that a growing number of districts—especially in urban areas—have chosen to transform overcrowded, failing organizations into “small schools.” The school building often remains the same, but within it, several new dynamic schools and academies are born. While size alone does not automatically make a school successful, it does appear to be an important factor in creating more effective schools. Small schools make it possible to create policies and practices that are conducive to student success. These components echo what we said earlier in this chapter about effective learning communities:

- **Relationships between adults and students reflect care and concern, and are ongoing;**
- **Relationships with parents are strong and ongoing;**
- **The school's organizational structure is flat, with broadly distributed leadership;**
- **Most small schools focus on key educational targets rather than attempting to be comprehensive;**
- **Professional development is ongoing, embedded, and site-specific;**
- **The school develops its own culture; and**
- **The community is engaged in educating its young people.**

Numerous studies, including some involving thousands of students and hundreds of schools, confirm that small schools lead to improved student achievement and enable educators to realize many of the other goals of school reform (e.g., increased attendance and graduation rates, higher grades, and higher rates of course completion).¹⁹ A summary of the key findings from these studies appears in the box that follows.

Box 9: Benefits of Small Schools: What the Research Says

The studies and papers cited below strongly indicate that creating smaller, more personal, learner-centered school environments can improve academic achievement for students, along with better social outcomes and greater teacher and parental satisfaction. Findings from selected studies are listed below.

Student Achievement

- ✓ Small size is a condition for “transforming schools into communities of learners.” Personal relationships, student participation, academic performance, and intellectual orientation are stronger in small schools.²⁰
- ✓ In a study²¹ of 13,600 urban, suburban, and rural schools in Georgia, Montana, Ohio, and Texas, the benefits of small schools include:
 - Higher achievement
 - Lower achievement gaps across races
 - Lower dropout rates
 - Lower student suspension rates
 - Less drug abuse
 - Less vandalism
- Additional findings from this study include:
 - Academic performance of students with disadvantaged socioeconomic status is better than in large schools;
 - Academic performance of students in lower socioeconomic categories declines as the school population increases; and
 - Negative effects of poverty on student achievement increase as school population increases.
- ✓ In a study of 5,209 students, socioeconomic status (SES) affected student achievement less in small schools (enrollment under 500 students) than in larger schools.²²
- ✓ In a study²³ of 34 randomly selected Illinois school districts with high school enrollments under 500:
 - Course offerings exceeded state mandates;
 - The average dropout rate was less than half the state average;
 - ACT composite scores were above average in 23 sample schools.
 - Per-pupil expenditures were below the state average, but salaries were as well;
 - Students participated in many more extracurricular activities; and
 - 85.3% of 1981 graduates were continuing their education or in the work force.
- ✓ A study in West Virginia found that poor students achieve better in small schools and districts and that negative effects of large schools and districts on poor students increase significantly as grade levels increase.²⁴
- ✓ In a study on the differences in educational outcomes for students from small (under 300 students), average (400–700 students), and large (900–1,200 students) rural high schools and among 1,084 students from small urban, suburban, and rural high schools, the mean scores were highest for students enrolled in the small schools in all measures of academic outcomes except mathematics.²⁵
- ✓ Across the nation, in urban, suburban, and rural schools of fewer than 300 students, African-American students scored higher on the SAT than their large-school counterparts.²⁶

Student Social Development

- ✓ Students of all abilities, at all schools levels, and in all settings demonstrate better attitudes, behavior, and participation in smaller schools.²⁷
- ✓ Students in small schools display more social concern, and dropout rates are reduced.²⁸
- ✓ Small schools are beneficial for the entire school community, and particularly for disadvantaged youths, who are helped by the attention and sense of belonging that small schools promote.²⁹
- ✓ Students in smaller schools have fewer, but more intense and enduring, relationships with adults in their school life.³⁰
- ✓ When a school is small enough, students can be trusted with responsibility, and an individualized program makes sense. Control is not a central issue, and every student and teacher has a say in how the school is run.³¹
- ✓ Students in small high schools participate in co-curricular activities more and are less alienated than students in large schools.³²
- ✓ Students in small schools feel a greater obligation to participate in school activities.³³
- ✓ Students in small high schools demonstrate higher levels of participation in student government, extra curricular activities, leadership roles and responsibility, use of the variety of courses offered, and involvement in community life.³⁴

Parent and Teacher Satisfaction

- ✓ Parents and community members report greater satisfaction with smaller schools, according to a study comparing small and large high schools in Chicago.³⁵ Teachers are often attracted to and become committed to teaching in these learning communities. Whether as a consequence of the conditions that contribute to student success or as a byproduct of student success itself, teachers in the smaller schools in this study reported that they were:
 - More satisfied with their jobs;
 - More likely to collaborate with colleagues;
 - More likely to engage in professional development that they found valuable; and
 - More able to build a coherent educational program for students between disciplines and across grade levels.

They also:

- Felt more committed and more effective;
- Tended to report a stronger professional community;
- Demonstrated a greater sense of responsibility for ongoing student learning; and
- Built a more varied instructional repertoire for working with students.

Cost Implications

Districts are quick to assume that large schools are more cost-effective. In fact, when costs are computed per graduate as opposed to per student, small schools, with higher graduation rates, have been found to be more efficient.³⁶ Tom Vander Ark, chief architect of the Gates Foundation's small schools program, says, "Big comprehensive schools have two drawbacks: They are big, and they are comprehensive. In large schools you actually have diseconomies of scale. For instance, you have to have a registrar for students ... a number of counselors, an athletic director, security people, support staff."³⁷ In their attempt to achieve economies of scale, big schools become impersonal bureaucracies, and in their attempt to be comprehensive, they too often scatter their resources across a curriculum that is a mile wide and an inch deep.

By contrast, at small schools, where teachers work with groups of students they know well, many administrative positions can be eliminated, and the resource base for instruction can be enriched and focused. Vander Ark estimates that the transformation of a large high school into several small learning communities entails an initial cost in the range of a million

When costs are computed per graduate as opposed to per student, small schools, with higher graduation rates, have been found to be more efficient.³⁶

dollars, but, once the planning and redesign investments have been made, per-pupil costs in small schools can run equal to those of other larger schools in the same system.³⁸

Cost data for the Talent Development model, developed by the Center for the Social Organization of Schools at Johns Hopkins University, bear out this estimate.

Developers for this program, which began by establishing small 9th grade academies with 120 to 180 student and four to six teachers, estimate that it would cost approximately \$250,000 per year to introduce the academies into a high school of 1,500 students, with a total cost of \$1 million to phase in the entire model over four years.³⁹ Clearly, this is an area where research will offer up new insights into school model alternatives and their costs and benefits.

One thing is clear: With \$100 billion being spent by states and districts for school construction and renovation over the next 10 years, we have a unique window of opportunity to design schools that meet the goals of a 21st century learning community. The box that follows illustrates how one district used the design of a new school as an opportunity to put the community's vision for learning into reality.

Box 10: Designs for Learning at the School of Environmental Studies

What do we mean by redesigned schools? Case studies summarized by the George Lucas Education Foundation in its (Re)Designing Learning Environments project help make this abstract concept real. The foundation's first case study, the School of Environmental Studies (SES) in Apple Valley, MN, demonstrates what can happen when a community starts by defining its vision for learning (interdisciplinary, project-based, and real-world) and designs everything—building, setting, curriculum, teacher roles, use of time, assessments, and community involvement—around this vision.

The architect of the new school, created in 1995, had this mandate: work with the community in designing a building that would meet these goals, at a per-pupil cost that would not exceed those of other high schools in the district. The resulting design, a 68,000 square foot building completed at a cost of \$80 per square foot, uses the student workstation as the central building block. Student workstations (a desk with bulletin board and storage area) can be personalized and provide students a home base with a sense of identity. Ten workstations form a "pod," and 10 pods form a "house," a group of 100 students with three teachers. Each house is in a large, flexible-use space that can be reconfigured as needed for small- or large-group work. The school is made up of four such houses, for a total of 400 students. They all share the library and forum, a two-story space that serves as cafeteria, display center, auditorium, and gathering place.

The school's location was also selected with the learning design in mind: Adjacent to a pond and less than a mile from the local zoo, the neighborhood is an extension of the school. Time is also redesigned to support the core goals of the school. Using block scheduling, the first three hours each day are spent on "thematic studies," an interdisciplinary course structured each trimester around an environmental question (e.g. "What is the relationship between humans and water?"). Team-taught by the three house teachers, this core course incorporates science, social studies, and English. Each student also has two additional 88-minute periods each day for electives. For 10 days at the end of each trimester, students focus on an "Intensive Theme Elective" in a topic they can study in depth, such as multimedia production, marine biology, or art exhibit production. The work they do in these projects involves and supports the community in a real way; for example, each fall, teams of juniors create a profile of a local pond for the city's water resources department, and their technical reports are reviewed by city officials as part of the assessment process.

Students, who are selected half by lottery and half through a competitive selection process, value the sense of community and personal attention they receive at the school. External measures bear this out, with student attitudes and behaviors more positive than those across the district and state, as well as scores on the ACT exams that exceed state and national averages. Teachers also value teaching at SES: Principal Dan Bodette says he has lost approximately a teacher a year, for reasons related to family responsibilities, spouses relocated to a new area, and other factors unrelated to job satisfaction.

Source: Dan Bodette, principal, School of Environmental Studies, and information on George Lucas Educational Foundation Web site, <http://gfl35.glef.org/learning/html/zoo.html>.

Expanding the Reach of Small Schools

Opportunities afforded by new technologies bring the resources associated with large schools—diversity of courses, a variety instructional supports, and students—to small schools. For example:

- **Internet resources give the school's library a global reach.**
- **Teachers can link with parents to extend the closer, more personal approach valued in small school designs.**
- **Students can use technology to enhance their personal voices (e.g., chat rooms and list-serves) and expand the audience of their work.**
- **Teachers can increase their peer network, accessing mentors, expert assistance, lesson plans, research, graduate courses, and other professional development opportunities far beyond those that any one school—or community—might offer.**
- **Online courses make it possible to give students in small schools access to curriculum their faculty cannot provide or the limited number of students in a school would otherwise not make possible. In the 2001-02 academic year alone, some 40,000-50,000 students were enrolled in online courses.⁴⁰**

Technology expands the reach of all schools, but smaller schools are particular beneficiaries.

Supporting the Vision With Technology

Just as technology ratchets up our effectiveness in virtually every sector of society, so does it provide opportunities to improve radically our means of educating every child.⁴¹ We have described in this chapter some of the ways that technology adds value to existing means of teaching and learning in supporting communities of learners and providing new professional development opportunities for teachers and learning options for students. But, as the impact and influence of technology on all aspects of modern life continues to expand exponentially, so too will technology's impact on education expand.

Transistors and integrated circuits are shrinking by half their size every two years even as they carry information at twice the speed for the same price, basically quadrupling their value (Moore's Law).⁴² Bandwidth is tripling every six months, with the cost dropping over the same time span by 50 percent. Seventy percent of American homes now have access to the Internet, and virtually all schools and classrooms have access to the World Wide Web.²⁷ By January 2003, there may well be more Web pages than people on the planet. We live in a world of "infowhelm."

What does all this mean for education? Technology is more than a tool for doing things faster, cheaper, or better. Each choice to adopt a technological solution is potentially a choice to change fundamentally the learning experience. The technology challenge lies in maintaining focus—holding to our vision of the academic, social, emotional, and developmental gains we seek.⁴⁴ Successful “e-learning” solutions make it possible for teachers to build on the research about how people learn. When teaching and learning occurs in networked environments (communities), it is: engaging (knowledge-centered), empowering (learner-centered), and effective (assessment-centered). We describe three arenas of technology’s impact on education below.

Technology Supports Powerful Explorations of Knowledge To Improve Learning

Yesterday’s three R’s have given way to what some have called “gateway basic skills.”⁴⁵ These include the ability to:

- **Read fluently, analytically, and productively;**
- **Express oneself well in writing that is clear and structurally correct; and**
- **Interpret quantitative data and perform basic arithmetic and logical tasks correctly, with ease, and confidence.**

But these are only the foundation. To be successful in the technological age, students require a sophisticated suite of 21st century skills and proficiencies “digital age” literacy, inventive thinking, effective communication, and high productivity.⁴⁶ It is no longer enough to teach students *about* technology; they must learn *with* technology. Further, the explosion of knowledge means that we are obliged to move from a curriculum that is “a mile wide and an inch deep” to a focus on learning for greater understanding that forms the solid base for further learning.⁴⁷

Technology Presents Content in Powerful Ways

Technology can help students better understand and apply complex concepts or enable them to move beyond intellectual stumbling blocks and delve deeply into a discipline.

“Simulation and visualization tools can help students recognize patterns, reason qualitatively about physical processes, translate among frames of reference, and envision dynamic models. These curricular approaches improve success for all types of learners

and may differentially enhance the performance of at-risk students.”⁴⁸

Technology can help students better understand and apply complex concepts or enable them to move beyond intellectual stumbling blocks and delve deeply into a discipline.

Multiple forms of media can address various learning styles (e.g., visual, auditory, or kinesthetic) to engage the ones that work best for a particular student or subject. The motivating aspects of interactivity can powerfully support student interest and effort.

Technology Supports Just-in-Time Assessment and Personalized Learning

As already noted, technology can help support learner-centered and assessment-centered learning environments by making it possible to collect and analyze data about student progress, in real time, on a continuing basis. This information can be compiled into a long-term record for the student or recombined into forms that make it possible to review the progress of an entire class. When combined with Internet-based instructional managers, teachers can find lessons, resources, tests, and other instructional supports that help them adapt instruction to the actual needs of the students.

Technology Supports Teachers

Technology has another important function in schools today: It provides the means to create and support teachers in learning communities. These communities can be based entirely within a school, providing teachers a “place” in which to reflect and converse with colleagues they might otherwise find scant opportunity to meet with in the busy school day—or they can extend across schools, districts, states, or even nations to provide much broader communities of practice. The benefits of these communities are particularly strong for new teachers who find it difficult to find the support they need in their local schools, as illustrated in the box below.

Box 11: Online Mentoring Support for New Teachers

Even if a new teacher has no one close at hand available to serve as a mentor in the critical first years of teaching, help is available through online mentoring. Some states are creating online sites to support mentoring relationships between new and experienced teachers. In Illinois, for example, the Novice Teacher Support Project, run by the University of Illinois in Urbana-Champaign, provides mentors to teachers in their first, second, or third year of teaching. Forty veteran teachers from across the state are paid \$300 stipends to serve as e-mentors and are expected to post a minimum of 12 messages per semester. Novice teachers are paid a \$250 stipend for participating and required to post at least five messages each semester. In reality, many more messages go back and forth between the novice teachers and their e-mentors, who also meet face-to-face twice a year. The electronic bulletin board also includes information sections on common areas of concern to new teachers, such as classroom management, assessment, and communications with parents.

Another e-mentoring program, WINGS Online, created at the University of Texas at Austin now serves novice teachers who want to communicate with other new teachers, connect with a mentor, or use the services of a Web site monitored by doctoral students. The “user friendly” site has four sections: a discussion space; tele-mentoring; stories; and information-on-demand on such topics as professional ethics, cognitive coaching, school culture, and helping novices find their balance.

Telementoring does not replace face-to-face mentoring but does provide novices another kind of resource, sometimes preferable for discussing issues a new teacher may feel uncomfortable discussing with a principal or other teacher in the home school.

Source: Rhea R. Borja, “E-Mentors’ Offer Online Support, Information for Novice Instructors,” *Education Week* (April 3, 2002), www.edweek.com/ew/newstory.cfm?slug=29mentor.h21 and Wings Online, <http://emissary.ots.utexas.edu/wings>.

A C T I O N S T E P S

This chapter lays out our contemporary vision for what we called “schools organized for success” in our original 1996 report. These are schools where all students can achieve; where caring, competent, and qualified teachers can teach to their fullest potential; and where all are learning, growing, and succeeding. Today we call these schools learning communities.

To transform all schools into learning communities, we recommend the following action steps:

- **Operate schools according to what research tells us about how people learn;**
- **Reallocate and appropriate funds to provide teachers and other school leaders with the time, flexibility, and resources they need to create and sustain the small and well-focused professional learning communities they need to ensure that schools succeed;**
- **Reallocate the resources of large, low performing schools to support the creation of small learning communities, breaking down teacher isolation and student anonymity;**
- **Select, prepare, retain, and reward superintendents, principals, teachers, and other school leaders who demonstrate the vision and skill to create schools that can meet 21st century needs;**
- **Adopt modern technologies and make use of research findings that enable teachers to diagnose student learning needs and deploy appropriate teaching strategies that customize instruction appropriately;**
- **Use Internet-based networked learning communities that enable teachers and students to participate in high quality learning any time, anywhere; and**
- **Use multiple assessments and accountability indicators that give a clear and continuing picture of progress toward student learning goals.**

LINKS IN THE CHAIN OF ACCOUNTABILITY

TRANSFORMING SCHOOLS INTO LEARNING COMMUNITIES

Action Steps	Who's Job Is It?			
	Federal Government	States	Districts & Schools	Institutions of Higher Learning & Research Community
Operate schools according to what research tells us about how people learn;		✓	✓	✓
Reallocate and appropriate funds to provide teachers and other school leaders with the time, flexibility, and resources they need to create and sustain the small, well-focused professional learning communities they need to ensure that schools succeed;			✓	
Reallocate the resources of large, low performing schools to support the creation of small learning communities, breaking down teacher isolation and student anonymity;		✓	✓	
Select, prepare, retain, and reward superintendents, principals, teachers, and other school leaders who demonstrate the vision and skill to create schools that can meet 21st century needs;		✓	✓	✓
Adopt modern technologies and make use of research findings that enable teachers to diagnose student learning needs and apply appropriate teaching strategies that customize instruction appropriately;	✓	✓	✓	✓
Use Internet-based networked learning communities that enable teachers and students to participate in high quality learning any time, anywhere; and	✓	✓	✓	✓
Use multiple assessments and accountability indicators that give a clear and continuing picture of progress toward student learning goals.	✓	✓	✓	✓

**BUILDING DREAMS ON
A STRONG FOUNDATION:
QUALITY TEACHER
PREPARATION,
ACCREDITATION,
AND LICENSURE**

S T R A T E G Y 2

QUALITY TEACHER PREPARATION	73
Teacher Preparation Must Begin With What We Know About Quality Teaching	73
Box 12: Criteria for Defining a Highly Qualified Beginning Teacher	73
All Pathways to Teaching Must Be High Quality	74
Six Dimensions of Quality Teacher Preparation	74
1. Careful recruitment and selection of teacher candidates	75
2. Strong academic preparation for teaching	76
3. Strong clinical practice to develop effective teaching skills	77
Box 13: Maryland Takes a Statewide Approach to Professional Development Schools	79
4. Entry level teaching support in residencies and mentored induction	79
Box 14: A School District and Higher Education Partnership for Preparing New Teachers: The New Haven/CSU-Hayward Teacher Education Program	81
5. Modern learning technologies	81
Box 15: Teaching Videos Model Sound Teaching Practice with Technology	83
6. Assessment of teacher preparation effectiveness	84
Quality Teacher Preparation Works	85
Box 16: University of Connecticut's Five Year Integrated Bachelors/Masters Program	85
Box 17: Transition Into Teaching Programs at George Washington University	86
Box 18: Washington State Creates School-Based Alternative Routes to Teacher Certification	88
TEACHER QUALITY ASSURANCE	89
Roles for the Profession, Federal and State Entities, and Higher Education Institutions	89
Accreditation of Teacher Preparation	89
Box 19: The National Council for Accreditation of Teacher Education (NCATE)	90
Teacher Preparation Accountability at the Federal and State Levels	92
Box 20: The Oklahoma Teacher Enhancement Program	94
College and University Responsibility for Quality Teacher Preparation	95
Box 21: The University of Texas at El Paso	96
Licensure Should Ensure That Teachers are Qualified to Practice	97
Progress Has Been Made	97
More Must Be Done	97
Quality at the State Level Is Uneven	98
Teacher Licensure Tests Don't Measure Up	99
Loopholes Make Licensing a Mockery	99
Needed: Full Disclosure	100
Disadvantaged Children Lose the Most	100
Winds of Change	101
A Voice for the Profession	101
Box 22: The Kentucky Education Professional Standards Board	102
Improving Teacher Assessment Tools	104
Tiered Licensure	104
ACTION STEPS	105

BUILDING DREAMS ON A STRONG FOUNDATION: QUALITY TEACHER PREPARATION, ACCREDITATION, AND LICENSURE

To ensure that educators are qualified to meet the teaching requirements of our schools and the learning needs of our students, it is time to insist on quality preparation for teachers, rigorous accreditation standards, and licensure that meets high standards.

In its 1996 report, the Commission observed that, historically, relatively few teachers have had access to the knowledge they needed to teach effectively, despite major advances in what is known about quality teaching and how children learn. This circumstance stemmed from an earlier view that schools could be managed by top-down control and that teachers needed to know little more than how to follow the book. Teachers were seen as technicians who could be minimally prepared, given highly structured tasks, and treated as semiskilled workers, rather than as professionals with the knowledge and expertise to make good teaching and learning decisions.¹ The Commission found that efforts to deal with these problems are often stymied by persistent myths that deflect attention from the hard work that is needed to improve teacher preparation. Among the most destructive of these myths: “Anyone can teach” and “Teacher education makes no difference.”

The result of these long-standing views is that there still is no consistent, substantive system for recruiting, preparing, and developing America's teachers. Because accreditation is not required of all teacher preparation programs, quality varies widely, with excellent programs operating alongside those that are out of touch with current knowledge and school needs. Similarly, we are witnessing rapid growth in the number of “alternative teacher preparation” programs that range from those that meet high standards to those limited to a few weeks of orientation in quick-fix efforts that only lead to frustration and burnout for the majority of their candidates.

Teacher licensure is undercut in many cases by the view that it is just a bureaucratic barrier to finding enough teachers to staff our nation's schools. Thousands of unqualified individuals are standing at the front of classrooms across the nation. They do not meet even the weak licensure standards already in place, let alone the strong ones that are needed. These individuals are placed in classrooms because state laws and district policies are ignored to meet the needs of schools unable to retain teachers who have proper credentials. These schools are said to be faced with "shortages" that require exceptions, but based on the data presented in the first section of this report, the Commission believes that teacher "shortages" can never be used to justify placing uncertified teachers in schools. There is no research supporting the claim that quality teacher preparation, accreditation, or licensure stand as barriers to supplying the nation's schools with a sufficient number of highly qualified teachers. Shortcutting these quality assurance measures only aggravates the conditions that are driving good teachers away from the schools that need them.

The Commission has observed that setting standards is like building a pyramid: Each layer depends on the strength of the others. Students will not be able to meet high standards of learning unless teachers are prepared to meet high standards. It is vitally important to understand that a knowledge-based economy and a pluralistic society create new expecta-

tions for teaching. What we said in 1996 is even more true today: "To help diverse learners master much more challenging content, today's teachers must go far beyond dispensing information, giving a test, and assigning a grade."² To help each child prepare for successful employment and productive citizenship in the 21st century, all teachers must know their subject areas deeply, understand how children learn, be able to use that knowledge to teach well, use modern learning technologies effectively, and work closely with their colleagues to create rich learning environments.

There is no research supporting the claim that quality teacher preparation, accreditation, or licensure stand as barriers to supplying the nation's schools with a sufficient number of highly qualified teachers. Shortcutting these quality assurance measures only aggravates the conditions that are driving good teachers away from the schools that need them.

QUALITY TEACHER PREPARATION

Teacher Preparation Must Begin With What We Know About Quality Teaching

We know that quality teaching is at the heart of good schools. This fact has now been recognized in federal law, with the *No Child Left Behind Act* requiring states to ensure that only “highly qualified” teachers are placed in the nation’s classrooms. Meeting this requirement is a three-step process: teacher preparation programs must prepare teachers who can meet high standards; accreditation and other quality assurance initiatives must ensure that teacher preparation programs are meeting these expectations; and licensure must become a publicly recognized guarantee that the teachers who enter the classroom are qualified to be there.

Strong teacher preparation programs are organized around what we know about quality teaching. As noted at the beginning of this report, the Commission, working with its state partners and building on research and standards developed by the Interstate New Teacher Assessment and Support Consortium (INTASC), the National Board for Professional Teaching Standards (NBPTS), and others, has identified a set of criteria we believe define a highly qualified teacher. The teaching profession has developed a consensus about what a highly qualified teacher should know and be able to do to help students learn. We repeat this definition in these pages, because it is critical that programs involved in teacher preparation and licensure be based on a widely accepted consensus about what it means to be a highly qualified beginning teacher.

Box 12: Criteria for Defining a Highly Qualified Beginning Teacher

Highly qualified beginning teachers should be able to meet state licensing standards that require candidates to:

- Possess a deep knowledge of the subjects they teach;
- Evidence a firm understanding of how students learn;
- Demonstrate the teaching skills necessary to help all students achieve to high standards;
- Create a positive learning environment;
- Use a variety of assessment strategies to diagnose and respond to individual learning needs;
- Integrate modern technology into curriculum to support student learning;
- Collaborate with their colleagues, parents, community members, and other educators;
- Reflect on their practices in order to improve teaching and student learning;
- Pursue professional growth in both content and pedagogy; and
- Instill a passion for learning in students.

These qualities do not come naturally. The journey to the classroom, like any journey, requires people who have prepared well and are confident in their skills. We cannot entrust the minds of our children to those who are strangers to rigor. Every teacher preparation program, whether it is viewed as “traditional” or “alternative,” should be judged by how well it instills these foundations of great teaching. Accreditation and licensure should reflect and reinforce these core components of quality teaching.

All Pathways to Teaching Must Be High Quality

It is time to abandon the futile debate over “traditional” vs. “alternative” teacher preparation. The key issue for the Commission, and the nation, is not *how* new teachers are prepared but *how well* they are prepared and supported in whatever preparation pathway they choose. Developing high quality teachers is the responsibility of all who take on the task, whether in colleges and universities or in programs sponsored by school districts or other organizations. Because all routes lead to the classroom, no matter who sponsors them, all who take those paths should meet the same high standards for teaching quality. Those responsible for traditional routes and those who develop alternate pathways are equally accountable for designing programs and committing the resources necessary to develop highly qualified beginning teachers. If they cannot do so, they should get out of the business of teacher preparation.

As the nation moves to implement the provisions of *No Child Left Behind*, it must be certain that “alternative certification” does not become a shortcut or a backdoor form of emergency licensure or certification waiver. That will only demean teaching and contribute further to the revolving door teacher turnover and attrition in our schools.

SIX DIMENSIONS OF QUALITY TEACHER PREPARATION

We have found that quality teacher preparation programs have six critical dimensions:

- 1. Careful recruitment and selection of teacher candidates;**
- 2. Strong academic preparation for teaching, including deep knowledge of the subjects to be taught, and a firm understanding of how children learn;**
- 3. Extensive clinical practice to develop effective teaching skills, including an ability to teach specific content effectively, at specific grade levels, to diverse students;**
- 4. Entry level teaching support through residencies and mentored induction;**
- 5. Modern learning technologies that are embedded in academic preparation, clinical practice, induction, and ongoing professional development; and**
- 6. Assessment of teacher preparation program effectiveness.**

In the sections below, we discuss these six critical dimensions for teacher preparation and suggest how they support the characteristics of a high quality teacher we outlined at the beginning of this section.

1. CAREFUL RECRUITMENT AND SELECTION OF TEACHER CANDIDATES

Through careful recruitment and selection, teacher preparation programs can identify teaching candidates who are well-suited to develop the attributes of highly qualified beginning teachers. Thoughtful selection of candidates increases the likelihood that a teacher preparation program will successfully develop individuals who:

- **Possess a deep knowledge of the subjects they teach;**
- **Collaborate with their colleagues, parents, community members, and other educators;**
- **Reflect on their practices in order to improve teaching and student learning;**
- **Pursue professional growth in both content and pedagogy; and**
- **Instill a passion for learning in students.**

Recruitment and selection criteria should ensure that teacher candidates have strong academic backgrounds and potential, as measured by grade point averages, scores on Praxis I or other skills tests and aptitude measures. Recommendations based on experiences in programs for children can indicate that candidates have the positive disposition to work with students, families, and communities to support student learning and development. Similarly, programs for mid-career changers and other alternative pathway initiatives increase their chances for success when they establish strong selection criteria and procedures to ensure that their candidates are prepared academically and are well-suited to work with young children and youth.

Teacher preparation selection criteria, and program designs, also should be responsive to the needs of the schools and communities they serve. For example in some regions of the country, programs continue to prepare a surplus of elementary teachers while the schools struggle with chronic staffing problems in mathematics, sciences, special education, and bilingual education. In contrast, market-responsive recruitment can have big payoffs. The University of Texas at Austin's "U Teach" initiative actively recruits freshmen with strong academic records in mathematics and sciences, and through a four-year program, prepares them to meet the demand for highly qualified mathematics and science teachers. From a pilot project with 28 students in fall 1997, the program has grown into a highly visible initiative boasting an enrollment of more than 250 students.³

Because today's schools are increasingly diverse, with students drawn from many cultures and ethnic groups, teacher preparation programs must ensure that candidates know how to work with students from diverse backgrounds. Whenever possible they should make a concerted effort to recruit candidates who reflect the full spectrum of diversity in the nation's classrooms. The "Pathways to Teaching" program at Armstrong State College in Savannah, GA, represents a successful approach to recruiting and preparing teachers for hard-to-staff, inner city schools. The program recruits non-certified paraprofessionals with some college experience and supports their development through regular teacher education courses and three years of teaching in collaborating school districts. Graduates have a 94 percent retention rate and are working in four rural and urban districts. Ninety-six percent are black, and the average age range is 37- to 45-years-old. Sixteen have been selected as "Teachers of the Year" for their schools.⁴

In view of the fact that the nation prepares a surplus of new teachers each year, it is time for teacher preparation to become more selective. The Commission has concluded that the perception of “teacher shortages” is no justification for reducing standards to expand the pool of candidates for entry to the teaching profession. Substandard teacher preparation contributes to the high turnover and attrition that is diminishing teaching quality in too many of our schools. The nation should consider whether it would be better served by investing the current level of teacher preparation resources in fewer candidates, who can be prepared to meet consistently high standards.

2. STRONG ACADEMIC PREPARATION FOR TEACHING

Teacher preparation programs focused on strong academic preparation graduate candidates who:

- **Possess a deep knowledge of the subjects they teach;**
- **Evidence a firm understanding of how students learn; and**
- **Demonstrate the teaching skills necessary to help all students achieve to high standards.**

All teachers must have a sound knowledge base for teaching in their chosen field and be actively engaged with the content and methods of inquiry that make up an academic discipline. A widely shared criticism of many current preparation programs (both traditional and alternative) is that they fail to produce teachers who know their subjects and know how to teach those subjects well. Since teacher candidates take their academic content courses outside schools and colleges of education, it is critical that the whole university take responsibility for this aspect of teaching quality. Faculty in the arts and sciences must be involved in teacher preparation in close collaboration with education faculty. Senior campus administrators must be strongly committed to the success of this collaboration. Alternative pathways to teaching also must ensure that their candidates have a strong academic background that supports the content knowledge they may have developed through practical or professional experience.

A college major or minor, and professional experience in the field, however, guarantees neither a command of subject matter nor the ability to teach it successfully. The knowledge base of teaching is incomplete unless candidates master not just the *what* of course content, but also the *how* of teaching it. To this end, teacher candidates should develop a clear understanding of professional, state, and district standards of learning in their discipline.

Teachers should know what research has shown about how people learn and how that applies to learning in their particular content area. They should know how best to teach the content they know and love, using multiple explanations and instructional strategies, so that students will understand it and share their enthusiasm. They should know how children develop conceptual understanding in the field, and they should know how to use the tools and resources of this field. And they must be comfortable in using teaching techniques, classroom management, assessment, and motivation to be most effective. None of this is intuitive; none of it is “Mickey Mouse” theory. The science of child development and how children learn should be integral to all teacher preparation programs, both traditional and alternative.

Although many critics of teacher education dismiss the importance of “teaching methods,” the American people clearly take a different view. In a recent national survey of American attitudes about teaching, the highest ratings on “what qualifications matter most for teachers” were given to: how to manage a classroom (91 percent), being thoroughly educated in the subjects they will teach (90 percent), understanding how children learn (89 percent), and being well-trained and knowledgeable about how to teach effectively (88 percent).⁵

Public opinion is supported by sound research. A recent study, using data from the National Assessment of Educational Progress (NAEP), examined the relationships between teachers’ training, teaching practices, and student achievement, controlling for student characteristics and other school inputs. Not surprisingly, the study found that 8th grade students do better on the NAEP mathematics assessments when they have had teachers with a major or minor in mathematics or mathematics education. However, this study also found that the teachers of these more successful students also knew how to engage in more hands-on learning (work with real-world problems and use of manipulatives) emphasizing higher-order thinking. They also had more professional training in working with diverse student populations and developing higher-order thinking skills. Similarly, students do better on the NAEP science assessments when their teachers have majored in science or science education *and* have had training in how to develop laboratory skills to engage students in hands-on learning to develop higher-order thinking skills.⁶ These findings confirm that it takes both content knowledge and teaching skills—knowing what to teach and how to teach it—to make a difference in student achievement.

3. STRONG CLINICAL PRACTICE TO DEVELOP EFFECTIVE TEACHING SKILLS

Clinical practice, in diverse settings, under the supervision of faculty and accomplished teachers, contributes to the development of a highly qualified teacher. It is essential for developing beginning teachers who:

- **Evidence a firm understanding of how students learn;**
- **Demonstrate the teaching skills necessary to help all students achieve to high standards;**
- **Create a positive learning environment;**
- **Use a variety of assessment strategies to diagnose and respond to individual learning needs;**
- **Integrate modern technology into curricula to support student learning; and**
- **Collaborate with their colleagues, parents, community members, and other educators.**

The Carnegie Corporation of New York writes, “Excellent teaching is a clinical skill... clinical practice in schools takes place in complex public environments and entails interaction with pupils, colleagues, administrators, families, and communities.... Exemplary teacher education provides for clinical education in a clinical setting.”⁷ Without the integration of knowledge and skills in a well-designed and carefully supervised clinical practice setting, the education and training of a new teacher is incomplete. The lack of clinical skills and experience feeds the high levels of burnout and attrition found among new teachers throughout the country.

Carefully structured clinical practice should include experience using a range of effective teaching and learning strategies that instill the competence and confidence needed to deal with a diverse student population in a variety of settings. Through clinical practice, teacher candidates are prepared to customize their teaching in response to student learning needs.

Learning how to build connections to a student's family is another fundamental skill teachers need to develop. The clinical experience should provide practice in communicating sensitively and effectively with parents in written reports as well as face-to-face meetings. Similarly, dealing with a school site council and learning how to build wider community relationships are essential skills that must be practiced before a teacher walks into his or her own classroom.

Furthermore, to meet the expectations of today's standards movement, teachers must know how to use assessment data effectively. Through mentored clinical practice teachers should become fluent in the use of multiple forms of assessment and test data to support their understanding of each child's learning progress and to help them make decisions on when to redirect instruction. With the aid of today's technologies it is possible for every teacher to make assessment a strong and positive force in the classroom.

In high quality teacher preparation programs, clinical experiences are implemented through collaboration between the K-12 and higher education partners. School and university partners work together to design this experience, which allows pre-service students to spend significant amounts of supervised time in the classroom.

Increasingly, Professional Development Schools (PDS) have been established to provide clinical settings for teacher candidates in training. But only a small percentage of the nation's education schools have committed the resources needed to support PDS programs. Successful PDS placements of teacher candidates require a reallocation of campus-based funds and significant redesign of faculty roles and responsibilities. Teaching in a PDS requires much more time than on-campus teaching, yet faculty often are not appropriately rewarded for this effort. Tenure and promotion decisions, motivators for all higher education faculty, are weighted for research and publication, not teaching. Supervising students in the field or working with K-12 faculty are even more out of alignment with traditional faculty tenure policies. It is time for higher education leaders to develop the reward systems and resources necessary to support quality teacher preparation in clinical settings.

When done well, the best PDS sites take an integrated approach to three functions: (1) improving teaching and learning for preK-12 students, (2) clinical practice for pre-service teachers, and (3) professional development for teachers and administrators. Some also conduct collaborative research.⁸ Professional Development Schools that are based in neighborhood schools in local systems (as opposed to specially created, campus-based lab schools) are true to their purpose as community-centered teacher preparation sites.

Box 13: Maryland Takes a Statewide Approach to Professional Development Schools

Since the early 1990s Maryland has transformed teacher education through a statewide commitment to Professional Development Schools (PDS). The Maryland Partnership for Teaching and Learning, K-16, a quasi-policy-making body, was formed through the collaborative leadership of the Maryland Higher Education Commission and the Maryland State Department of Education. This K-16 partnership created statewide PDS standards and guidelines. These standards, aligned with the PDS standards set by the National Council for the Accreditation of Teacher Education, are now required for state program approval in teacher preparation programs. The Maryland PDS standards are probably the single-most critical element in Maryland's PDS initiative because they make clear what a PDS is and what it should accomplish in the important areas of: learning community; collaboration; accountability; organization, roles, and resources; and diversity/equity.

Today all Maryland teacher education programs require a yearlong PDS internship.

Funding the PDS movement has come through small catalyst grant funds to PDS sites, with most of the state resources derived from federal grants. The HEA/Title II State Teacher Quality Enhancement Grant is currently a major source of external support. The state supports PDS network functions throughout the year, conferences on best practices and research, annual summer leadership academies, and site visits by PDS practitioner teams.

PDS site visits made by legislators have built legislative support. However, with current budget deficits, the PDS movement in Maryland must address the challenge of keeping legislators' interest and good will in a time of reduced funding.

Source: Virginia Pilato, Maryland State Department of Education.

4. ENTRY LEVEL TEACHING SUPPORT IN RESIDENCIES AND MENTORED INDUCTION

Strong residency and mentored induction experiences provide beginning teachers with invaluable support as they lay the groundwork to become accomplished teachers. Through these experiences novice teachers deepen their knowledge and competence on all aspects of highly qualified teaching and, in particular, they:

- **Evidence a firm understanding of how students learn;**
- **Demonstrate the teaching skills necessary to help all students achieve to high standards;**
- **Create a positive learning environment;**
- **Use a variety of assessment strategies to diagnose and respond to individual learning needs;**
- **Integrate modern technology into curricula to support student learning;**
- **Collaborate with their colleagues, parents, community members, and other educators;**
- **Reflect on their practices in order to improve teaching and student learning; and**
- **Pursue professional growth in both content and pedagogy.**

Teachers are not "finished products" when they complete a teacher preparation program. Guided entry into teaching, via residencies and mentored induction, should become a standard feature of every high quality teacher preparation approach. During this residency, novice teachers should be provided with well-structured opportunities to develop and

perfect their teaching skills under the mentorship of accomplished teachers. A well-planned, systematic induction program for new teachers is vital to maximize their chances of being successful in any school setting but is especially critical in high-need schools.

University-based preparation programs are being asked to take on extended responsibilities during this stage of the new teacher preparation process, and good school-university partnerships are important to the success of this undertaking. Components of this new teacher support system vary widely but may include such features as training for mentors, university faculty status for K-12 mentor teachers, and other ways to build and sustain support for the careers of new teachers. When university and K-12 partners work together to ensure the success of these activities, they cooperate with each other—and often with state assessment officials—to assess the teaching performance of new graduates in order to determine how to help them succeed.

The New Teacher Center at the University of California-Santa Cruz, for example, has developed a powerful model of new teacher induction. Inductees have had a 95 percent retention rate in the teaching profession over an 11-year period. Similarly, the “Strengthening and Sustaining Teachers” (SST) project, based at the University of Washington, is developing a model of “reciprocal accountability” that redefines professional responsibility for novice teachers. The project report found that, “by redesigning pre-service education, induction programs, and first-year teaching responsibilities, and then connecting them to professional development opportunities that extend through the fifth year of teaching, these initiatives are working to reduce attrition rates and strengthen teacher capacity to build rigorous, standards driven education for their students.”⁹

Many state licensure systems recognize the importance of this period in the new teacher's career by establishing mentoring and induction periods, with an initial or provisional license granted, to promote skills development and effective support strategies. As the federal Title II partnership grant program envisions this process, it is an ongoing activity, requiring the regular involvement of all the partners. Grantees under the Carnegie Corporation of New York's Teachers for a New Era initiative also will implement a two-year induction program for new teachers prepared in their programs.

An increasing number of innovative teacher preparation programs are composed of partnerships between school districts and colleges, in which the teacher preparation program is conducted almost entirely on-site in local schools. The New Haven/CSU- Hayward Partnership in California, described in the box on the following page, is one such example.

Box 14: A School District and Higher Education Partnership for Preparing New Teachers: The New Haven/CSU-Hayward Teacher Education Program

In collaboration with California State University-Hayward, the New Haven Unified School District in Union City, CA, operates an innovative pre-service/ internship teacher education program almost entirely set in district secondary schools. The program combines elements of traditional preparation with internship routes that prepare candidates to meet high teaching standards for secondary school teaching. The curriculum is jointly planned and delivered by university professors and district faculty. Most of the academic course work is delivered in the district for candidates' convenience and melds theory and practice. Beginning a month before school starts, a cohort of about 30 teacher candidates begins working closely with partner teachers in a mentored relationship that extends through the entire year. Each candidate is welcomed as a full member of the school. The program offers:

- **A common, clear vision of good teaching, articulated in well-defined standards of practice and performance that are used to guide and evaluate course work and clinical work;**
- **A curriculum grounded in substantial knowledge of children taught in the context of practice (e.g., linking lesson designs and classroom environments with understanding of development);**
- **A student teaching period and a careful screening process for interns prior to the assignment of limited teaching responsibilities (not all teaching candidates become interns); and**
- **Strong relationships, common knowledge, and shared beliefs among school- and university-based faculty.**

Interns are selected based on documented experience with students and on performance during an intensive summer session of course work. Once selected, they carry a teaching load of only one or two courses while completing the same rigorous teacher education program as regular student teachers. Interns are supervised by both university- and school-based faculty who help them plan lessons, teach them in tightly linked course work, and coach them in the classroom. The district provides paid seminars on the essentials of effective supervision for master and partner teachers.

Source: Jon Snyder, *New Haven Unified School District: A Teaching Quality System for Excellence and Equity* (New York: National Commission on Teaching and America's Future, 1999).

5. MODERN LEARNING TECHNOLOGIES

Teacher preparation programs that embed modern learning technologies in academic preparation, clinical practice, and induction develop teachers who know how to:

- **Integrate modern technology into curriculum to support student learning;**
- **Demonstrate the teaching skills necessary to help all students achieve to high standards;**
- **Use a variety of assessment strategies to diagnose and respond to individual learning needs;**
- **Collaborate with their colleagues, parents, community members, and other educators;**
- **Reflect on their practices in order to improve teaching and student learning;**
- **Pursue professional growth in both content and pedagogy; and**
- **Instill a passion for learning in students.**

Teachers in 21st century schools must be technology-proficient educators who are well-prepared to meet the learning needs of students in a digital age. Teaching and learning in K-12 settings increasingly take advantage of software and hardware that link classrooms to the wider world and to a vast array of curriculum resources in every subject area, at every grade level. School boards, school administrators, parents, and students expect all teachers to be well-prepared to use new technologies that will be ubiquitous in tomorrow's classrooms. It is especially important that we train teachers entering schools in low-income communities and rural areas to become advocates for the use of information and communication technologies to improve learning. Students in these communities will be denied full access to the power of these new learning tools if they do not have teachers who know how to engage them in challenging learning activities that can help them meet high standards. As teacher preparation programs design their clinical practice and induction experiences they should pay particular attention to the need to develop technology-proficient educators in these settings.

Adding new methods courses about technology in education or developing a small cadre of education technology specialists is not sufficient. Quality preparation programs must ensure that university courses across the curriculum are designed, or redesigned, to ensure that all teacher candidates learn with technology modeled by faculty who use it appropriately in every content area. Teacher candidates, in all subject areas and at all grade levels, should be prepared to use technology as a resource that helps students to become actively engaged in learning. They should know how to draw on the power of these new learning tools to develop student skills in languages and the arts, and they should be able to help students develop deeper conceptual understanding in mathematics and sciences using graphic manipulations, simulations, and modeling, among other strategies. And, with predictions that every high school graduate will have taken at least one online course by 2006,¹⁰ teacher candidates in clinical settings should have an opportunity to work with technology-proficient teachers in Web-based learning environments.

Modern learning technologies offer new tools for recording student learning (e.g. electronic grade books, electronic portfolios); diagnosing stumbling blocks (e.g. handheld tools that can produce "running records" of student reading progress); and analyzing student and class progress (e.g. assessment spreadsheets and databases). Teacher candidates should become fluent in the use of these powerful assessment tools during their preparation and clinical practice experiences. At the other end of the technology spectrum, a number of states are developing comprehensive online assessments that can be used by teachers to follow student progress from year to year, so each succeeding teacher can develop appropriate learning activities for the next step in a child's education. Beginning teachers should know how to use this data for instructional decisions.

Networked technologies also are being used in preparation programs to help teacher candidates to reflect on their progress and hone their skills. Video case studies like those provided by CaseNet, Teachscape, and LessonLab¹¹ provide teaching candidates with windows into effective teaching strategies. Whether live or taped, real or virtual, video links into classrooms can help candidates experience a wider variety of teaching conditions, challenges, and solutions than would be possible through face-to-face observations and clinical experiences. The box on the next page describes one such resource.

Box 15: Teaching Videos Model Sound Teaching Practice With Technology

Through INTIME (Integrating New Technologies Into the Methods of Education), teacher candidates can see accomplished teachers employ technology to support the principles of sound teaching. Created by the College of Education at the University of Northern Iowa, INTIME uses a free, downloadable technology that allows viewers to watch any of the 540 video lessons stored at the site. Video vignettes include a range of grade levels and subject areas. The 60 teachers selected to demonstrate accomplished teaching give lesson examples in a variety of contexts including multiage classrooms, alternative high schools, and gifted and talented programs; working with special education students in mainstream classrooms and resource rooms; and the teaching strategies of National Board certified teachers.

The project was launched in September 1999 with a grant from the U. S. Department of Education's "PT3" program (Preparing Tomorrow's Teachers to Use Technology). Four other universities, partners in the Renaissance Group, participate in the project (Eastern Michigan University, Emporia State University in Kansas, Longwood College in Virginia, and Southeast Missouri State University.) Participating universities have matched federal funding.

Between February 2000 and February 2002, the INTIME site was visited 114,964 times. The three most-viewed lessons were: (1) kindergarten language arts, (2) 9th grade math, and (3) 2nd grade inclusion language arts. The INTIME model is aligned with standards published by the National Council for Accreditation of Teacher Education, the National Board for Professional Teaching Standards, and the Interstate New Teacher Assessment and Support Consortium.

Source: Karla Krueger, Curriculum and Technology Project Specialist and Project Coordinator, University of Northern Iowa, www.intime.uni.edu.

Online courses extend the range of teacher education expertise available in any one teacher preparation institution, and fledgling teachers in clinical experiences find valuable support through online discussions with faculty and peers in their teaching cohorts. Familiarity with these resources during teacher preparation helps teacher candidates develop experience with the information resources they will use to communicate with colleagues, students, and parents throughout their professional careers.

Beginning teachers also are using information technologies to support their professional growth. By participating in networked learning communities during their induction years, they are able to share and expand their expertise through regular interactions with their colleagues and other leaders in the profession. Participation in these networked communities often begins when teacher candidates collaborate with technology-proficient faculty and accomplished teachers who can model the effective use of technology in specific academic fields. These professional learning communities can be extended to support novice teachers during their entry years, wherever and whenever they need it.

6. ASSESSMENT OF TEACHER PREPARATION EFFECTIVENESS

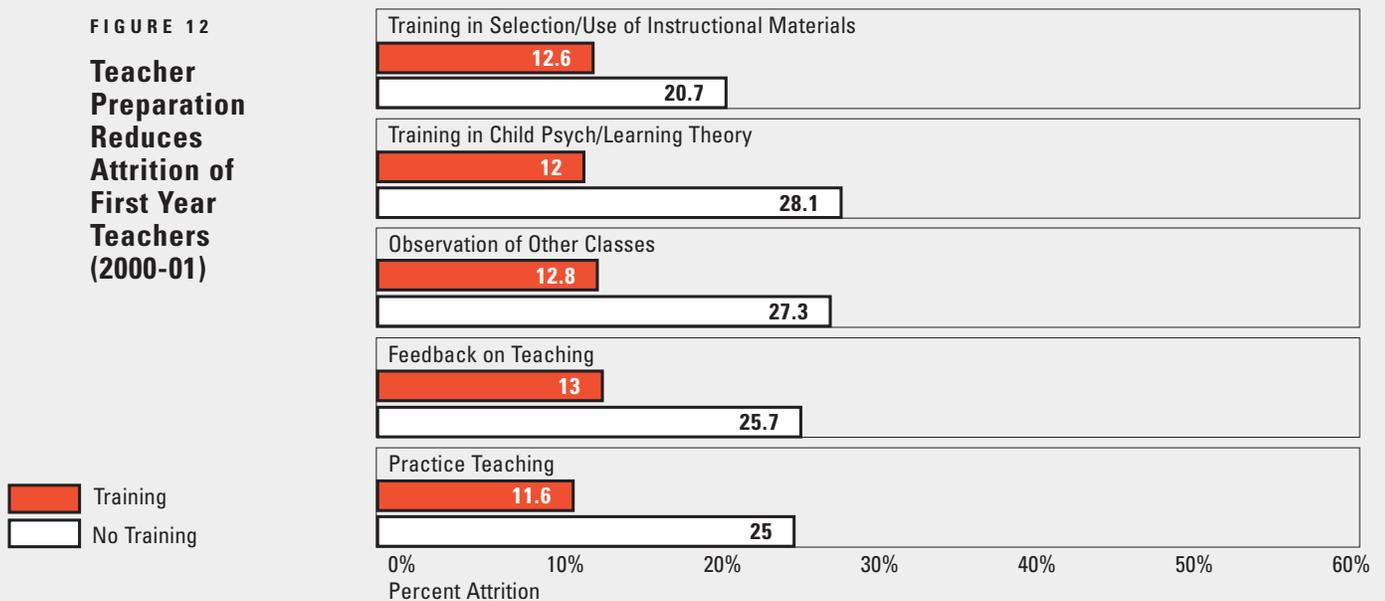
Assessment of teacher program effectiveness is essential to ensure quality teacher preparation. Programs that assess the performance of the teachers they prepare are in a better position to improve. As they engage teacher candidates and beginning teachers in this process they also contribute to the development of highly qualified teachers who can:

- **Use a variety of assessment strategies to diagnose and respond to individual learning needs;**
- **Reflect on their practices in order to improve teaching and student learning; and**
- **Pursue professional growth in both content and pedagogy.**

Assessment of teacher preparation means that teacher candidates are evaluated by more than final exams in their courses or by the “comps” required for their degree programs or other graduation requirements. Ongoing formative assessments should encourage teacher candidates to continuously reflect on their learning and how it will be applied in the classroom. They should be able to explain instructional choices based on research-derived knowledge and best practice.

Programs that require teacher candidates to submit portfolios containing lesson plans, student observations, and reflections on student progress can help teacher candidates and their supervisors identify and better understand successful practice and problem areas. Video and Internet tools can lift the portfolio to a higher level of explicitness and help candidates practice technology skills at the same time. All of this information can and should be used as feedback that teacher preparation program faculty and administrators use to improve their initiatives.

FIGURE 12
Teacher Preparation Reduces Attrition of First Year Teachers (2000-01)



Source: Richard M. Ingersoll, University of Pennsylvania, original analysis for NCTAF of the 2000-01 Teacher Followup Survey.

Quality Teacher Preparation Works

Taken together, the six teacher preparation program components outlined above provide clear steps to success (see page 74). When teacher preparation programs are focused on a coherent approach to rigorous knowledge and teaching skill development, when they include extensive clinical practice designed to meet the needs of the schools and students they will serve, and when they provide early teaching support to their graduates, the rates of beginning teacher attrition are almost half the level found in beginning teachers who have not had this kind of preparation (see Figure 12). Well prepared graduates are more likely to stick with teaching and contribute to the development of a strong professional learning community in the schools they serve. We highlight such a program at the University of Connecticut in the box below.

Box 16: University of Connecticut's Five-Year Integrated Bachelors/Masters Program

The Neag School of Education at the University of Connecticut offers an intensive, five-year program that, due to its reputation for high standards and the quality of its graduates, has to turn away hundreds of applicants every year. According to Neag Dean Richard L. Schwab, the school's Integrated Bachelors/Masters program (IB/M) had 130 slots available in the 2002-03 academic year. About 1,100 students entered as pre-education majors and about 380 applied for the IB/M program after their sophomore year. The rigorous selection process meant that only one in three candidates was selected. Students selected in the 2002-03 academic year had a grade point average of 3.45 or better; an academic major in mathematics, science, English, history, or world languages; and demonstrated experiences with youngsters.

All students have multiple clinical experiences, including placement in hard-to-staff schools—those characterized by low test scores and high rates of poverty. One third of IB/M graduates have remained teaching in those schools. All students work in professional development schools in Hartford, East Hartford, Windham, Mansfield, Willington, and Glastonbury.

The first two years of the program focuses on the teacher-as-learner, and the candidate experiences field placement and methods courses in a local PDS. The senior year is predominantly student teaching. In that fifth year, the candidate must complete a yearlong internship and an "action research" project in which he or she must work on a school-identified problem within one of the districts. Ninety-five percent of the candidates complete the program.

With its stringent selectivity and rigorous academic requirements and fieldwork, it is notable that the IB/M program, though small, is still one of the biggest producers of teachers in Connecticut because those who go through the program become teachers and remain in teaching at higher rates than other programs experience. "Bright people are not attracted to weak programs," Schwab said, adding that the cost/benefit ratio—the time, money, and labor expended to graduate teachers from IB/M, makes the five-year program a smart investment for the state. The program graduates highly qualified, dedicated teachers who remain in the profession, having had the proper grounding in content and teaching knowledge. One-third of graduates take jobs in "hard to staff" schools. The high rate of retention among IB/M graduates—90 percent of whom are still teaching after five years—is evidence that, in the long run, the five-year course yields more satisfactory results than many of the popular "teacher training" programs that put novice teachers into the classroom after limited clinical experience.

The Neag School hopes to expand the faculty of the IB/M program; if that happens, more student slots will open. In the meantime, the program's reputation for excellence grows, and the program will continue to turn away many more teaching candidates than it can accommodate.

Source: Interview with Richard L. Schwab, Dean, Neag School of Education, University of Connecticut (July 2002). For more information, see www.education.uconn.edu.

Alternative approaches to teacher preparation should also build on the six critical dimensions outlined in this section (see Page 74). We feature two such alternative pathways in the boxes that follow. One (Box 17) illustrates how a private urban university has worked to serve the needs of its surrounding school districts. The other (Box 18) illustrates a statewide approach to innovation in teacher preparation.

Box 17: Transition Into Teaching Programs at George Washington University

George Washington University (GW) in Washington, DC, serves as the main hub for several “transition into teaching” programs offered to mid-career entrants, including former military, Peace Corps, and Americorps veterans. GW’s programs also offer a “bridge” for those instructors who served in Teach for America, D.C. Teaching Fellows, or as substitute teachers, to obtain full licensure and a master’s degree.

Candidates fulfill their fieldwork requirements through partnerships with the school districts of Washington DC, Montgomery County, MD, or Fairfax County, VA. The programs are the **Teachers 2000 Partnership** (this has two components: the **GW Teaching Corps** and the **Millennium Fellows**), the **Fairfax Transition to Teaching Program**, the **Urban Initiative**, and the **Delta Partnership**. The key characteristics shared by these quality programs include: substantial fieldwork in classrooms, ongoing courses to strengthen content as well as teaching knowledge, and working closely with districts to meet targeted needs.

The first of the **Teachers 2000 Partnerships** is the **GW Teaching Corps Program**, designed to help former Peace Corps, Americorps, or Teach for America employees further develop their teaching skills and earn licensure in the state of Maryland. The program, established in 1990 with a grant from the Cafritz Foundation and subsequent grants from the DeWitt Wallace–Reader’s Digest Fund, begins by having candidates commit full time, day and evening, to the program in January. Teaching Corps candidates jump-start back into teaching—in the day, they are placed as full-time interns in middle and high schools in the Montgomery County, MD, public schools, and attend GW classes several evenings per week. This 10-week schedule fulfills the internship requirement of the program (five weeks in a middle school, five in a high school), under the guidance of cooperating teachers. After a candidate completes the internship satisfactorily, he or she substitute teaches in schools across Montgomery County through the end of the school year. Teaching fellows are then hired as full-time substitutes in the fall and continue to receive support from GW via biweekly observations and seminar classes. The course work necessary for certification is completed during the first year of full-time teaching, so that the Teaching Corps fellows are fully certified to teach in the district the next year.

Outstanding science and liberal arts graduates are invited into **GW’s Millennium Fellows** program, which enables candidates to be fully certified in specific content areas in secondary education or special education. The Millennium Fellows program typically starts as a part-time commitment in the summer, switching to full time in August. Similar to the Teaching Corps program, fellows must complete a required internship (six to eight weeks) with a cooperating teacher during their first year. Once this is complete, the fellows teach full time as a permanent substitute teacher in the school where they are assigned and function as a member of the school staff. When not substitute teaching, the fellows are observing, team teaching, or assisting a teacher during class. During the second year of the program, Millennium Fellows continue to receive clinical support from GW until their course work is completed. Upon graduation, they receive Maryland state licensure and full-time positions in the Montgomery County Public Schools.

The Fairfax Transition to Teaching (FTT) program is the result of a successful partnership between GW and the Fairfax County, VA, public schools. This initiative, which began 15 years ago as a way for the district to recruit substitute teachers, has matured to become a comprehensive alternative certification program that helps people from other careers become teachers. As in the “Teachers 2000” program, entrants to FTT are assigned to a yearlong internship at a Fairfax County school and can work as a full-time substitute, a tutor, or as part of a teaching team and take their certification courses in the late afternoon. Funding for the fellowship benefits of the program comes from the Fairfax district’s substitute teaching budget and cost-sharing from GW. Roughly 300 graduates have completed the program and are teaching in 22 of the district’s 24 high schools and five middle schools, as well as in other local school districts. In 1997, the Association of Teacher Educators recognized the FTT as a Distinguished Program in Teacher Education.

GW’s Urban Initiative, a graduate-level Professional Development School partnership with the District of Columbia school system, helps provisionally certified teachers become licensed and licensed teachers add special education credentials to their licenses. The Urban Initiative mainly recruits older students (28–30 years old, on average), who are ethnically diverse, and committed to working in an urban environment. The initiative works closely with the faculty of Cardozo High School, an inner city high school where the recruits spend a full academic year as interns. Program candidates must teach two classes (one with an experienced Cardozo teacher, and the other, team-teaching with other interns). Teacher-educators from the Urban Initiative offer professional development opportunities for all Cardozo teachers. This program is highly selective, but pays off in high retention rates: the Urban Initiative has produced 38 graduates over the past five years, and approximately 87 percent have remained in the teaching profession.

Finally, **GW’s DELTA** (Developing Effective Leaders in Teaching at Arlington) Secondary Education Program prepares professionals with degrees outside of education to become qualified secondary school teachers eligible for certification. Launched in 1986 as a program for retiring military officers doing their last tour of duty in Washington, DC, the DELTA program has certified more than 350 teachers. This program, a pioneering high quality alternative certification program that was cited in *What Matters Most*, continues to keep pace with changing times and to grow in innovative ways. In 2001, the DELTA program expanded to include 20 math/science career-changers recruited by the New Teacher Project to work in the District of Columbia schools as part of the D.C. Teaching Fellows program.

GW’s teacher education unit is accredited by NCATE, and its teacher education programs are approved by the District of Columbia. Praxis I and II are required of all students completing certification requirements. Program graduates are certified within their content areas in the District of Columbia, Virginia, Maryland, and other states.

Source: Mary Hatwood Futrell, Dean, Graduate School of Education and Human Development, George Washington University.

Box 18: Washington State Creates School-Based Alternative Routes to Teacher Certification

As a result of the Washington Professional Educator Standards Board's report, *Recommendations for High-Quality Alternative Routes to Teacher Certification*, the Alternative Routes Partnership Grant Program was established. The program provides support for partnerships between school districts and higher education teacher preparation programs to offer one or more of three school-based alternative routes to teacher certification. The programs are aimed at experienced paraeducators and mid-career professionals with expertise in subject areas in which the state has shortages (e.g. math, science, and special education.) Characteristics of Washington's alternative route programs include:

- **Field-based partnerships** between districts and higher education preparation programs with all formalized learning opportunities offered on or near districts, online, or via the K-20 telecommunications network;
- **Performance-based mentored internships** of one year or less complemented by formalized learning opportunities. Interns are not teachers of record but are in classrooms all day, every day under supervision of a trained mentor teacher. The length of the program is determined by the time required for candidates to demonstrate competency related to residency certificate standards;
- **Stipends and tuition support** for interns, pre-service mentor teachers, and beginning teacher mentors provided through \$3.2 million in state and federal Transition to Teaching dollars secured by the PESB and OSPI;
- **Individual teacher development plans** that identify the alternative route requirements for each candidate, crediting prior experience and education;
- **High quality mentor training** specifically designed for working with pre-service and beginning teachers; and
- **First year teacher support** provided by trained mentor teachers.

Source: Jennifer Wallace, Executive Director, Washington State Professional Educator Standards Board.

TEACHER QUALITY ASSURANCE

Roles for the Profession, Federal and State Entities, and Higher Education Institutions

In its 1996 report, *What Matters Most: Teaching for America's Future*, the Commission articulated a three-part strategy for teacher quality assurance that consisted of: teacher education accreditation, initial licensure, and advanced professional certification.¹² Progress on accreditation, licensure, and program accountability are discussed in this section. Progress on advanced certification is discussed in Strategy 3, in the context of developing rewarding professional career paths in teaching.

Accreditation of Teacher Preparation

Accreditation is the primary vehicle for quality control in teacher preparation, just as it is in other professions. In general, professions in the United States rely on voluntary accrediting agencies to review the quality of programs that prepare new entrants. In most cases, accreditation principles and practices are tied to a nationally accepted curriculum, as in medicine, nursing, and engineering. Eligibility to take licensing exams is limited to those who successfully complete accredited programs. Thus, a chain of accountability links academic standards, specialized accreditation, and state licensing requirements to reinforce quality standards. For a variety of historical and political reasons, this is not the case for teacher preparation. In contrast to accreditation in other professions, teachers in some states can be licensed and certified to teach without having graduated from an accredited teacher preparation program.

To ensure quality, the Commission continues to recommend that federal and state policymakers insist on accreditation for all teacher preparation programs. The U.S. Department of Education recognizes the National Council for Accreditation of Teacher Education (NCATE) as the professional accrediting body for colleges and universities that prepare teachers and other professional personnel for work in elementary and secondary schools. NCATE has established partnerships with 48 states to conduct joint reviews of colleges of education. These partnerships integrate state and national professional teacher preparation standards, increase the rigor of reviews of teacher education institutions, and reduce the expense and duplication of effort that occur when states and NCATE conduct two separate reviews.

In response to the need to develop highly qualified teachers, NCATE has developed challenging standards for teacher education programs. Receiving NCATE accreditation is a rigorous process; approximately one in four institutions seeking it for the first time fail to achieve accreditation. A majority of states now rely on NCATE's standards and reviews as quality benchmarks.

NCATE revises its standards every five years to ensure that accreditation reflects current research and state-of-the-art practice in the teaching profession. NCATE has taken steps to ensure that accreditation is aligned with the model standards for beginning teacher licensing created by the Interstate New Teacher Assessment and Support Consortium (INTASC) and with standards for accomplished teaching developed by the National Board

for Professional Teaching Standards (NBPTS). NCATE's new performance-based accreditation model expects candidates at NCATE institutions to provide solid evidence of academic ability and teaching proficiency. While a quality curriculum and how it is implemented is still a core component in preparing teachers, the NCATE performance standards take accountability to another level: results matter. These standards ask: Have the candidates acquired the necessary knowledge and skills to become educators and have they demonstrated their knowledge and skills in measurable ways? Has the institution provided clear evidence of the competence of their candidates? Can they help students learn?¹³

Since the Commission recommended accreditation for all schools of education in 1996, NCATE has been making considerable progress, which is summarized in the box below and figures 13 and 13a.

Box 19: The National Council for Accreditation of Teacher Education (NCATE)

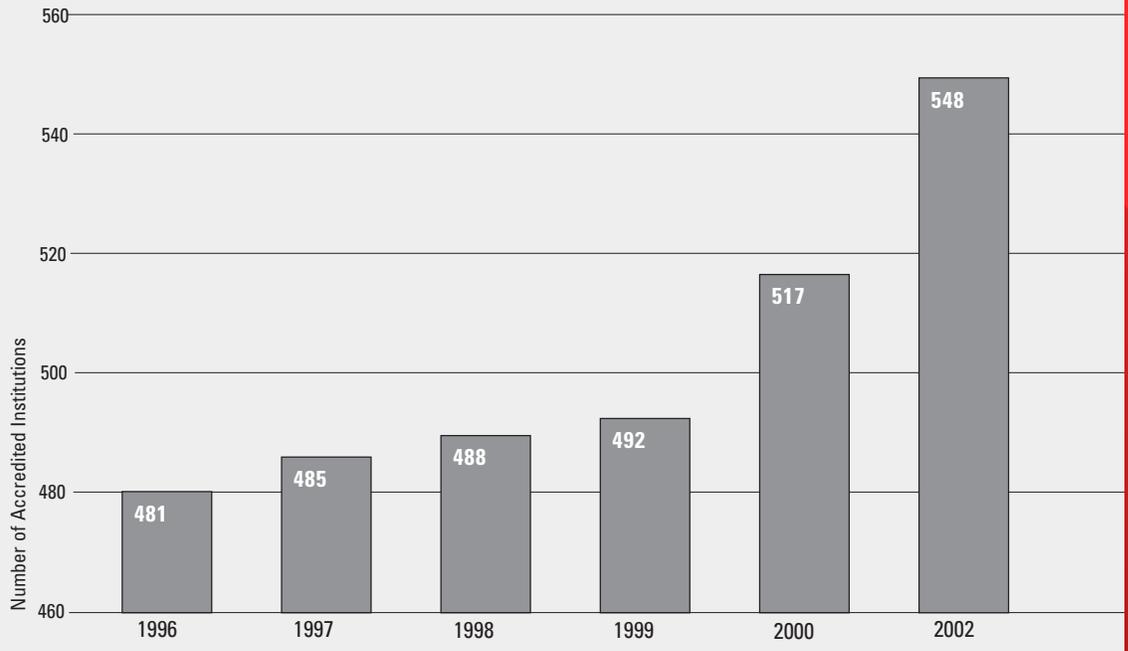
In 1996, NCTAF recommended that states ensure quality control and advance the academic merit of teacher education programs through partnerships with NCATE, a national nonprofit organization founded to improve the quality of preparation programs. We said, "NCATE's quality standards, recently revised and strengthened, are demanding, but not beyond the reach of any school of education genuinely committed to preparing excellent teachers for the classrooms of a new century."¹⁴ At that time, there were 481 NCATE-accredited institutions in the country, with an additional 41 in the application process. In 2002, 548 institutions are accredited and 112 are candidates and pre-candidates for accreditation. With a growing demand for accountability from states and the public, the number of institutional candidates seeking accreditation has almost tripled in the past five years.

Currently, 48 states have entered into partnership with NCATE to bring their teacher preparation programs into compliance with NCATE's accreditation standards. This sharply contrasts with the situation in 1990, when only 19 states were partners and earlier, when the lack of coordination between state program approval and professional accreditation meant that institutions had to meet the requirements of two separate systems for their graduates to be recognized.

A recent study by Educational Testing Service shows that NCATE-accredited institutions produce proportionately more qualified teachers than institutions that are not accredited. Of all the candidates who took the PRAXIS II licensing exam, designed by ETS and administered in 37 states and the District of Columbia [between 1995 and 1997], graduates of NCATE-accredited institutions significantly outperformed those from unaccredited institutions, and both groups significantly outperformed those who had never prepared as a teacher but who took the exam.¹⁵

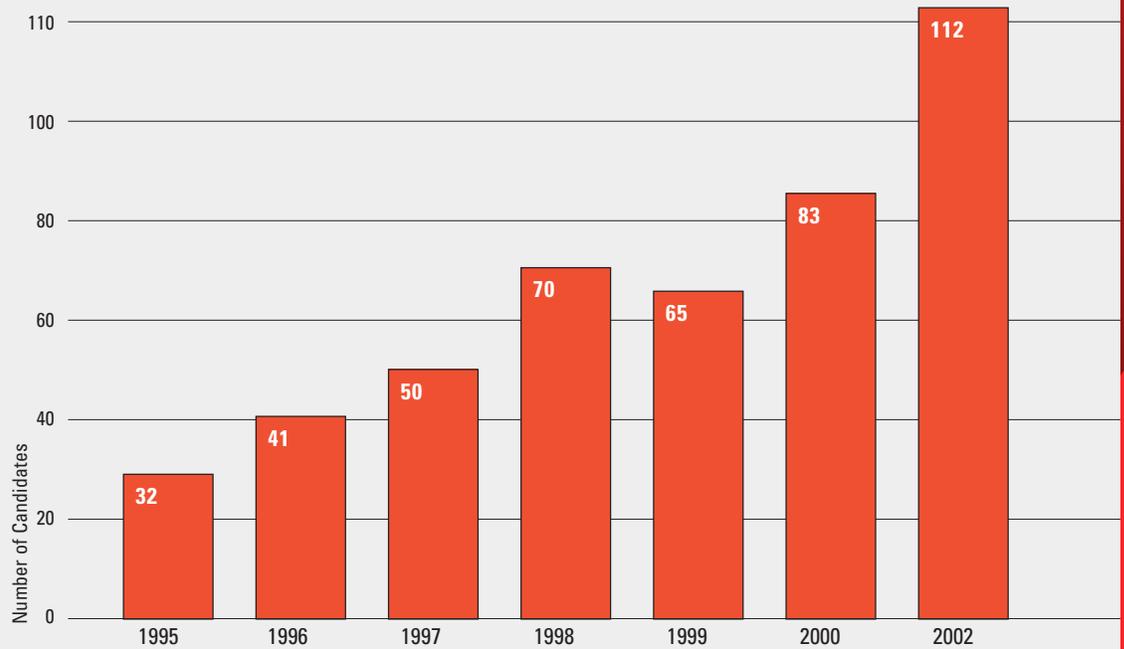
Source: National Council for the Accreditation of Teacher Education, www.ncate.org.

FIGURE 13
Steady Growth
in NCATE
Accredited
Institutions
1996-2002



Source: National Council for the Accreditation of Teacher Education, www.ncate.org.

FIGURE 13a
Number of
Institutional
Candidates
for NCATE
Accreditation
1995-2002



Source: National Council for the Accreditation of Teacher Education, www.ncate.org.

NCATE has also pilot tested and issued revised standards for assessing the quality of professional development schools.¹⁶ Ten key concepts reflected in the standards include the importance of developing strong, boundary-spanning, professional learning communities to support student learning and professional development through active inquiry.

Although the number of “alternative programs” for teacher preparation has expanded rapidly since the Commission issued its report in 1996, there are as yet no clearly established and widely accepted standards for these approaches. Alternate route teacher preparation programs offered by accredited colleges of education must, however, meet NCATE standards, and NCATE is considering whether to review non-university providers of teacher preparation. The Commission believes that alternative programs should be held to quality standards that are equally as rigorous as those required of traditional teacher preparation programs.

Teacher Preparation Accountability at the Federal and State Levels

Since the Commission’s original report was issued there has been growing pressure for federal and state agencies to be more proactive in the chain of accountability for teacher preparation. The quality of many teacher education programs has increasingly been criticized. Many policymakers are expressing concern about the apparent unwillingness or inability of some programs to improve or reform themselves in fundamental ways. The alternative pathways movement has grown, in part, as a response to these concerns.

The 1998 Higher Education Act amendments require federal and state agencies to measure, report on, and hold teacher preparation programs responsible for the quality of their graduates. These reporting requirements apply to every state and to every teacher preparation program in the nation. The federal Title II “report cards” for institutions and states are a start in this accountability process. By the spring of each year, colleges and universities with teacher preparation programs must report the following to their state’s department of education:

- **Pass rates for those who complete teacher preparation courses;**
- **Basic program features (e.g., number of students, how much supervised practice teaching is required, the student-faculty ratio in practice teaching);**
- **Whether the program has been classified as “low performing” by the state; and**
- **Any supplemental data the institution feels will offer relevant contextual information about the program.**

Institutions are required to disclose this information to the public, both on request and through publications that are sent to potential applicants to teacher preparation programs, guidance counselors, or those who might employ program graduates. The first round of institutional reports was made in 2001, by about 1,300 teacher preparation programs.

HEA Title II also requires that states report each year to the U.S. Department of Education on:

- **State licensure and certification requirements;**
- **Descriptions of alternative routes to certification;**
- **Statewide pass rates for licensure or certification candidates, by institution and for each alternative route;**
- **Rankings of institutions by licensure pass rates;**
- **Information on waivers granted to state licensure or certification requirements, including the percent of teachers on waivers in high- and low-poverty school districts; and**
- **Criteria used by the state to assess the performance of teacher preparation programs.**

These “report cards” for institutions and states are first steps on a journey to greater accountability. They will not tell policymakers and the public everything they need to know about quality teacher preparation because, in part, they rely heavily on tests that provide incomplete measures of teaching competence. Furthermore, a recent report from the General Accounting Office suggests that, because the Department of Education left many definitions open to interpretation, “states and institutions could report information that made their programs seem more successful than they might have been.”¹⁷

Nonetheless, if they are used well, these annual reports could open the door to a broader discussion and understanding of the state teacher preparation systems that should guarantee a quality teacher for every student.

Some states do just that. For example, in June 2000 the Oklahoma State Regents and all university presidents in the state higher education system approved the Oklahoma Teacher Warranty. The warranty states that all teacher education graduates will successfully demonstrate that they can meet the state’s required 15 teacher competencies in their first year of teaching, or the institution, at no cost to the local education agency or the teacher, will receive whatever assistance is determined necessary to improve the teacher’s performance. This warranty is one piece in a series of statewide initiatives undertaken in Oklahoma, one of the Commission’s first partner states, to improve teacher quality, as noted in the box on the following page.

A full understanding of the quality of teacher preparation must go beyond the pass rates of candidates on final exams in their courses, the “comps” required for their degree programs, or scores on PRAXIS and other teacher examinations. It is time for all teacher education programs—traditional and alternative—to intensify efforts to publicly demonstrate the “value-added” they bring to their teacher candidates. This should include documentation of the extent to which graduates have developed and mastered the 10 qualities of a highly qualified beginning teacher that are the starting point for this section (see box 12 on page 73).

NCATE program standards are now aligned with professionally set national content standards for preK-12 students. As education programs meet these standards, they are preparing teachers who can teach to the standards in these academic areas. In further support of these goals, the Standards-Based Teacher Education Project (STEP), sponsored by the Council for Basic Education and the American Association of Colleges of Teacher

Box 20: The Oklahoma Teacher Enhancement Program

The Oklahoma Teacher Enhancement Program (OTEP) is an example of a partnership working to create an accountability feedback loop that benefits all parties: new teachers, the schools in which they teach, and the institutions that prepare them. Working together, the state partners (the Oklahoma State Regents for Higher Education, the Oklahoma Commission for Teacher Preparation, the Oklahoma State Department of Education, and the Oklahoma Education Association), developed an assessment system that includes triangulation of three elements: 1) K-12 student quantitative achievements; 2) evaluation by trained observers, including the teacher mentor, higher education faculty, and local administrator, known as the Resident Year Committee (RYC); and 3) portfolio reflections of the first-year teachers, known as Resident Year Teachers.

Funded by a Title II Teacher Quality Enhancement grant, OTEP is in the third year of implementation using the following assessment instruments:

- **Teacher Work Sample Methodology:** To determine teacher influence directly on student learning gains, the Oklahoma Teacher Work Sample has been developed. Participating Resident Year Teachers were trained in the use of these work samples, which were then scored by trained higher education faculty members statewide. Two research analysts then analyzed the data, and the results were reported to the deans.
- **Pathwise Induction Program:** All participating Resident Year Committee members participate in this program, developed by the Educational Testing Service. It focuses on the 15 Oklahoma teaching competencies that must be met in teacher education programs.
- **Teacher Portfolio:** Resident Year Teachers recorded reflections in portfolios to analyze their own teaching and the teaching preparation. The prompts for the portfolio were developed by a cadre of National Board Certified Teachers using the 15 Oklahoma teaching competencies.

Although Oklahoma has had a mentoring program for first-year teachers for 20 years, the Resident Year Committee mentors had received no training in the past. The Pathwise training has proved to be invaluable to the RYC members for evaluating the performance of the first-year teachers in a systematic way that leads to improved performance. And, because of feedback from the RYC members, a K-16 initiative has been developed by the partners to align teacher preparation standards and teacher evaluations. This will lead to possible policy and/or law changes. Finally, the Teacher Work Sample has been shown to provide valuable information to the colleges of education—feedback that can lead to changes and enhancements in the teacher preparation programs.

Source: Kyle Dahlem, Oklahoma State Regents for Higher Education.

Education, is assisting colleges and universities as they redesign their programs to ensure that the teachers they prepare have the knowledge and skill to help students meet PreK-12 learning standards. Arts and sciences and education faculty review courses and clinical experiences to determine how they develop teachers' content and pedagogical knowledge to support standards. Several STEP campuses, particularly those in Georgia, Indiana, and Kentucky—which are facing rigorous new state mandates—are creating assessment systems by which graduating teachers demonstrate their subject-area content knowledge, their ability to teach the content, and their ability to impact the learning of students.¹⁸

The Teachers for a New Era program, initiated by the Carnegie Corporation of New York, has the potential to catalyze this effort. The program requires its grantees “to evaluate the ongoing effectiveness of the teacher education program based, in part, on evidence of pupil learning that has occurred under the tutelage of teachers who are graduates of the program.”¹⁹ This kind of accountability is meaningful because it promotes the use of real outcome data to diagnose and improve programs. It is time to end the debate over whether it is possible to do this and to begin the hard work of making it happen. As more states become capable of matching PreK-12 student assessment data with teacher evaluations, they may also be able to do a better job of measuring the strength of traditional and alternative teacher preparation programs.

College and University Responsibility for Quality Teacher Preparation

Because the vast majority of the nation's teachers are prepared in approximately 1,300 colleges and universities across the country, any meaningful discussion of accountability for quality teacher preparation must address institutional responsibility for success. College

The behind-closed-doors fact is that too many teacher education programs are inadequately funded to do their jobs.

presidents, university chancellors, and deans in arts and sciences as well as colleges of education need to take their place in the chain of accountability for the quality of teachers prepared at their institutions. That means moving quality teacher education to the forefront of institutional planning. Make no mistake. The presidents and boards of trustees of these institutions have a moral

responsibility to America's children. If they are unable to make this commitment, they should not be in the business of teacher preparation.

The behind-closed-doors fact is that too many teacher education programs are inadequately funded to do their jobs. “Too many American universities treat their schools of education as ‘cash cows’ whose excess revenues are spent on the training of doctors, lawyers, accountants, and almost any other students than the prospective teachers themselves.”²⁰ Faculty are often paid less than their counterparts in other fields, and investments in educational technology often lag far behind those made in other university programs.²¹ To be done well, teacher training takes considerable resources. Shortchanging teacher education results in weak programs with poor clinical training and little of the intensive mentored support that quality teacher preparation requires.

At many research universities with teacher preparation programs, the reward system priorities deflect faculty away from significant involvement in preparing teachers. These structural disincentives are barriers to effective and successful preparation of high quality teach-

ers. Progress is made when key university policies are changed to encourage and reward collaboration between the colleges of education and arts and sciences and K-12 faculty. This can include policies that reward all faculty, not just those in education, for teaching and service activities and procedures that recognize the value of K-12 collaboration in faculty promotion and tenure policies.

Sometimes structural changes are required to overcome the barriers that exist between arts and sciences, schools of education programs, and K-12 school systems. The University of Texas at El Paso, described in the box below, provides an outstanding example of the payoff for such efforts.

Other examples of places where universitywide commitment and collaboration are producing well-designed programs preparing highly qualified teachers can be found in the Goodlad Network for Educational Renewal, and at campuses like the University of Wisconsin at Milwaukee, the University of Southern Maine, the University of North Carolina system, or the State University System of Georgia, where the direct and sustained engagement of chief executives have transformed the approach these institutions take to preparing teachers.

To ensure quality in higher education institutions, then, the overarching challenge is to bring the preparation of teachers back to the position it once held in American higher education—as a core mission that involves all segments of the campus and that has the active support of top university leaders. The Commission brings this issue before college and university presidents as the most important public policy challenge they must address in the next few years. Campus chief executives, provosts, and even trustees must be willing to create and sustain the policy, structure, and practice changes that result in a campuswide, community-based focus on quality teacher preparation.

Box 21: The University of Texas at El Paso

In the El Paso Collaborative for Academic Excellence, a network of university, school, and community partners has forged a teaching collaborative that has, for the past 10 years, focused on the quality of teaching in Texas' El Paso County. Having the resources and expertise of these partners translates into the continuing involvement of leaders from the education, business, and civic communities.

The El Paso Collaborative supplies 60 percent of the teachers in El Paso County. The integrity of the program is crucial to the public schools it feeds, and training qualified teachers is now an across-the-board responsibility for the entire University of Texas at El Paso. More than 80 percent of its teacher candidates originate from El Paso County, meaning that the teachers prepared by the university are preparing the next generation of students who will, in turn, attend the university. So all parties in the Collaborative have a vested stake in high quality teaching and high quality teacher preparation. The program is heavily field-based, and several schools in the El Paso system function as Professional Development Schools. University of Texas-El Paso faculty teach at the schools as well, overseeing teachers-in-training. Veteran teachers who aspire to become mentors can take professional development courses in mathematics, science, and literature, and are compensated for being mentors.

Source: Interview with Diana Natalicio, President, University of Texas at El Paso.

Licensure Should Ensure That Teachers are Qualified to Practice

Certification or licensure is the state's legal vehicle for establishing competence for members of professions, including teaching.²³ It is meant to represent the minimum standard for responsible practice. Each state has its own system for determining whether and how an applicant for a license meets its standards. But in many states the value of licensing, as an indicator of quality, has come under fire in view of the fact that licensure tests vary greatly and often are characterized by low-level content and low passing scores.²⁴

Progress Has Been Made

On a positive note, a number of states have, over the past decade, taken important steps to strengthen their licensure requirements, which are now substantially different from what they were 15 or 20 years ago. In most states, candidates for teaching must earn a minimum grade point average and/or achieve a minimum test score on tests of basic skills, general academic ability, or general knowledge in order to be admitted to teacher education or gain a credential. In addition, they must secure a major or minor in the subject(s) to be taught and/or pass a subject matter test, take specified courses in education and, sometimes, pass a test of teaching knowledge and skill. In addition, in the course of teacher education, candidates are typically judged on their teaching skill, professional conduct, and the appropriateness of their interactions with children during the student teaching experience.

In the three-part strategy for ensuring teacher quality that the Commission outlined in its 1996 report, licensure played a central role. The Commission said: "In a performance-based licensing system for teaching, all candidates should pass tests of subject matter knowledge and knowledge about teaching and learning before they receive an initial license and are hired. They should then pass a performance assessment of teaching skills during their first year or two of supervised practice as the basis for a continuing license. We further recommend that states use common assessments with common, professionally set cut-off scores."²⁵ We continue to maintain that these are bedrock requirements for a teacher licensure system that signifies all who are licensed are indeed qualified to teach.

Through work on the development of the Interstate New Teacher Assessment and Support Consortium (INTASC) standards, states are making progress on these fronts. But more must be done if teacher licensure is to gain the respect that licensure holds in other professions. Teacher licensure remains the weak link in the chain of accountability for quality teaching.

More Must Be Done

The Commission continues to believe that licensure is essential to ensure that America's children are taught by highly qualified teachers. America's families and children must have confidence that their school leaders are staffing their classrooms with individuals who are qualified to be there; licensure must provide that assurance. Studies using national data, as well as state data sets, have found significant relationships between teacher certification measures and student achievement at the levels of the individual teacher.²⁶ The convergence of findings across different units and levels of analysis reinforces the strength of conclusions about the importance of certification that might be drawn from any single study.²⁷

Although there is a growing consensus among states on improving standards for licensing, the Commission believes more must be done to ensure that licensure represents the high standards necessary for highly qualified teaching. This is because:

- 1. The content and quality of licensing standards across states is uneven and inconsistent;**
- 2. Teacher licensure tests don't measure up. Some are weak proxies for the depth of knowledge and skills all teachers must have, and wide variations in acceptable passing scores diminish their value;**
- 3. Loopholes make licensing a mockery. Backdoor routes to the classroom have proliferated, and in some cases state officials have sanctioned wholesale violation of their own rules;**
- 4. The public doesn't always know what they need to know about the qualifications and licensure status of teachers in their schools; and**
- 5. Disadvantaged students lose the most from these loopholes because underqualified "teachers" are typically placed in beleaguered schools.**

We discuss these issues below.

Quality at the State Level Is Uneven

Typically, each state requires some combination of a passing score on an entrance examination, a certain number of courses in education, a major or minor in subjects taught at upper levels, and, in most cases, a minimum number of hours of supervised student teaching. But the choice of tests, the passing scores, the number and type of courses, and the quality of the supervised teaching experience vary significantly. This haphazard menu of requirements, tests, and policies does nothing to create a credible benchmark for teacher preparation programs. Furthermore, the standards required for new teachers are not always aligned with student content standards. In a nation where 43 million Americans move each year, this crazy quilt of requirements means that the quality of teaching for our students depends on accidents of birth or residence.

Teacher Licensure Tests Don't Measure Up

Forty-three states test prospective teachers, but most are still not using true performance-based measures that provide valid assessments of teaching competence. States have raised teaching standards substantially in the past decade; now they need to improve their measures of teaching competence.

A National Research Council report raised concerns that, because the tests used for teacher licensing and the passing scores on those tests are not comparable from state to state, it is difficult to make useful comparisons of teacher education program outcomes.²⁸ The tests also impede the mobility of teachers from parts of the country where there are surpluses to the places where there are shortages. Furthermore, the fact that the tests are not well validated means we cannot rely on them as adequate measures of teaching.²⁹

We need a system of well-constructed, validated teacher tests that do not pose undue fiscal burdens or unnecessary obstacles on test-takers (including those who are mobile) and that are strongly predictive of actual teaching ability.

Loopholes Make Licensing a Mockery

Across the nation, thousands of unqualified individuals are in the classroom. Students are exposed to them because states and districts are unable to hire and retain teachers with the proper credentials. They are placed in classrooms because state and district officials are willing to bypass, or outright ignore, their own laws and policies. There are so many euphemisms for these backdoor routes to the classroom that policymakers—and the public—have trouble grasping the extent or impact of this phenomenon. For instance, there are teachers on “waivers,” which means the requirements or standards have been set aside to hire them. There are teachers with “temporary certificates” that can last for decades, teachers with “provisional” certificates populating a kind of professional limbo, teachers with “emergency” certificates in settings where the emergency is the norm not the exception, and “out-of-field” teachers who are assigned to teach subjects for which they are neither prepared nor licensed.

A recent federal report notes that 183,573 people (i.e., about 6 percent of all public school teachers) taught on “waivers” in the United States during the 2000-01 school year.³⁰ Here, “waiver” means “any temporary or emergency permit, license, or other authorization that permits an individual to teach in a public school classroom without having received an initial certification or license from that state or any other state.”³¹ But even for those who are licensed, out-of-field teaching remains allowable. There are states, for example, that allow teachers to spend as much as half their time teaching subjects in which they have not been certified.³² Forty-four percent of the nation's middle school students and 16 percent of high school students take at least one class from a teacher who did not even minor in the subject being taught.³³ Many states do not keep complete or accurate data on the extent to which their students are taught by individuals who are not credentialed in the subjects they are teaching. It doesn't have to be that way. For example, Kentucky posts all teacher certification data online, so that the public can see for themselves in what content areas or grade levels their local teachers are certified to teach.³⁴

Needed: Full Disclosure

The Commission believes it is time to make accountability for results a reality for everyone involved. Guaranteeing the quality of teachers just entering the profession ought to be a shared responsibility among states, teacher training institutions, and school districts. The chain of accountability should include school districts that should be held responsible for enforcing high standards for all entrants to teaching from all forms of teacher preparation. They should just say no to unlicensed and unqualified individuals.

It is unacceptable, as a matter of public policy, to hold students to academic standards that some of their teachers are unable to help them meet. States and school districts should ensure that every teacher in every classroom has met teaching standards that are well-aligned with K-12 learning standards. Standards for K-12 students have been developed based on what they need to know and be able to do; if we want our students to meet those standards we must also hold their teachers to high expectations.

State and local elected officials and policymakers should understand the licensure tests and cut-off scores used in their states and, for the sake of every student in their state, they should be honest about how their own policies and state's practices impact quality standards. They need solid numbers to determine how many teachers are on waivers, how many have emergency certificates, how many teach in fields for which they are unprepared, how many long-term substitutes are employed, and how many teachers are riding on "temporary" certificates.

The failure of policies and practices that are the responsibility of others in this society—whether federal or state governments, university preparation programs, or school districts—are being shouldered by children. The adults in their world pay but a small price for their unwillingness or inability to fund and manage successful schools, for their inattention to high quality preparation of new teachers, and for their habit of waiving rules and regulations to avoid confronting difficult policy choices.

Disadvantaged Children Lose the Most

The distribution of unqualified teachers has a disturbingly uneven and inequitable impact on students. In six states, more than 15 percent of teachers in their low-income districts are hired on waivers, including 23 percent in California and Louisiana.³⁵ Students in high-poverty secondary schools are more than twice as likely as students in low-poverty schools to be taught by teachers not certified in their fields, according to a recent study by the Education Trust.³⁶ In the case of mathematics, "schools with high concentrations of minority students are more likely to be taught by teachers without a background in mathematics. Indeed, in math courses in high schools with large concentrations of minority students, 32 percent of the teachers lacked even a minor in the subject area compared to 23 percent in mostly white schools."³⁷

We can no longer tolerate a system in which the least prepared teachers are concentrated in schools with the greatest learning needs and challenges.

The data for California presented in the figures 10a, 10b, 10c in the first section of this report tell a troubling story that could be repeated in any state. All around the nation, the highest numbers of underprepared teachers are consistently placed in the lowest performing schools, the lowest income schools, and schools with the largest minority populations.

We can no longer tolerate a system in which the least prepared teachers are concentrated in schools with the greatest learning needs and challenges. Teaching performance suffers, student learning declines, and teacher attrition accelerates as these schools continue to ride a downward spiral.

W i n d s o f C h a n g e

As earlier noted, the focus on teaching quality that began with *What Matters Most* stimulated a debate that in turn has led to promising practices. There is considerable work now under way at the state level—much of which has been led by states themselves, partnering with the Commission.³⁸ We list several areas of promise below.

A Voice for the Profession

Professional standards boards for teachers are a strong voice in the chorus of change. While the roles and functions of these boards vary, in the best of cases, like boards for other professions, they have the authority to accredit teacher preparation and license renewal programs; set licensure standards and issue licenses; and discipline licensed practitioners. Some are independent and can set standards and requirements for practice, while others act in an advisory capacity to state boards of education.

In 1996 when the Commission called for independent professional standards boards in every state, there were 12 such boards in place. Their growth has been slow, and they continue to evolve in terms of authority and independence. As of 2002, nine states had independent boards of standards and practice; (two others had independent standard boards, and another two had independent practice boards); four had semi-independent boards (three for both standards and practice, one for standards only); 12 had advisory boards of standards and practice; and the remaining states had no such boards.³⁹ Kentucky provides an example of how a strong professional standards board has spearheaded teacher quality improvements across the state, as described in the box on the following page.

Box 22: The Kentucky Education Professional Standards Board

The Kentucky Education Professional Standards Board (EPSB) was created in 1990 under the Kentucky Education Reform Act and set up as a semiautonomous entity attached to the Kentucky Department of Education. In July 2000, the governor separated the EPSB from the Department of Education, making it a fully independent agency administratively attached to the office of the governor.

During its first 10 years, the EPSB accomplished its original mandates set forth by the legislature, including:

- Establishing standards for professional school personnel;
- Establishing and approving standards-based preparation programs for professional school personnel;
- Streamlining the certification system;
- Adopting a code of ethics; and
- Establishing a professional practices/disciplinary action process for litigating allegations of misconduct by professional school personnel.

The EPSB's independence and the continuing attention given policies on "teaching quality" has led to an expansion of the board's roles and responsibilities. Setting high goals for teaching quality outcomes throughout the state, the EPSB has deployed a variety of technologies to facilitate the collection and publication of data that makes progress on meeting these goals accessible to the public. Examples of actions include:

Accountability for Educator Preparation

The board has adopted the NCATE 2000 standards for accreditation of educator preparation programs. It also set up an "Emergency Program Review Procedure" to review certification programs in which quality of preparation is seriously jeopardized as evidenced by failing scores on the PRAXIS II certification assessments. Five institutions were reviewed in the summer of 2002, and a set of expectations and timelines for improvement were developed for these institutions.

The EPSB also created the Kentucky Educator Preparation Program Report Card (www.keppreportcard.org) to provide public information about the quality of all Kentucky's educator preparation programs. The 2001 Report Card included passing rates on PRAXIS II exams for graduates of every preparation program, as well as their passing rates in the Kentucky Teacher Internship Program and the Kentucky Principal Internship Program. The 2002 Report Card also includes data based on a survey of new teachers, student teachers, and their supervisors regarding their perception of the quality of preparation at their respective institution. Survey results are displayed by institution and correlated to Kentucky's New Teacher Standards (i.e., the results show areas of excellence and improvement needed for each preparation program). The 2003 Report Card is slated to include a "Quality Performance Index" for each institution. The index will have potential accreditation ramifications if a program's index score slips below an acceptable level of performance.

Alternative Routes to Certification

The EPSB operates six alternative routes to certification, including options for veterans, college faculty, career switchers with baccalaureate degrees, and candidates with exceptional work experience. The most popular option—the university-based alternative preparation program—is now available at 12 institutions statewide. The EPSB hopes that these new programs hold the promise of drastically reducing the proliferation of emergency certificates and meet the demands of the *No Child Left Behind* Act by providing quality programs for nontraditional teaching candidates.

Accountability for Proper Assignment of Staff

The EPSB performs an annual audit of all professional school positions to determine the instances of out-of-field teaching. Districts with improper assignments can be financially penalized by the state commissioner of education through the withholding of state funds. A statewide database system allows districts to submit data on course scheduling, staff assignments, student management, and financial information, with a minimum of hassles. The Teacher Certification Inquiry system, published on the EPSB Web site (www.kyepsb.net), allows public access to the certification records of all professional school personnel and the listing of permitted assignments. This system has proved to be a huge success in providing meaningful public information and assisting school districts in properly employing and assigning staff.

Internships and Professional Growth

All new teachers must successfully complete the one-year Kentucky Teacher Internship Program (KTIP) to receive professional (i.e., second stage) licensure. KTIP provides mentoring support to the new teacher and a team assessment of his/her competency; KTIP is performance-based and built around Kentucky's New Teacher Standards. This program will be piloted with a new two-year format under the EPSB's Title II Teacher Quality Enhancement Grant. The EPSB operates a nearly identical program for support and assessment of new principals, the Kentucky Principal Internship Program, which is based on the Interstate School Leaders Licensure Consortium standards.

Teachers can advance in certification rank by using planned professional development and continuing education in lieu of a traditional master's degree or graduate course work. The EPSB created an online learning platform at www.KyEducators.org to provide targeted professional development and training opportunities, as well as facilitate certification programs. Planned modules include training for those who mentor and assess new teachers, a "New-to-Kentucky" teacher section, a plan-building seminar for Continuing Education Option participants, testing strategies for PRAXIS II, and a program on accommodating special learners in the classroom. Future modules to assist in the certification of special education teachers are also being developed.

The board has implemented a statewide incentive program to assist candidates pursuing certification from the National Board for Professional Teaching Standards (NBPTS) and to recognize NBPTS-certified teachers. The Kentucky incentive program includes an upfront stipend, release days, and partial fee reimbursement for candidates. NBPTS-certified teachers can receive Rank I certification (the highest certification recognition in Kentucky), a \$2,000 annual salary supplement, and additional stipends for mentoring other teachers.

Attrition/Retention

The EPSB data collection system allows for sophisticated analyses of teacher supply and demand. Recently released data collected over the past decade shows that Kentucky has a much higher retention rate for new teachers (75 percent to 80 percent after the first five years) than the national rates of less than 50 percent over the same time period. The EPSB has developed a methodology to examine retention and migration of teachers in-state since 1988 and can now provide information about teacher attrition/retention/migration patterns for any subject, grade range, and years of experience. Additionally, the EPSB is contracting this year with researchers to examine a possible methodology to determine teacher "demand."

Source: Susan Leib, Kentucky Department of Education, and Mary Ellen Horner, Kentucky Education Professional Standards Board.

Improving Teacher Assessment Tools

Fifteen states have been working with the Interstate New Teacher Assessment and Support Consortium (INTASC) to develop a Test for Teaching Knowledge (TTK), based on the INTASC standards and designed to assess teachers' knowledge of teaching before an initial license is issued. Unlike current pedagogy tests, which do not differentiate between developmental levels, the TTK has one segment each for prospective elementary, middle, and high school teachers. Unlike current tests, the questions concern actual teaching situations and classroom experiences and require constructed responses. The costs of administering the tests are expected to be higher than current multiple choice tests, but if the test helps screen out those unlikely to be effective teachers, the costs are worth it.

Several states, including Arkansas, Connecticut, Indiana, Kentucky, and Ohio, are using a performance-based assessment prior to issuing the first professional license. Ohio and Arkansas use PRAXIS III, a classroom observation instrument, developed by the Educational Testing Service, and Connecticut and Indiana use portfolio assessments based on the INTASC standards, which focus on beginning teachers' ability to teach specific subjects, such as mathematics, reading, and science. These portfolio assessments were developed to be aligned with the National Board portfolio assessments, which are now widely accepted as tools to measure accomplished teaching.

Tiered Licensure

Since the release of the Commission's 1996 report, significant progress has been made by the states in developing a tiered system to incorporate INTASC and NBPTS standards as measures for staged entry into the profession and advanced certification. At least 17 states are creating tiered licensing systems, usually comprised, for example, of an initial or provisional license, a professional license, and a "master teacher" designation. Twenty-five states have been working to implement INTASC or similar standards for beginning teacher licensure. Twenty-five states accept National Board Certification for license renewal purposes and, in some cases, use such certification to grant the state's highest professional license.⁴⁰

These tiered systems for licensing teachers are built on stages similar to those in other professional career ladders, and they make explicit what is expected of teachers at each stage, from the initial or provisional license, to the demonstration of more experience and expertise required for a professional license, and finally the expectations for the "master teacher" designation. They "create increasingly higher expectations of teacher knowledge and skills as teachers advance in their careers."⁴¹ Designed with sufficient care in the context of a systemic approach to teaching quality, tiered systems can reward teachers for demonstrated growth in knowledge and skills. To do so, they should be tied to pay systems, discussed in more detail in the next section.

ACTION STEPS

High quality teacher preparation provides new teachers with the skills, confidence, and competence to begin their teaching careers. Teacher licensure should validate that teachers are highly qualified to teach. These are, as we know, first steps in guaranteeing that our schools are being staffed with competent, caring, well-qualified teachers. States, institutions of higher education, schools, and school districts can join us in ensuring that teacher preparation lays a strong foundation, and that licensure guarantees high quality teaching, by following the Commission's recommendations for teacher preparation and quality assurance:

TEACHER PREPARATION

- Set and maintain high standards for entry to all teacher preparation programs;
- Require all preparation programs—"traditional" and "alternative"—to deliver rigorous education designed to develop and instill the attributes of highly qualified teachers;
- Develop teacher preparation programs that are based on the six dimensions of strong teacher education;
- Create federal, state, and district level incentives to recruit and prepare teachers in high-need disciplines and local areas; and
- Establish and fund strong K-16 partnerships in which teacher preparation is closely aligned to the needs of schools and students.

TEACHER QUALITY ASSURANCE

- Insist that all teacher preparation programs meet rigorous accreditation standards;
- Establish institutionwide and programwide leadership responsibility for the quality of teacher preparation;
- Close those programs that prove unable to produce high quality teachers;
- Establish independent standards boards where they do not exist and create regulatory procedures for implementing standards boards' decisions;
- Develop and use widely accepted standards and cutoff scores on licensing exams that are driven by a rigorous definition of teaching quality; develop multiple measures for licensure, composed of rigorous tests of content knowledge, performance based assessments of teaching skill, and portfolios documenting both content knowledge and teaching skill;
- Apply sanctions to districts that hire unlicensed teachers and to schools that require teachers to teach out-of-field;
- Make data on teacher licensure status and teaching assignments public;
- Collect and use data on student achievement, teacher licensure, and teacher retention to improve the teacher preparation and licensure system; and
- Adopt multitiered licensing and advanced certification systems, from entry-level to accomplished teaching.

LINKS IN THE CHAIN OF ACCOUNTABILITY

Action Steps	Who's Job Is It?				
	Federal Government	States	Institutions of Higher Education	Accrediting Bodies	Districts & Schools
TEACHER PREPARATION					
Set and maintain high standards for entry to all teacher preparation programs		✓	✓		
Require all preparation programs—“traditional” and “alternative”—to deliver rigorous education designed to develop and instill the attributes of highly qualified teachers		✓	✓	✓	
Develop teacher preparation programs that are based on the six dimensions of strong teacher education		✓	✓	✓	
Create federal, state, and district level incentives to recruit and prepare teachers in high-need disciplines and local areas	✓	✓	✓		✓
Establish and fund strong K-16 partnerships in which teacher preparation is closely aligned to the needs of schools and students		✓	✓		✓

LINKS IN THE CHAIN OF ACCOUNTABILITY

Action Steps	Who's Job Is It?				
	Federal Government	States	Institutions of Higher Education	Accrediting Bodies	Districts & Schools
TEACHER QUALITY ASSURANCE					
Insist that all teacher preparation programs meet rigorous accreditation standards	✓	✓	✓	✓	
Establish institutionwide and programwide leadership responsibility for the quality of teacher preparation		✓	✓	✓	
Close programs that prove unable to produce high quality teachers		✓	✓		
Establish independent standards boards where they do not exist and create regulatory procedures for implementing standards boards' decisions		✓			
Develop and use widely accepted standards and cutoff scores on licensing exams that are driven by a rigorous definition of teaching quality; develop multiple measures for licensure, composed of rigorous tests of content knowledge, performance-based assessments of teaching skill, and portfolios documenting both content knowledge and teaching skill	✓	✓		✓	
Apply sanctions to districts that hire unlicensed teachers and to schools that require teachers to teach out-of-field		✓			✓
Make data on teacher licensure status and teaching assignments public		✓			✓
Collect and use data on student achievement, teacher licensure, and teacher retention to improve the teacher preparation and licensure system	✓	✓	✓	✓	✓
Adopt multitiered licensing and advanced certification system, from entry-level to accomplished teaching		✓			



S T R A T E G Y 3

**FULFILLING THE DREAM
OF TEACHING:
A PROFESSIONALLY
REWARDING CAREER**

S T R A T E G Y

3

STEP 1: STAFFING SMARTER	112
Box 23: Home Page for Teach Louisiana	113
Assessing State and Local Needs	114
“Grow Your Own” State Teacher Incentives	114
Federal Incentives	115
Streamlining Hiring	116
Box 24: A Tale of Two Districts	117
Supporting Teacher Mobility	118
Box 25: State Programs Encouraging License Reciprocity	119
Box 26: The Second Time Around—Bringing Retired Teachers Back to the Classroom	120
STEP 2: SUPPORTING NEW TEACHERS	121
New Teacher Induction Programs	121
Box 27: Effective Induction: A Principal’s Perspective	122
Mentoring and Support Beyond the First Year of Teaching	123
Box 28: Maine Builds an Induction Program	124
Box 29: Mentoring the Entry-Year Teacher in Brunswick, OH	125
Box 30: Connecticut’s Beginning Educator Support and Training (BEST) program : Supporting New Teachers Beyond the First Year	126
Peer Assistance and Review Programs	126
Box 31: School Districts Create Peer Programs To Improve Teaching	128
STEP 3: PROMOTING TEACHERS’ CONTINUING PROFESSIONAL GROWTH	129
Professional Development Is Not Optional	129
Two Essential Elements: Time and Technology	130
STEP 4: RECOGNIZING ACCOMPLISHED TEACHING	131
National Board for Professional Teaching Standards	131
Box 32: Becoming a National Board Certified Teacher	133
PAYING TEACHERS WELL: ALL ALONG THE WAY	134
Pay Matters	134
A Better Pay System	135
Box 33: Arizona’s Career Ladders and Performance-Based Incentives	137
Box 34: Teacher Pay Matters in Denver, CO	138
Lessons Learned on Teacher Compensation Systems	138
ACTION STEPS	140

FULFILLING THE DREAM OF TEACHING: A PROFESSIONALLY REWARDING CAREER

Creating strong learning communities in schools where teaching and learning can thrive, and preparing high quality teachers to staff those schools, are essential starting points for quality teaching for all children. But they are only the start.

In its 1996 report, *What Matters Most: Teaching for America's Future*, the Commission recommended that the nation make an equally strong commitment to building a professionally rewarding career for all teachers. We called for: streamlining district hiring, eliminating barriers to teacher mobility, aggressively recruiting high need teachers, developing a career continuum for teaching linked to assessment and compensation systems that reward knowledge and skill, removing incompetent teachers, and enacting incentives for National Board certification in every state.¹ Of all of the Commission's recommendations, the nation has made the greatest progress on this front. We must build on this momentum, as we continue to develop rewarding career paths in teaching, from induction to accomplished teaching.

If we expect today's new teachers to become tomorrow's accomplished teachers, we must devote equal energy to building career paths that offer them the satisfactions of a rewarding profession. This means recruiting good teachers, supporting them with mentoring, sustaining them with professional growth opportunities and recognition, and rewarding them with pay that recognizes the value they provide to our nation. We describe each of these elements in the pages that follow.

STEP 1: STAFFING SMARTER

States and school districts must rethink how they draw every line and position every box in their organization charts. They need to beg, borrow, and steal good ideas from the businesses and nonprofit organizations that successfully compete with schools in finding, training, and retaining a highly skilled work force. The first step is getting good teachers in the door. Too many good candidates, primed to commit their lives to the dream of teaching, never quite make it to the youngsters who need them most because the job information is too scant, the hiring procedures are antiquated, the administrative barriers are too daunting, and the conditions where jobs are available are too overwhelming without the prospect of strong leadership and collegial support. States and districts that are addressing this problem effectively are taking a systemwide approach.

The box at the right describes the Web site created by the state of Louisiana, a “one-stop shopping” site that is client-oriented at every point, informing candidates of vacancies by county and content area, describing requirements, and guiding them through the process of applying. It also gives information on professional development and procedures for obtaining National Board certification. At each step along the way, teachers and teacher candidates are treated as professionals.

Box 23: Home Page for Teach Louisiana

The Louisiana Department of Education developed the Web site Teach Louisiana to provide the state's educators with a career development center that supports all stages of their professional career. This joint endeavor of the state education department, the Board of Elementary and Secondary Education, the Board of Regents and the governor's office is partly funded through a federal Title II Teacher Quality Enhancement Grant. From Jan. 1, 2002, to Sept. 2002, the site received more than 120,000 hits. As of Sept. 19, 2002, more than 3,640 educators had registered on Teach Louisiana, and 47 districts had posted job openings. More than 1,000 jobs were posted on the Teach Louisiana Recruitment Center during fall recruitment.

The site also provides an online career development clearinghouse for Louisiana's 55,000 educators throughout different stages of their careers. It supplies online information for parents about the certification status of their children's teachers. The primary audiences for Teach Louisiana are elementary and secondary educators and teacher candidates across Louisiana. Additional individuals utilizing Teach Louisiana's services include: out-of-state educators, district superintendents, district personnel directors, principals, Department of Education staff, higher education faculty and staff, policymakers, and the public.

Key components include:

- 1. Teacher Preparation Center:** Individuals interested in teaching in Louisiana can research traditional and alternative paths to becoming a qualified and effective teacher.
- 2. Certification Center:** Individuals can remotely access certification procedures, apply for certification, and update/check the status of their certification.
- 3. Recruitment Center:** Educators use the recruitment center to search job openings in Louisiana public schools and to post their resumes. School districts post job openings and access the resume database to find qualified teachers for their classrooms.
- 4. New Teacher Induction Center:** Teach Louisiana provides educators with supplementary support during this crucial stage of being a new teacher.
- 5. Professional Development Center:** Teach Louisiana helps teachers gain access to high quality professional development opportunities and resources. This Web site supports the idea of teachers being lifelong learners.

As a result of informing, recruiting, and supporting educators, and improving communications with parents, Teach Louisiana seeks to increase the number of quality educators teaching in Louisiana and thereby significantly contributes to the larger goal of improving student achievement in Louisiana's K-12 school system.

Source: Carol Scott Whelan, Louisiana Office of Quality Educators, www.teachlouisiana.net.

Assessing State and Local Needs

Policymakers can't make the right decision if they work from incomplete or stale data, or from no data at all. Today's technology can make collecting, updating, and analyzing school staffing data a cost-effective and efficient process. Databases for decisionmaking should include regular updates on statewide supply and demand, based on current factors such as teaching vacancies by district, grade level, and subject area. This information should be matched with databases that track unemployed teachers, teacher education candidates, and graduates. Candidates in nontraditional preparation programs, retirees, and paraprofessionals should also be tracked. All these databases should be matched against projected student population data, achievement data, turnover rates, and other indicators of school performance and staffing needs. In addition, information from other states should be monitored to track recruitment beyond state borders.

A few states have started to assess staffing shortages and help districts use the information locally. Box 1 on page 38 describes the work of Tennessee's P-16 Council in learning more about teacher attrition in that state. In North Carolina, the Excellent Schools Act of 1997 mandated a comprehensive study of teacher and administrator supply and demand as a way of spotting trends a decade ahead, providing valuable information about the impact of attrition rates. The state also created an online calculator that enables districts to assess their own local supply and demand and to review and revise hiring strategies.² The North Carolina Working Conditions survey (see Box 2, on page 39) is another resource in North Carolina's smart-staffing toolbox.

As part of Title II of the federal Higher Education Act, the U.S. Department of Education awarded 41 state grants to address teacher quality and recruitment issues. Some of these Title II grantees (e.g. Ohio and Oregon), plan to use part of their HEA-Title II funds to revise existing hiring procedures or create new databases to quantify teacher supply and demand, retirements, and misassignments.

"Grow Your Own" State Teacher Incentives

With better staffing information in hand, many states have begun to develop recruitment strategies that start at the very beginning of the career pipeline. Twelve states have created programs to begin at the high school level to interest students in teaching as a career, and six have recruiting programs based in community colleges.³ Twenty-seven states offer college scholarships or forgivable loans of various types to prospective teachers. The scholarships and forgivable loan programs in 11 of these states are aimed specifically at academically high-performing candidates, while 10 states target minority candidates. In addition, 18 states have scholarships or forgivable loan programs aimed at specific subject areas, and 10 states have scholarships or forgivable loan programs that target hard-to-staff schools.⁴

One of the most successful state programs is the North Carolina Teaching Fellows, which fully underwrites the college education of hundreds of high-ability students annually. These students receive special supports as they prepare to teach, and they commit to teaching for at least four years in North Carolina public schools. This program has sharply increased the supply of male and minority teachers as well as individuals in shortage fields like mathematics and science. A recent evaluation showed that the fellows were pleased with their preparation and were evaluated highly by local school principals. Approximately 82 percent were still employed after their five-year teaching requirement was met.⁵

Some states and districts have used signing bonuses, housing incentives, and other incentives to attract candidates into high-need areas. But creative signing bonuses alone, without additional mechanisms that support new teachers and improve working conditions, are not enough. Incentives must be complemented by changes in the conditions that have made these schools hard to staff in the first place. Without changes in the school conditions that drive new teachers out of education, money spent on recruitment incentives may be wasted—it may simply contribute to the revolving door of new hires and departures in hard-to-staff schools.

Federal Incentives

As we discuss in the first section of this report, many states have surpluses of candidates in fields with relatively low attrition, such as elementary education, English, and social studies, but there are inadequate numbers of teachers training in such high-attrition and high-need areas as mathematics, physical science, special education, and English as a second language. Targeted incentives from the federal government to increase the number of teachers prepared to serve in shortage fields and in high-need locations could address the supply side of the teacher “shortage” problem, while states and districts work to improve retention in these fields. The Commission strongly supports this approach.

In the 1970s, the federal government sponsored a number of programs that accomplished similar goals in teaching, including training grants to colleges and universities and subsidies for candidates in fields like mathematics and science. The National Defense and Education Act and legislation that supported the National Science Foundation’s teacher training initiatives, the training of special education teachers, the Urban Teacher Corps, and other initiatives to recruit and prepare teachers eliminated shortages while the programs were in operation. But these programs were eliminated in the early 1980s and have not been reinstated even as demand has increased. Recently, however, several bills have been introduced in Congress that would offer grants or student loan forgiveness to attract students for teaching in high-need (low-performing) schools or high-need (e.g. special education, mathematics, or science) positions.⁶

The Commission also suggests creating a national service scholarship program to prepare high-ability candidates in high-demand fields, much like the national teaching fellowship program envisioned by the Lugar/Bingaman “Teaching Fellows Act of 2002.”⁷ The bill would establish a nationwide scholarship program that would a) offer \$6,500 yearly college tuition grants to students planning to become teachers, and b) require the grantees, upon graduation, to teach in a low-performing K-12 school in their home state for five years. The bill includes a Teacher Partnership Program, under which paraprofessionals such as teaching assistants would be eligible for similar grants that would allow them to continue through college and become licensed teachers. As currently written, the bill requires states to provide 25 percent of the funding; those states offering the program would be able to establish the guidelines under which the money would be awarded.

This bill is praiseworthy for several reasons: the federal government would step up to its responsibility and help build a qualified teaching force; the grantees commit to teaching for five years, as opposed to other popular programs asking for only two years of teaching after three months of “teacher training”; and flexibility is given to states to create the rules under which the funding would be granted. Half of the funds would be allocated from the

federal level to encourage teachers to train where they are and then move where they are needed, and half would be allocated to the states to direct and recruit within their states to meet high needs.

Functioning like forgivable loans, service scholarship programs have been successful in professions such as medicine in getting fully prepared candidates into high-need fields and high-need locations. The federal government routinely subsidizes the creation and expansion of training programs—and the tuition of medical students—to increase the supply of physicians in high-need areas. The Health Professions Education Assistance Act and the Medical Manpower Act (enacted in the 1960s and 1970s), provide service scholarships to encourage prospective doctors to prepare in high-need fields. These are paid back through years of service, and additional incentives direct doctors to high-need locations in central cities and poor rural communities.⁸

Streamlining Hiring

The reception given to prospective candidates applying for a teaching position can make all the difference in meeting staffing needs. In September 1999, *The Merrow Report* aired a probing documentary on PBS examining the difference between creative hiring procedures and entrenched bureaucratic hurdles that discourage candidates from entering teaching and impact what the report called “the so-called teacher shortage.” The example in Box 24 on the next page were adapted with permission from this one-hour documentary, “Teacher Shortage, False Alarm?”⁹

Although they are working to make improvements, Oakland’s story is not all that different from that of far too many districts across the nation. Bureaucratic systems and snafus are a big factor contributing to what are called “shortages” in too many of America’s schools. Too many districts make it far too hard for good teachers to get in the door.

States can streamline hiring procedures by creating Web sites like the Louisiana site featured earlier in this section, where state requirements and procedures are explained, and districts can use these sites to post openings centrally. Some districts have established online application processes and satellite links to conduct long-distance interviews with prospective teachers like those cited in Box 24.

At the last count, 36 states and the District of Columbia had Web sites devoted to recruitment and hiring.¹⁰ South Carolina has provided a model for other states by creating a state agency, the South Carolina Center for Teacher Recruitment, devoted to this issue.¹¹ The California Center for Teaching Careers (CalTeach) works with the national organization, Recruiting New Teachers Inc. (RNT) to provide a “one stop” information and referral recruitment center for individuals interested in a teaching career.¹² The site also assists employers seeking to fill vacant teaching positions.

Box 24: A Tale of Two Districts

Oakland, CA

The 8th grade math class at Bret Harte Middle School was without a regular math teacher for most of the past academic year. The students had so many teachers they couldn't remember all their names. At Oakland High School, not far away, one 9th grade science class was taught by substitutes all year. As one student commented, "I'm feeling short handed, 'cause this is the third year. Ever since I got in junior high school I haven't had a science teacher... all three years." Another said, "All we learn is like the same thing all over again; when a new teacher comes, sometimes we gotta skip chapters and start all over again, and it's difficult."

Says Nancy Caruso, who *is* a certified science teacher at the school, "It breaks my heart....People have come from those classes over there, and they come down and they beg me, 'Can I get into your class, please, I want to learn, I need a science class,' and they're not getting it."

When Karen Scheurmann heard Oakland was looking for teachers, she was eager to apply. She had the right credentials but had trouble getting an application. "I called twice and got no response at all. And finally I faxed a request, and then I got an application." But they never called her back. She had begun her application process in 1997. Nothing happened. She applied again in June 1998 and finally got a response in January 1999 when the school year was half over. By then she had moved out of town.

Greg Fanslow also applied to teach science and had a similar experience. He made numerous trips to the central office to try to get an interview. Fanslow recalls, "I asked at that time to speak with the recruiter, and I was immediately asked you know, this question, which I'm sure that you've heard, 'Do you have an appointment?' And that's pretty much the glass wall." His application sat in an in-box for five months before he was invited for an interview. They told him, less than a week before the semester was to start, that they'd put him in a "pool of people that were hireable." When he saw they still didn't have a specific job identified for him, Fanslow gave up on Oakland. He's now teaching in nearby Berkeley.

New Haven, CA

Just a few miles away, California's New Haven district has gotten aggressive about recruiting and hiring. Jennifer Root, who got her teaching license in Minnesota, went online and saw a teaching position in the New Haven district. "Everyplace else they need to mail you the application, you fill it out, and mail it back. Here you just go to the computer and you can fill out the application on the spot." Donna Uyemoto, assistant superintendent says, "If they have an e-mail address, I will respond to tell them, 'I just received your application. Can you please follow up by sending or faxing your résumé and letters of recommendation to complete your file?'" The paperwork is electronically scanned, and a principal who has a vacancy can access it all online.

For her interview, Root went to her local Kinko's where "they put me in a conference room. I sat down in front of a TV and saw them, and they were doing the same thing in California at the same time." Uyemoto says, "During the interview, if we get a sense that this is a good candidate, at the conclusion of the interview, we can offer a contract."

Two school districts, a few miles apart—both needing teachers. In New Haven, 80 teachers a year are needed to meet growing enrollments and comply with California's mandated class-size reductions. Although Oakland has four times as many students, its problem is a different one: Oakland has to find 500 new teachers every year to replace the one in five who leave annually. Nancy Caruso, the Oakland science teacher whose science class the kids were begging to get into, is one of those who is leaving. "I'm burned out, you know, because I have to...bring all my own supplies. I really don't get any support. I had no water, and I was supposed to teach science. I was toting water from a decaying toilet basically, little one-gallon containers, one at a time, and it was just very frustrating for me. And if you look around, (it's) a decaying building. It's graffiti-ridden, trash everywhere, so the frustration level for me is high because it seems like nothing that could get done gets done."

Source: "Teacher Shortage: False Alarm?" Used with permission from Shae Isaacs, producer, *The Merrow Report*.

Supporting Teacher Mobility

License reciprocity among states helps districts with shortages attract experienced teachers across state boundaries, including those who may be part of the reserve pool of teachers currently not working in schools. But while some states have been easing requirements for teachers with out-of-state licenses as a way of increasing their own pool of qualified teachers, many states still do not recognize out-of-state licenses unconditionally.¹³ This makes it difficult to dip into the pool of thousands of licensed teachers nationwide who currently are not teaching, or attract teachers who are willing to move to new teaching opportunities but are thwarted by state licensing barriers.

To improve mobility, some states are reducing or changing coursework requirements for licensure, whether by allowing out-of-state teachers to opt out of coursework by passing tests, or by extending the period during which they can complete the requirements. Several models of what states are doing to encourage teacher mobility through improved license reciprocity are noted in the box at right.

License reciprocity among states helps districts with shortages attract experienced teachers across state boundaries, including those who may be part of the reserve pool of teachers currently not working in schools.

Pension portability is an issue that impacts teacher mobility. While TIAA-CREF has well-established portability provisions for faculty in higher education, the issue has yet to be resolved for preK-12 teachers. The State Higher Education Executive Officers organization (SHEEO) has been involved in a two-year project funded by the Ford Foundation to promote the recruitment and retention of accomplished teachers by addressing licensing and personnel policies that would give teachers the freedom of movement

enjoyed by other high-status professions.¹⁴ The Mid-Atlantic Regional Teachers Project (MARTP) is pursuing similar objectives with its five member states.¹⁵

One approach some states have taken has been to use incentives that encourage retired teachers to return to the classroom without loss of their pension benefits. While this can be costly, the value of having experienced teachers in the classroom has, for these programs, made the investment worthwhile. Box 26 describes how two states have developed programs that encourage experienced retired teachers to continue working.

Box 25: State Programs Encouraging License Reciprocity

In 1997, **California** enacted the Credentialed Out-of-State Teacher Recruitment and Retention Act, which authorized school districts to employ any teacher holding a valid elementary, secondary, or special education credential from a state other than California. Out-of-state teachers are issued a five-year preliminary credential; during that period, they must complete the California requirements for a standard professional credential, including passing the state certification test and completing course work requirements for subject-matter competence, as well as courses on the U.S. Constitution and methods of teaching reading, health, technology, and special education.

Colorado legislation signed in 2000 allows teachers with comparable licenses from other states to receive professional licenses without holding a provisional license, completing an induction program, or demonstrating professional competencies otherwise required for a professional license.

Florida lawmakers passed legislation in 2000 that authorizes the state to provide full license reciprocity to out-of-state teachers who have standard certificates and two years of teaching experience in another state, without placing additional requirements on a candidate. This legislation recognizes licenses from all states and makes those licenses portable to Florida.

In 1997, **Mississippi** lawmakers passed legislation that authorizes the state to issue a standard license to anyone who holds a valid standard license from another state and has a minimum of two years of full-time teaching or administrative experience. Educators with less than a standard license from another state or less than two years of full-time experience receive a nonrenewable special license for not more than 24 months, during which time the applicant is required to complete Mississippi's requirements for a standard license. The legislation recognizes "traditional" and "alternative" licenses from all states.

In 1998, **Missouri** created a provisional teaching certificate for out-of-state teachers. Regulations provide that a candidate who holds a valid license from another state is eligible for a Missouri certificate if the candidate graduated from a state-approved institution, meets Missouri's testing standards, and meets other basic requirements for prospective teachers. Further revisions in 2000 allow out-of-state teachers to demonstrate subject-matter knowledge by passing tests as an alternative to completing required course work.

Source: Sandra S. Ruppert, "Improving Pension Portability for K-12 Teachers," a report of the SHEEO project, *Enhancing the Teaching Profession: The Importance of Mobility to Recruitment and Retention* (Denver, CO: State Higher Education Executive Officers, 2001), www.sheeo.org.

Box 26: The Second Time Around—Bringing Retired Teachers Back to the Classroom

How do you lure veteran teachers back to the classroom? By coaxing them out of retirement with specialized policies allowing them to work without forfeiting their pensions and other benefits. It's an approach that helps states offset the K-12 staffing shortages while bringing experienced teachers back into the field. Maryland and North Carolina are two of several states where these creative policies were made into law and implemented.

In 1999, the **Maryland** General Assembly enacted a bill to exempt certain retired teachers from an earnings limitation if they are re-employed as classroom teachers, substitute teachers, or teacher mentors. Returning teachers can participate in this program if they commit to working in a low-performing school, a school system designated as a geographic shortage area, or to teach a subject area for which there is a critical shortage of qualified instructors. Currently, the state's board of education recognizes all districts as having critical teacher shortages, so in practical terms, all of the state's K-12 districts are included under the legislation. If hired, retired teachers are subject to all of the benefits and requirements of other employees hired in the same positions.

The following year, the General Assembly adopted a bill permitting certain retired school principals to be exempt from an earnings limitation, under the same provisions as the 1999 bill for retired teachers. A similar bill passed in 2001 stipulated that the returning principals had to have been employed not more than 10 years before the date of retirement and have verification of better-than-satisfactory performance for each year prior to retirement in a position supervising principals.

Each of these bills is effective only until June 30, 2004; the state considers these bills to be a short-term solution designed to address immediate staffing problems. Although bringing retired teachers back to the classroom is an attractive solution, the reality is that in most cases it will be a limited one. Depending on the age or personal interests of the retirees, their second time around in the classroom might be just for one year, or a handful of years, before they leave again.

In **North Carolina**, teachers need only be retired for six months before being allowed to return to the classroom, under legislation similar to Maryland's. The initial bill passed by the North Carolina General Assembly was set to expire in 2002, but as of this writing the Assembly is considering extending the legislation through 2006.

Under this policy, retired North Carolina teachers can return full time at the salary they were drawing upon retirement. In addition to salary, the teacher receives full retirement income and insurance benefits through the retirement system. Specifics of the arrangement—teaching load and some aspects of compensation—can be negotiated between the individual teacher and employer, according to Kathy Sullivan, director of human resource management at the North Carolina Department of Education. During the 2001-02 school year, 583 teachers were taking advantage of this provision.

As in Maryland, legislators and administrators in North Carolina recognize that this policy is a stopgap measure to relieve an immediate shortage. The highly experienced teachers are paid more than new teachers lower on the salary scale, but the increased cost is somewhat offset by not needing to pay benefits. Participating teachers can apply to any district in the state and do not have to return to their former employers, Sullivan said.

To see other incentives in Maryland, go to:

<http://certification.msde.state.md.us/TeachMD/TeachMDIncentives.html>. To see the first rehiring retired teachers' statute, go to: <http://mlis.state.md.us/1999rs/billfile/sb0015.htm> (Senate Bill 15)/.

Sources: Virginia Pilato, Maryland Department of Education; Tom Blanford, formerly of the North Carolina Professional Teaching Standards Commission; and Kathy Sullivan, North Carolina Department of Education.

STEP 2: SUPPORTING NEW TEACHERS

Incentives, hiring improvements, and streamlining staffing help to do one thing. They bring teachers inside the schoolhouse door. But even the best of these “input” approaches will do little to stop the revolving door of teacher attrition unless they are backed by policies and programs that provide professional support for teachers—especially new teachers, teachers in beleaguered schools, and teachers in trouble. If we expect new teachers to perform at the top of their game, they must be welcomed into a supportive professional learning community.

New Teacher Induction Programs

The transition from student teaching to full responsibility for a classroom of one's own is a huge leap. In a study of first- and second-year Massachusetts teachers working in a range of public schools, a group of Harvard researchers led by Susan Moore Johnson discovered what happens all too often to new teachers—they receive little guidance about what to teach or how to teach it. “Left to their own devices, they struggled day-to-day to prepare content and materials. The standards and accountability environment created a sense of urgency for these teachers but did not provide them with the support they needed...[M]any new teachers, who could have succeeded with more support, may leave teaching prematurely because of the overwhelming nature of the work and the pain of failing in the classroom.”¹⁶ The vacancies created by those who leave diminish the teaching and learning environment for their colleagues and students and contribute to significant financial costs and administrative disruptions that are borne by the school districts that must replace them.

Effective teacher induction programs recognize the needs of new teachers by providing special support in the critical first years of teaching. Mentors, more experienced teachers who work with the same content area or grade level, are a key component of strong

If we expect new teachers to perform at the top of their game, they must be welcomed into a supportive professional learning community.

induction programs. By providing regular support, instructional guidance, and encouragement, skilled mentors help novices navigate the difficult early years of teaching as they perfect their teaching skills.

But the quality of mentored induction programs varies widely. Some programs exist in name only with little support and few resources, while others

are cast on the model of the medical residency. As a result, not all teachers who participate in mentored induction programs actually receive mentoring from a skilled veteran who has released time to coach them in the classroom. And, while 33 states have induction policies, only 22 mandate and fund these programs. As the American Federation of Teachers notes, “more than 34 percent of the states—17 states in all—are silent on induction, offering neither policy guidance nor funding.”¹⁷

The American Federation of Teachers has identified five characteristics of effective induction programs:¹⁸

- 1. All beginning teachers participate;**
- 2. The induction programs last at least one year;**
- 3. All beginning teachers are assigned qualified mentors;**
- 4. Beginning teachers have lighter teaching loads; and**
- 5. A summative review of the new teacher’s skills completes the program.**

Box 27: Effective Induction: A Principal’s Perspective

The first years of teaching must be guided by the beginner’s new school community. Serious study of pedagogy and content should continue through this induction period, facilitated by the mentorship and collaboration of more seasoned colleagues. The new teacher exercises the knowledge base of teaching in the most practical of ways—teaching every day. Time for observation of others, peer coaching, and reflection with colleagues is essential.

The first months and years should be focused on learning more about how classrooms become learning communities; how teachers engage students with “big ideas” and sequenced skills; how developmental, cultural, and personal differences among children require different teaching; and how families and community may be involved in school.

Recruiting, hiring, and supporting teachers as they learn how to teach well are at the heart of a principal’s job. Nothing is more important.

Source: Lynn Stuart, Principal, Cambridgeport School, Cambridge, MA, and NCTAF Commissioner.

The Commission has concluded that well-designed and effectively implemented mentoring for new teachers during their early teaching years can significantly reduce teacher shortage problems. There is increasing evidence that beginning teachers who have access to intensive mentoring by expert colleagues are much less likely to leave teaching in the early years.¹⁹ Teachers who have no induction program are twice as likely to leave within the first three years.²⁰ A number of school districts, including the Cincinnati, Columbus,

With an effective mentoring program, new teachers not only stay in the profession at higher rates, they also become competent more quickly than those who must learn by trial and error.

and Toledo school systems in Ohio, and Rochester, NY, have reduced attrition rates of beginning teachers by more than two-thirds—often from levels exceeding 30 percent to rates of under 5 percent—by granting expert mentors release time to coach first-year teachers.²¹

Over a five-year period, California's Beginning Teacher Support and Assessment Program (BTSA) successfully reduced teacher attrition for participating teachers by two-thirds. The BTSA program encourages local school districts, county offices of education, and

colleges and universities to collaborate in providing new teacher induction programs. These programs reported collective retention rates of 96 percent for first-year teachers; over five years, the program reduced the attrition rate to just 9 percent in contrast to 37 percent for new teachers who did not participate in such programs.²² With an effective mentoring program, new teachers not only stay in the profession at higher rates, they also become competent more quickly than those who must learn by trial and error.

The New Teacher Center at the University of California-Santa Clara²³ is a national resource for schools and districts seeking assistance in creating or restructuring their new teacher induction programs. The Carnegie Foundation recently funded this program to support the induction component of the Teachers for a New Era project.

Two state programs supporting mentored induction are profiled in Boxes 28 and 29. Maine's pilot for a statewide program and Ohio's Entry Year Program as implemented in Brunswick, OH.

Based on consistently strong research results and the availability of exemplary models like these, the Commission recommends that all states and school districts vigorously implement and support well-designed teacher induction and mentoring programs.

Mentoring and Support Beyond the First Year of Teaching

Mentoring for new teachers is the first step in building a careerlong community of support for accomplished teaching. Connecticut's Beginning Educator Support and Training (BEST) program (profiled in Box 30) extends new teacher support through the second or, if needed, third year of teaching, when new teachers present portfolios documenting their teaching as a basis for the award of a provisional license, good for five years until a full, professional license, is achieved.

Box 28: Maine Builds an Induction Program

Maine is breaking new ground for its beginning teachers with the development of a comprehensive induction and mentoring initiative, developed by the state's department of education and funded by Title II Higher Education funds. The initiative, Advancing the Agenda for Results-Based Educator Certification, (AARBEC) began in the 2001-02 school year with pilot sites in eight geographic regions that included 44 districts, reaching 140 new teachers and their mentors. Features of the program include formal mentor training, weekly meetings between the mentor and beginning teachers, and professional development designed to meet the needs of new teachers, according to AARBEC project director Judith Cox.

During AARBEC's first year, the project has focused largely on new teachers in Maine's highest need areas (mathematics and science and technology), who were identified in local education agency pilot sites to receive induction services through yearlong regional seminars, workshops, and summer academies. In the 2002-03 school year, 24 additional pilot sites will be selected, and the focus will extend to teachers in all content areas. These local pilot sites will be critical in providing evidence of which mentoring and support activities work most effectively and equitably and show promise for a model to be proposed for statewide implementation at the end of the grant period. Cadres of mentors will provide training at the regional and local levels and will be central to ensuring consistent high quality support and training for new teachers.

According to Cox, mentors are selected based on characteristics such as professionalism, success in the classroom, strong communication skills, and a commitment to supporting beginning teachers. Although standards for mentors haven't been formalized throughout the state, she said, a "major goal" for this academic year is to give the new teacher-mentor relationship "the kind of structure that could survive the grant period." Pay for mentors is uneven—some districts pay mentors on a contractual basis while others pay little or nothing, but the model presented to the state board should provide equity across the state. Mentors are provided with time to attend training and meet with their "mentees" weekly, but in most cases their workloads have not been reduced. That, too, is an area the state proposes to change in the statewide model.

Although the AARBEC program is too new to be able to report outcome data, the initial response from beginning teachers involved in the program has been overwhelmingly positive, Cox said, and mentors report that they, too, have benefited from participating in the program. "It was a two-way street. I learned a lot from my mentee," one new mentor noted. From another: "The beginning teacher had someone to vent to...to get a different perspective from...that led to a more positive classroom environment. It meant less stress for the beginning teachers, and all of that had to help the kids. How can we document that?"

If the documented outcomes of AARBEC reflect its initial success, the state will build on the program model and propose statewide implementation at the end of the grant period. Further, Maine plans to expand its K-16 partnership through active participation of the deans and directors of teacher preparation programs. Higher education associates from the arts and science faculties and schools of education of Maine's public and private institutions will examine ways to provide mentoring and resources in the content areas and pedagogy. A Higher Education Teacher Support Council has also been created to design pilots for training, course work, and support for beginning teachers entering the profession from nontraditional or alternative routes.

Sources: Judith Cox and Judith Malcolm, Maine Department of Education, www.state.me.us/education/aarbec/homepage.htm.

Box 29: Mentoring the Entry-Year Teacher in Brunswick, OH

The need for a strong mentoring and induction program was particularly acute in the Brunswick, OH, school district, where, roughly four years ago, an early retirement program caused an exodus of experienced teachers. Over the past four school years, the district has had to hire nearly 300 new teachers. According to Connie Eskesen, Brunswick schools entry year coordinator, by late 2002 about 70 percent of teachers in the district had less than five years of teaching experience, and of those, 95 percent had been hired to replace teachers who had left their positions.

The teacher support and mentoring program, called "A Partnership in Education," uses a teacher-to-mentor ratio of 15-to-1. Veteran educators are selected, trained, and then released from their teaching duties in order to focus full time on mentoring activities. The mentor's full-time status allows for frequent contacts with the new teachers. Mentors are able to be in an individual teacher's classroom from 25 to 45 times during the school year, providing assistance and guidance. Mentors' responsibilities also include the completion of four formal observations during the year, coaching sessions, and arranging for entry-year teachers to be released from class in order to observe other master teachers.

Ohio has developed a 10-point criteria that the state views as vital to an entry-year teacher's success. New teachers must demonstrate knowledge of: subject matter, student learning, diversity of learners, planning instruction, instructional strategies, learning environment, communication, assessment, professional development, and student support. The mentoring and induction program is structured to provide guidance and support in helping new teachers become competent in each of these areas. A Peer Assistance and Review (PAR) panel, composed of three members of the Brunswick Education Association (BEA) and three administrators, governs the program. The president of the BEA and the assistant superintendent co-chair the PAR group. The panel is responsible for overseeing the program, making (or withholding) employment recommendations for entry-year teachers, selecting and evaluating mentors, and reviewing the progress of the "Partnership in Education" program.

Because of the number of mentees and the level of responsibility involved, educators wishing to serve as full-time mentors go through an extensive application process. Along with an application and résumé, candidates must also submit a recommendation from an administrator and recommendations from three of his or her peers. The PAR panel selects from the applicant pool; qualifications must include a minimum of five years of teaching in the Brunswick system, a master's degree, skill in oral and written communications, outstanding teaching ability, knowledge of classroom management and instructional techniques, and a demonstrated ability to cooperate and develop good working relationships with other professionals.

All mentors in the Brunswick district are trained in the Pathwise program, a mentoring framework created by the Educational Testing Service to assist mentors and entry-year teachers to refine, and reflect on, teaching practices. In Ohio, Pathwise (and support software) had been adapted into a program called Ohio First, and it is part of the preparation leading up to a teacher's Praxis III performance assessment. Districts are free to choose a mentoring program that best meets their needs as long as it is congruent with the Praxis III assessment criteria and domains. According to Eskesen, the induction and mentorship system implemented in Brunswick, and particularly the Pathwise/Ohio First performance and observation aspects of the program, has been a strong contributing factor to the high passage rate on Praxis III assessments for new teachers. Since 1996, Ohio's department of education has trained more than 1,300 individuals with K-12 classroom experience to conduct Praxis III assessments of entry-year teachers. Data for the initial three-year pilot period, covering more than 5,000 teachers, indicates that 91 percent of beginning teachers passed the Praxis III. The state of Ohio is now ready to move beyond the pilot phase for Praxis III, said Eskesen, and will require passage for all teachers seeking to obtain the state's five-year teaching license.

Source: Connie Eskesen, Brunswick School District, OH.

Box 30: Connecticut’s Beginning Educator Support and Training (BEST) Program: Supporting New Teachers Beyond the First Year

Connecticut’s Beginning Educator Support and Training (BEST) program is unusual in that it is a two-year, comprehensive induction program—requiring more from new teachers than most states, but at the same time providing a strong network of mentored support. BEST supports beginning teachers with mentoring, guidance, and reflection on practice during the first two years of their career, while assessing whether they have the necessary skills to teach effectively. In the second year of the BEST program, teachers in most content areas must complete a content-specific portfolio designed to demonstrate their pedagogical knowledge and skills.

Connecticut’s approach to teacher induction and assessment is designed to help beginners learn to gauge student achievement, build and apply subject-specific instructional knowledge, and examine their own work as teachers. Beginning teachers work with a mentor or support team on a regular basis during the critical first year. At least one team member of a new teacher’s support team must be a trained BEST mentor, and at least one should have teaching experience in the appropriate content area. Mentors are required to participate in 24 hours of professional development related to new teacher development, the state’s teaching standards, and the BEST portfolio assessment process. Mentors are also expected to provide instructional support to novices and help them reflect on their practice. In addition to mentors, Connecticut offers subject-specific seminars to beginning teachers designed to familiarize them with the state’s teaching standards and portfolio requirements.

Peer Assistance and Review Programs

Programs like the Rochester, NY, Careers In Teaching program provide support to teachers throughout their careers, as well as an “intervention” program that provides assistance and support for tenured teachers whose professional practice is in jeopardy. This intervention mechanism also has been used as a means of identifying and removing teachers from the classroom when their practice is found to be inadequate and resistant to improvement.²⁴

Peer assistance and peer review are two distinct functions. *Peer assistance* aims at helping new and veteran teachers improve their knowledge and skills by linking new teachers—or struggling veterans—with consulting teachers to provide continuing support through observing, modeling, sharing ideas and skills, and recommending materials for further study. *Peer review* adds a significant element to peer assistance. Consulting teachers conduct formal evaluations and make recommendations regarding the continued employment of participating teachers. In their handbook on this topic, the AFT and NEA state that while peer assistance programs can and do improve teaching quality without the addition of a peer review program, the opposite is not true.²⁵ That is, peer review programs should not operate independently of peer assistance.

The Commission has found that peer assistance and evaluation can be effective strategies for building the profession and the quality of teaching in schools (see Box 31). The Commission strongly recommends that states and districts pursue these strategies to ensure that every child has access to competent, qualified teachers.

As of 2000-01, more than 95 percent of new teachers in the state had to meet the portfolio requirement in order to earn a provisional license, which is the second phase of the state's licensure process. Entry-year teachers passing Praxis I and II are granted a beginner's license; second- or third-year teachers whose portfolios are accepted are granted a provisional license, which can be kept for five years; a full, or professional license, requires a master's degree and must be renewed every five years with a required number of continuing education credits.

Teachers whose performance on the portfolio is judged to be unsatisfactory have the opportunity to go through the portfolio process again during their third year of teaching. If their performance on the portfolio remains unsatisfactory, they are ineligible for provisional licensure and are not able to continue teaching in Connecticut.

Portfolio Requirements

For the second-year portfolio, each teacher must complete several entries that are integrated around one or two units of instruction. These entries include a description of the teaching context, a set of lesson plans, two videotapes of instruction during the unit(s), samples of student work, and written reflections on his or her planning, instruction, and assessment of student progress. The portfolio requirements are highly structured, and second-year teachers are given detailed instructions, in the form of portfolio handbooks, on how to meet them.

Two trained assessors who teach in the same content area as the candidate they are evaluating score the portfolio. At first, the assessors work independently, using a discipline-specific evaluation framework to examine each of the portfolio entries and record evidence that is relevant to the categories. In mathematics, for example, the framework includes mathematical tasks, mathematical discourse, learning environment, analysis of learning, and analysis of teaching. After organizing evidence independently, the assessors work together to summarize evidence that is relevant to a set of guiding questions. In mathematics, the guiding questions include: How appropriate are the mathematical tasks for the instructional goals and objectives? How does the teacher promote student discourse in the classroom? How does the teacher assess student learning? How does the teacher learn from the experience?

To answer the guiding questions, assessors must compare and integrate evidence from multiple parts of the portfolio, which includes integration across different portfolio entries and types of portfolio data. After summarizing the evidence and answering each of the guiding questions, the assessors then use a scoring rubric as they attempt to reach consensus regarding the teacher's overall level of performance. On average, it takes four to five hours for a pair of assessors to score a portfolio. When two assessors assign a nonpassing score to a portfolio or when they cannot agree on a score, it is automatically rescored by another pair of assessors.

Each year in the spring, first-time portfolio assessors attend two days of training. In the summer, new and experienced assessors spend 10 to 12 days benchmarking and scoring portfolios. Many assessors report that the experience of scoring portfolios has significantly influenced their approach to mentoring, as well as their own instructional practice.

Source: Peter Youngs, *State and District Policy Related to Mentoring and New Teacher Induction in Connecticut* (Washington, DC: National Commission on Teaching and America's Future, 2002), www.nctaf.org.

Box 31: School Districts Create Peer Programs To Improve Teaching

Montgomery County, MD, has initiated a peer review program that gives new teachers and struggling veterans the help they need to become successful. It also counsels poor-performing teachers out of the profession. The peer review panel consists of six teachers and six principals; the school administration and the teachers' union lead the program equally in an attempt to change the structure of the profession and give teachers more autonomy in establishing and enforcing teaching standards.

The peer review program and a new evaluation system are being phased in gradually over three years. In its first year, the district hired 20 consulting teachers for the peer review program at a cost of about \$900,000, with 20 more slated for hiring in each of the next two years. By the end of three years every new teacher the district hires will have a consulting teacher. Principals are no longer solely responsible for assessing teachers and have support from teaching colleagues when it is necessary to remove poor-performing ones. To date, this "counseling out" has resulted in 32 district teachers who have chosen to resign rather than be fired.

Since 1988, **New York City's** Peer Intervention Program has provided assistance on a voluntary, confidential basis to veteran, tenured teachers who have received unsatisfactory ratings from their principals or have been warned of possible formal proceedings. Teachers apply for assistance and indicate the instructional issues with which they need help. If approved for intervention, teachers are connected with staff "intervenor"—exemplary teachers with at least 10 years of experience who are chosen through an elaborate screening process. Intervenors serve four-year renewable terms, during which they provide assistance to struggling teachers, receive special staff development on working with adults, and assist in counseling out teachers when it becomes evident that a career change might be a good idea.

The peer assistance and review program in **Toledo, OH**, started in 1981, is the oldest in the country. Known simply as the Toledo Plan, it has two main components—a mentoring program that assists new teachers and an intervention program targeted at teachers experiencing difficulty. All probationary teachers hired for four consecutive semesters are subject to peer evaluation. The process is not confidential, and the evaluations of all interns and second-year teachers are filed with the personnel office. Intervention is mandated for tenured teachers when the building principal and a separate intervention committee recommend professional assistance for a teacher who has been so unsatisfactory that either termination or improvement is imperative. "Consulting teachers" with five or more years of experience discuss supervision, evaluation, and goal-setting with the unsatisfactory teacher, observe and assess teaching performance, establish specific performance goals, and determine when an intervention is no longer necessary.

Sources: Dylan Johnson and Barnett Berry, Southeast Center for Teaching Quality.

STEP 3: PROMOTING TEACHERS CONTINUING PROFESSIONAL GROWTH

Professional Development Is Not Optional

Teachers are the ultimate knowledge workers. They are professionals whose practice must be continually upgraded as the content in their field changes, research offers new perspectives, new technologies become available, and new students enter their classrooms. Recognizing this, states, districts, and the federal government are devoting greater resources to professional development.

But if we are to create schools organized for success, today's professional development must go far beyond adding a few more days or even weeks of in-service training to teachers' calendars. Strong professional development opportunities must be embedded in the very fabric of public education. Just as we should design schools—as learning communities—around the principles of how children learn, so should professional development be structured around how adults learn.

Countless studies confirm the elements that make staff development effective. Strategies 1 and 2 make it clear that strong staff development is an essential component of a robust, evolving profession. Research tells us that professional development that is explicitly focused on the needs of students results in significant changes in practice, engages teachers in analysis of their own practice, and offers opportunities for teachers to observe experts and to be observed by, and to receive feedback from, experts.²⁶ According to the National Staff Development Council, effective staff development consists of the following:²⁷

Learning communities: Educators are organized in learning communities whose goals are aligned with those of the school and district;

Leadership: Skillful school and district leaders guide continuous instructional improvement;

Resources: Resources support adult learning and collaboration;

Data-driven: Disaggregated student data is used to determine adult learning priorities, monitor programs, and help sustain continuous improvement;

Evaluation: Multiple sources of information guide improvement and demonstrate its impact;

Research-based: Educators learn to apply research to decisionmaking;

Good design: Learning strategies are appropriate to the intended goal;

Learning-centered: Knowledge about human learning and change are at the core;

Collaboration: Educators gain the knowledge and skills to collaborate effectively;

Equity: Educators are guided in understanding, appreciating, and holding high academic expectations for all students; they learn to create safe, orderly, and supportive learning environments;

Quality teaching: Educators' content knowledge deepens as they develop research-based instructional strategies, and they are prepared to use various types of classroom assessments to assist students in meeting rigorous academic standards; and

Family involvement: Educators develop the knowledge and skills to involve families and other stakeholders appropriately.

Two Essential Elements: Time and Technology

Protected time—or the lack of it—can be the blessing or bane of teaching. Its essential connection to continuous professional growth is indisputable. Teachers need time to reflect on student learning needs, time to work with colleagues, time to observe, time to plan and collaborate, time to reflect on what is working, and time to take a step back and evaluate. But, as every teacher knows, protected time is the scarcest commodity in the current organization of a teacher's day. National reports have made this point repeatedly, and international comparisons demonstrate that the way time is treated is one of the greatest differences between U.S. teachers and those overseas.²⁸ In most other educational systems, a teacher's learning time is considered part of his or her professional time; it is not regarded as an "extra perk" but as a necessity for doing high quality teaching. In Japan, even though classes are large, teachers are in front of a class for only four hours a day. Teachers in Germany have classroom responsibilities for 21 to 24 hours of a 38-hour workweek.²⁹

Having enough time for teacher learning means that "drive-by professional development" is no longer appropriate for teacher learning. Furthermore, "one-size-fits-all" professional development is as inappropriate for teachers as one-size-fits-all instruction is for students. As in business and the other professions, the best development opportunities provide teachers with "just in time" and "just what's needed" help. Technology can provide teachers access to the targeted professional resources they need, when and how they need them. Online courses, informal support groups, and other network supported resources open the door to professional development resources far beyond what any school or district might be able to offer.

Some states are creating online modules to ensure that all teachers have access to training in areas targeted to the teacher evaluation system. Alabama, for example, has used a portion of its Federal Title II Teacher Quality Enhancement funding for developing and field testing 24 self-instruction modules in both Web-based and CD-ROM formats that address the competencies that constitute the standards for teacher performance in Alabama. Titles include: Planning, Preparing, and Administering Classroom Tests; Aligning Curriculum, Instruction, and Assessment; Becoming a Teacher Leader; Identifying and Teaching To Individual Differences; Developing/Using Rubrics, Checklists, and Rating Scales; Managing Classroom Time and Student Behavior; Selecting Instructional Resources; Using Computers To Enhance Instruction; and Parent Conferencing and Parent Involvement.³⁰

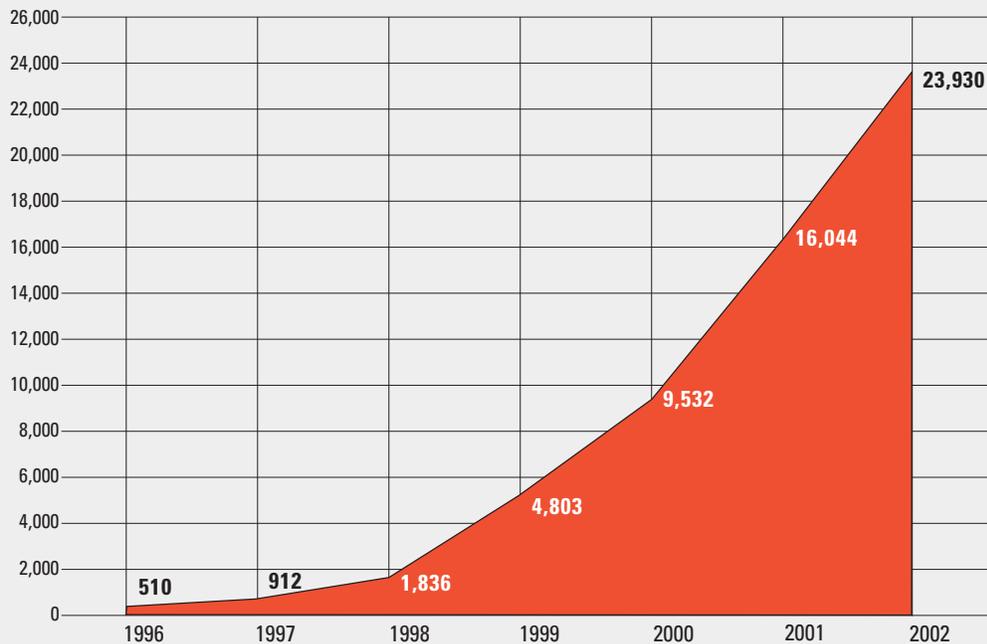
STEP 4: RECOGNIZING ACCOMPLISHED TEACHING

National Board for Professional Teaching Standards

As teachers become more accomplished in their teaching, they should be recognized and given opportunities for new roles based on their expertise. The Commission continues to view the standards developed by the National Board for Professional Teaching Standards (NBPTS) as a benchmark for accomplished teaching. These standards represent a consensus among accomplished teachers and other education experts that has been built on an extensive body of research about what accomplished teachers should know and be able to do.

Most districts and states have come to recognize the certificate as the benchmark of accomplished teaching, most notably since 1996, when the Commission first recommended that National Board Certified Teachers (NBCTs) be recognized as “master teachers” across the country, transcending state jurisdictions. Teachers themselves recognize this achievement, as the number of NBCTs has risen dramatically during that time span, from 510 teachers in 1996 to approximately 23,930 as of November 2002 (see Figure 14).

FIGURE 14
Number of
National Board
Certified
Teachers
1996-2002



Source: National Board for Professional Teaching Standards,
www.nbpts.org/nbct/nbctdir_byyear.cfm.

Interest in national-board certification continues to be strong, as there were 7,886 newly certified NBCTs in 2002, up from 4,727 in 2000. As of December 2002, more than 15,000 candidates have applied for certification in the 24 certificate areas for 2002-03.

To encourage more teachers to pursue national-board certification, states and districts are supporting candidates through a variety of means, including assistance in paying the application fee, offering salary stipends or bonuses through the life of the certificate, and other incentives. As of June 2002, 48 states (and approximately 430 local school districts) have implemented policies to support NBPTS certification.³¹

- **30 states offer fee support**
- **28 states offer license renewal/credits**
- **35 states offer license portability**
- **33 states offer salary supplements**

National Board Certified Teachers are being recognized as resources whose expertise should benefit not just the students in their classes, but their colleagues within their schools and across the profession. The teaching licenses of NBCTs are recognized across 35 states, increasing their ability to relocate without having to obtain a separate license in their new home state. Increasingly, these master teachers are able to extend the reach of their expertise in new roles as mentors, as advisers to teacher education programs, and as curriculum and professional development consultants. But like many accomplished teachers, their hearts may still lie in the classroom, and principals and districts should create flexible staffing arrangements that free these extraordinary teachers for a broad spectrum of teaching and leadership activities.

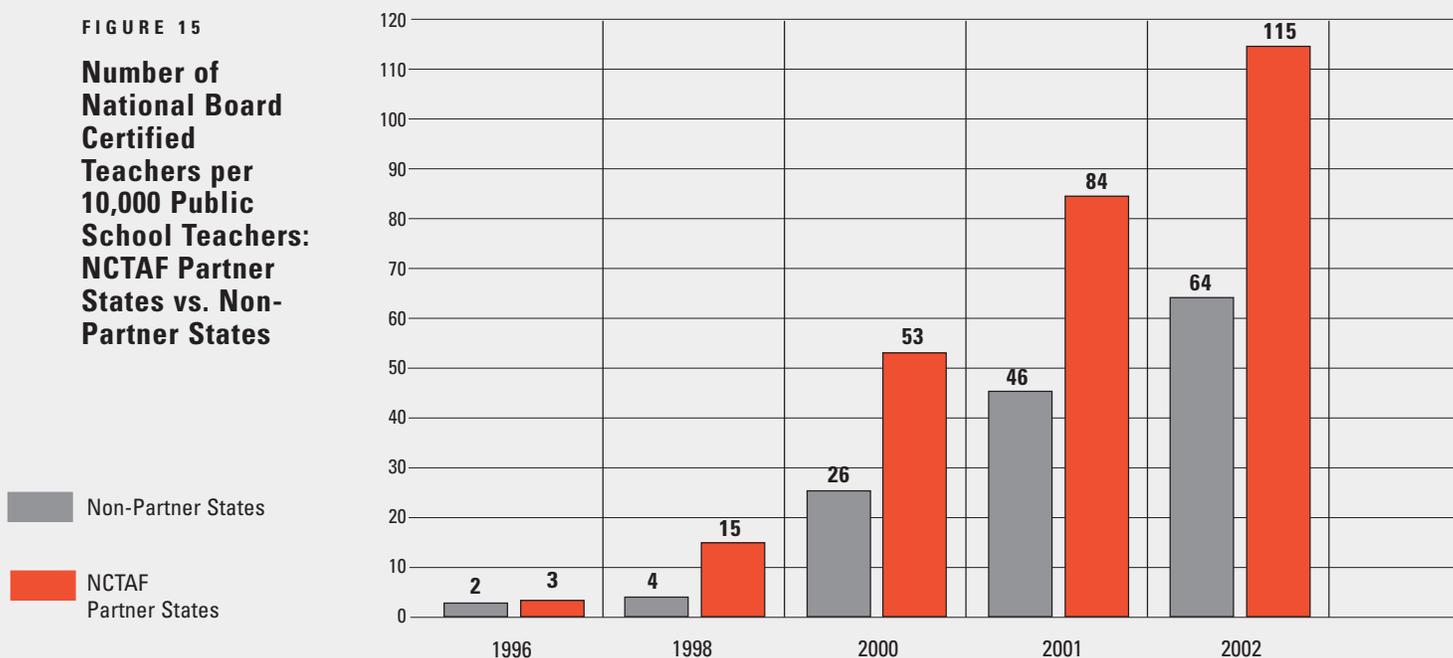
NCTAF partner states have been working hard on implementing teacher quality improvement initiatives, and they are being rewarded with a growing cadre of accomplished teachers. The Commission is encouraged to note that in 2002, with 115 board certified teachers per 10,000 teachers, the percent of certified teachers in NCTAF's 20 partner states is almost double the percentage found in all other states, which average 64 board certified teachers per 10,000 teachers (see Figure 15).

With a critical mass of Board certified teachers, research examining the effects of their teaching is being collected. One study demonstrated that Board certified teachers significantly outperform their peers on 11 out of 13 key dimensions of generally recognized measures of good teaching.³² For example, such teachers were better at understanding why students succeed or fail on a given academic task; engaging students without overwhelming them; anticipating difficulties students might have with new concepts; and improvising when faced with the unexpected. Almost three-fourths of the work samples collected from students taught by Board certified teachers reflected a high level of comprehension compared with only one-third of students taught by teachers who had not achieved this status.

Over the past several years, one-third of all schools of education have become engaged in National Board related initiatives. These include using National Board standards as a resource to redesign the structure of pre-service and graduate programs. Additionally, a growing number of colleges and universities are hiring National Board Certified Teachers to co-teach with faculty, work with student interns, and help focus the work of higher education on instructional strategies that result in better student learning.³³

FIGURE 15

Number of National Board Certified Teachers per 10,000 Public School Teachers: NCTAF Partner States vs. Non-Partner States



Source: NCTAF analysis of National Board for Professional Teaching Standards data
www.nbpts.org/nbct/nbctdir_bystate.cfm

Box 32: Becoming a National Board Certified Teacher

It's a tough process to become a National Board Certified Teacher. Teachers applying for the certificate must demonstrate knowledge and skills through a series of performance-based assessments, including submissions of their students' work, videotapes of teaching sessions with students, and rigorous analyses of their classroom teaching and how well their students are learning. To qualify, candidates need a minimum of three years of teaching experience in a public or private school, with a valid state teaching license for those three years. The current application fee is \$2,300.

The NBPTS was created in 1987 as a response to the landmark President's Commission on Excellence in Education report, *A Nation at Risk*, and to *A Nation Prepared: Teachers for the 21st Century*, published by the Carnegie Forum on Education and the Economy's Task Force on Teaching as a Profession. The professional standards established by NBPTS are based on the knowledge of what teachers should know and be able to do. There are five "core propositions" through which the NBPTS gauges an applicant's level of accomplishment:

1. Teachers are committed to students and their learning;
2. Teachers know the subjects they teach and how to teach those subjects to students;
3. Teachers are responsible for managing and monitoring student learning;
4. Teachers think systematically about their practice and learn from experience; and
5. Teachers are members of learning communities.

Accomplished teachers must acquire and employ a range of instructional methods and strategies, while remaining reflective about their practice and drawing from experience to shape their lessons, according to the NBPTS. The board also weighs the context in which the candidate must teach, noting that "teaching in an Alaskan village exacts demands different from teaching in Chicago. Teachers in both settings, though, blend and adapt their knowledge of teaching with their knowledge of the community in which they work to ensure effective student learning."

As the demands on America's teachers grow more complex, so too does the knowledge base and suite of skills necessary to help every child realize his or her academic potential. The NBPTS, through its work to identify and develop accomplished teaching, has become a prominent voice in the national dialogue on what constitutes teaching mastery, and how it is measured.

Source: National Board for Professional Teaching Standards, www.nbpts.org.

PAYING TEACHERS WELL: ALL ALONG THE WAY

Pay Matters

Pay has an impact on who decides to stay and who goes looking for greener pastures. Compensation systems signal what skills and attributes are valued and what kinds of contributions reap rewards. As a nation we say we value education, but what we pay teachers says otherwise.

The erosion of teachers' paychecks is, in fact, a relatively new phenomenon. At a time when professional occupational opportunities for women were limited, and when women were paid less than men in the work force in general, education used to be considered a well-paid profession for the predominantly female candidates it attracted. In 1970, when many of today's senior teachers entered the work force, female teachers were paid approximately 10 percent higher than the average woman with a four-year college degree. Today, educated women have many more choices, and the salary tables on teaching have been turned. In 1999, the average woman with a four-year college degree made about 10 percent more than the average female teacher, many of whom have a master's degree and are, in fact, better educated than their more highly paid sisters.³⁴

No matter their gender, today's teachers know they are making a financial sacrifice to go into teaching, and the sacrifice grows as they stay in the classroom. Overall teacher salaries are about 20 percent below the salaries of other professionals with comparable education and training.³⁵ In an expanding economy, teacher salaries have not increased at the same rate as salaries in other professions. The \$43,250 average teacher salary in 2001, when accounting for inflation, is only \$827 above what it was in 1992-93, and just \$2,900 more than the average salary recorded in 1971-72—a real increase of only about \$100 per year.³⁶ And this is average—in 36 states the average salaries fall below this figure, with South Dakota ranking last in average teacher salaries, paying its teachers on average \$30,265 in the 2000-01 school year.³⁷ Teacher salaries, when compared with wages of those in other occupations, are not keeping up (see Figure 16).

Why are good people still attracted to teaching in the face of such discouraging economic realities? The reason goes to the dream of every teacher who enters a classroom—the dream of doing something meaningful, of making a difference in the lives of children. Researcher Susan Moore Johnson puts it this way: “Not surprisingly, intrinsic motivation continues to be a significant factor in teacher satisfaction, especially when complemented by external factors such as well-behaved students and supportive administrators and parents.”³⁸ But when, for whatever reason, student success is not achieved and school support wanes, dreams die, and lower salaries, which were at first insulting, become intolerable.

There is substantial evidence that wages are at least as important to teachers in their decision to change jobs as they are to workers in other occupations.³⁹ Teachers are more likely to quit when they work in districts with lower wages, and when their salaries are low relative

to alternative wage opportunities.⁴⁰ The effects of wage differentials are strongest at the start of the teaching career,⁴¹ but the effects of wages on retention persist at higher levels of experience as well. Teachers in high-demand fields like mathematics and science are especially vulnerable to salary differences in their decisions to remain in teaching.⁴² Such fields have especially high opportunity costs for remaining in teaching, given much higher salaries in alternative occupations, and the attrition rates in these fields reflects this reality. Not surprisingly, higher salaries also appear to attract better-prepared and higher quality teachers.⁴³ Student achievement may be associated with increases in teacher salaries as well, along with teacher experience and education, which are rewarded in teacher salary schedules.⁴⁴

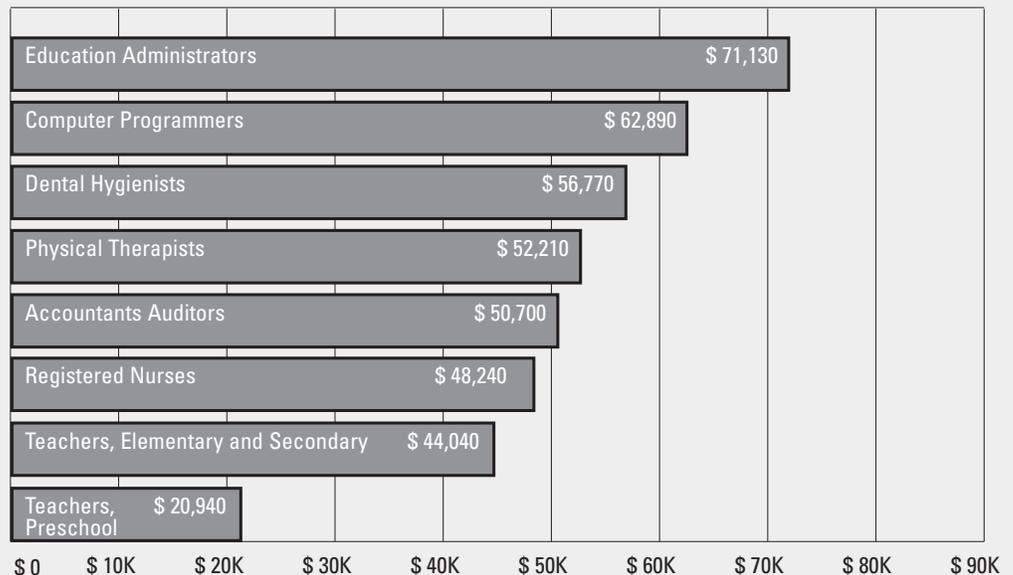
A Better Pay System

Our teachers need not just better pay, but a better pay system. In most cases the teacher salary system is one that has been with us since the early 1920s and is modeled on personnel policies in government and the public sector generally, where employees are paid on a single-salary scale based on years of service and educational levels.⁴⁵ The traditional salary schedule was developed in response to discriminatory past practices and designed to ensure fairness in the system. But it has several limitations: "It has not produced salaries for teachers that are competitive in the current job market given their education, nor does it reflect the complexity of the work they do. In many salary schedules, it takes a very long time to reach the top of the schedule, which undermines teacher recruitment and retention efforts. As typically implemented, the traditional salary schedule does not reward additional skills and knowledge that benefit children.... It does not respond to market forces... nor does it provide incentives for teachers to assume differentiated roles.... Finally, it fails to provide incentives for teachers to acquire skills and knowledge needed to deliver standards-based instruction."⁴⁶

The business community has become a strong supporter of better pay and better pay systems for teachers. In their report, *Investing in Teaching*, the National Alliance of Business,

FIGURE 16

Teacher Salaries Compared with Other Professions (2001)



Source: Bureau of Labor Statistics, Occupational Employment Statistics

in collaboration with the Business Roundtable and the National Association of Manufacturers said, “We must increase teacher salaries to a competitive level commensurate with their status as professionals and the essential contribution of their work and consistent with the new requirements and expectations we have of them. But raising salaries alone is not the answer. We must also institute new staffing/compensation approaches, whatever the name given to them. Some, called pay-for-performance incentives, include pay for knowledge and skills and added pay for improved student achievement.”⁴⁷

To be competitive in today’s economy, length of service must not be the only basis for a pay raise. New teachers, and experienced staff who top out on the pay scale, need opportunities to advance in their careers without leaving teaching for administration or another occupation. In too many cases, moving up for teachers can only happen by moving out.

Pay systems should also create opportunities to start new teachers higher up on salary schedules if they are teaching in shortage fields and in challenging school site or assignment areas. But this should extend beyond entry incentives created to recruit “hard to find” teachers or teachers willing to work in “hard to staff schools.” As these approaches are considered, attention should be given to paying all teachers who are performing well in hard-to-staff schools at a higher rate, not just those who were initially attracted to the schools by incentives.

Teachers should receive additional compensation for taking on additional roles and responsibilities, such as mentoring, peer support, instructional leadership, and other professional development activities. A persistent hurdle for creating differentiated staffing and pay models has been the difficulty in coming to agreement about what constitutes expert teaching and how it can be demonstrated and recognized. Proposals for changing the compensation structure should be built around paying teachers to acquire and deepen valued qualities; by, for example, mastery of accomplished teaching as demonstrated by achieving advanced certifications or by passing the performance assessments of the National Board for Professional Teaching Standards. Because certification by the National Board has come to represent teaching expertise, those who achieve this status are often not only rewarded accordingly but also given new leadership roles in their schools. Many states now reward National Board Certified Teachers (NBCTs) during the life of their certificate, with substantial salary increases or bonuses.

But teachers should not have to wait for National Board certification before receiving recognition for exemplary teaching. A great teacher deserves a great salary. The definition of greatness must and should include an element of improvement in students’ academic results, in addition to other factors such as teaching methodology, teacher advanced certifications, and other traditional marks of teaching excellence.

The unions generally support new pay models, but rightfully demand that teachers must be involved in designing these plans. The American Federation of Teachers has concluded that “school systems must move beyond the ‘rigid hierarchy’ of the traditional salary schedule to compensate teachers as other professionals in our society are compensated.”⁴⁸

Changing the way we traditionally compensate teachers has been one of the Commission’s most difficult recommendations for states and localities to address. While the Commission has not found a “model” system that is fully implemented at this time, two very different approaches are presented in the boxes below. Under the first effort Arizona is pursuing a broad and loosely defined statewide legislative initiative, which allows for diverse compensation plans at the local level (see Box 33).

Box 33: Arizona's Career Ladders and Performance-Based Incentives

For 15 years Arizona has had a statute enabling districts to submit plans for teachers to voluntarily participate in a career ladder program. Although the details are left to the districts' discretion, plans must: establish a multilevel system of teaching; provide opportunities for continued professional advancement; require improved or advanced teaching skills, higher level instructional responsibilities, and demonstration of pupil academic progress; ensure that teacher placement is based on more than one measure of teacher performance; involve teachers in the process; and be supported by a majority of teachers in the district. The program is funded at a total of nearly \$70 million, approximately one-half of which is paid from state funds and one-half from local sources. Teacher bonuses above regular salaries range from \$1,000 to \$10,000, depending on the district. The state put a cap on the program after the original 28 districts submitted plans.

In addition, several years ago the state enacted an Optional Performance Incentive (OPI) Program, which allows individual schools to apply for funds based on several criteria including parent and teacher satisfaction ratings and identified student achievement goals. Schools may choose their student achievement measures. This program, which also has a funding cap, receives approximately \$5 million.

Two years ago the legislature enacted "Education 2000," part of which established a Compensation-Based Incentive Project. Funds for the project come from a 6/10-cent sales tax approved by the voters in Proposition 301. Funds from the sales tax total approximately \$100 million. To receive the funds, districts must create performance-based compensation plans. All of the state's more than 200 districts have received the funds, 40 percent of which must be used for performance-based compensation, 20 percent of which must be used for base teacher salary increases, and 40 percent of which may be used at the district's discretion.

Although there is a wide range of types of plans, most are building-based incentive plans and most have a student achievement component based on the statewide or district student assessments. Performance goals included in more comprehensive plans include: improved graduation rates and student attendance, development of professional knowledge and skills related to the attainment of target student achievement goals, and serving as a mentor or coach for new teachers. The state also had five "Milken" pilots (one school has since dropped out), similar to the district career ladder programs but based at the school level.

Prior to the passage of Proposition 301, nearly 40 percent of Arizona's teachers were a part of some kind of incentive pay program. With the passage of the proposition, nearly 100 percent of Arizona's teachers have the option of participating in one of these endeavors.

Penny Kotterman, president of the Arizona Education Association, participated in the original Career Ladder Program, which she says many association leaders helped to craft. Although the association would have preferred to enlarge and revise the original program, rather than create something new, she is enthusiastic about the possibility of consolidating funding into one system in the future. The association hopes to work with the business community and legislators to create a framework for the Career Ladder and Performance-Based Incentive Program that allows for local variation but achieves greater consistency in decisionmaking across districts. Her goal, she says, is to create a program that provides teachers with real incentives and the kind of professional development they need to do outstanding work in the classroom.

Researcher Allan Odden has noted in his research⁴⁹ that the Arizona Career Ladder program has shown evidence of student achievement gains, but the state has not reviewed this data thoroughly and there is a great deal of debate over this notion. Says Kotterman, "We do have some evidence that the additional professional development, career opportunities, and salary help with retention and teacher satisfaction. The OPI program is well-supported by the teachers that participate, and we know that because they are required to have at least a majority of teachers who support the plan to implement it, and they must conduct teacher satisfaction ratings each year. The jury is still out on whether or not the Prop 301 plans will have a major impact, and they vary so greatly in terms of form and function that it is really too early to tell."

Source: Penny Kotterman, Arizona Education Association, www.arizonaea.org.

The well-received pay-for-performance plan in Denver, CO, (see box 34) illustrates another version of how alternative teacher compensation models can work when teachers, principals, and union representatives sit down together and set mutually satisfactory performance goals for teachers.

Lessons Learned on Teacher Compensation Systems

The American Federation of Teachers (AFT) has suggested that “teacher compensation should not be considered in isolation but instead must be considered as part of an educational system that includes curricula aligned with standards, continuous professional development for teachers and paraprofessionals, and the other necessary conditions to support teaching and learning.”⁵⁰ AFT has recommended that the following resources be part of any compensation system reform:

- **An adequate salary base for all teachers;**
- **Sufficient funding to create and sustain meaningful financial incentives;**
- **Credible, agreed-upon standards and measures of professional practice;**
- **Clear steps for improving professional practice, combined with necessary supports;**
- **Collaboration between teachers and school management on the design of compensation systems that establishes credibility and buy-in of teachers;**
- **Incentives that are available to all eligible teachers; and**
- **Easily understood standards and procedures for awarding teachers additional compensation.**

Box 34: Teacher Pay Matters in Denver, CO

Over the past eight years the Denver Public Schools and their teachers’ union, the Denver Classroom Teachers Association (DCTA), have gradually been restructuring the way teachers are paid.

Their first efforts to change teacher compensation could hardly be called systematic. However, since August 1999, when they entered into a landmark agreement to consider basing teachers’ pay, in part, on the academic achievement of the students they teach, the district and the union have been building a systemwide focus that will address many issues raised by NCTAF. They are poised to present a recommendation for a comprehensive professional compensation package for teachers to the Board of Education and the rank and file members of the DCTA in March 2004.

Currently, teachers in Denver are paid on a single salary schedule. In addition to the traditional structure, the district and the union have agreed to seven, sometimes controversial, compensation components that supplement it:

- 1. Market incentives for teachers who teach English Language Acquisition to Spanish (ELA-S) speaking students.** In place since September 1995, stipends of \$500 for ELA-S are paid to teachers upon the completion of their first year in the program and \$800 for completing additional years.
- 2. Salary freezes for teachers whose performance is unsatisfactory.** Teachers who are evaluated as unsatisfactory through the teacher evaluation process do not receive scheduled increases for experience until they successfully complete a remediation plan.

3. Tuition supplements and extra pay for teachers with National Board certificates. The district pays \$1,000 for a minimum of five teachers who are seeking their National Board certificates, and the union pays an additional \$500 for up to five local members as a way to offset the costs of completing the process. In addition, all teachers who hold the National Board certificates are granted movement to the next educational column on the salary schedule, an amount equal to approximately 7.2 percent of their current salary.

4. Additional pay for new teachers who hold full Colorado teacher's licenses. Teachers who do not hold Colorado licenses, but are employed under the state's Teacher in Residence program, are paid 5.272 percent less than teachers who are fully qualified. These teachers who are not fully qualified do not receive increases for experience until they become fully qualified.

5. Market incentives to attract and retain hard-to-recruit teachers in low-performing schools. These incentives, created by statute for the 2001-02 school year, provide incentives for qualified teachers to fill math, science, English Language Acquisition in Spanish, and special education assignments in schools identified as "low" or "unsatisfactory" by the Colorado School Accountability Rating program. Denver has 91 schools rated as low or unsatisfactory. Incentives were to be a minimum of \$1,500 and could not exceed \$5,000 without administrative approval. In the 2002-03 school year, the state restructured the law so all teachers, not just teachers in hard to recruit areas, were eligible, but restricted eligibility only to teachers in schools with unsatisfactory ratings. Denver has 24 schools currently rated as unsatisfactory.

6. Additional pay for instructional coaches in the district literacy program. Teachers serving as instructional coaches receive stipends of \$5,000.

7. Bonuses to teachers who meet measurable objectives based on improvements in student learning. In 16 pilot schools, 640 teachers are eligible for \$1,500 in bonuses if they meet objectives. This pilot program, begun in 1999, encourages teachers and principals to collaborate in setting two objectives for growth in student learning based on the teacher's assigned instructional discipline. Teachers who meet one objective receive a bonus of \$750. Teachers who meet both receive a bonus of \$1,500. The pilot, which concludes at the end of the 2002-03 school year, is being studied by the Community Training and Assistance Center (CTAC). CTAC's study will be presented in two installments. The first was presented in December 2001. The second will be presented in December 2003. The research study will provide teachers, administrators, the board, and the Denver community with an independent perspective on the work of the pilot.

Largely as an effort to put into practice what has been learned by the Pay for Performance Pilot, the district and the union have established a Joint Task Force on Teacher Salary. This group, composed of teachers, administrators, and community members, is developing a comprehensive teacher compensation system that is based, in part, on student achievement.

A draft of the task force's recommendation will be presented in spring 2003. It will be revised in fall 2003. After receiving the final report on the Pay for Performance Pilot from CTAC, the district and the union will negotiate their recommendation and present a collective bargaining agreement to the Denver Board of Education and the members of Denver Classroom Teachers Association (DCTA) for ratification.

Source: Brad Jupp, Denver Public Schools/Denver Classroom Teachers Association Pay for Performance Design Team, www.denverpfp.org.

ACTION STEPS

To keep our pledge to America's children we must build a high quality teaching profession in which teachers can thrive from induction to accomplished teaching. The nation's continuing challenge is to develop a sustainable and rewarding professional career system for all teachers. The Commission calls on states, school systems, unions, school boards, and business leaders to join us in pledging to improve teacher retention in our schools by 50 percent by 2006, rewarding schools and districts that achieve this objective, and creating incentives for those working toward this goal. To meet this goal we recommend the following strategies for states, districts, schools, and professional organizations:

STAFFING ACTIONS

- Develop data-driven school staffing systems and strategies;
- Create federal, state, and district level incentives to hire teachers in high-need disciplines and areas;
- Use modern technology to streamline teacher recruitment and hiring; and
- Eliminate barriers to teacher mobility by creating portable licensure and make pension systems more uniform across states.

SUPPORTING NEW TEACHERS

- Create and support mentored induction programs for new teachers and create peer assistance programs to provide support for experienced teachers and
- Establish outplacement procedures to deal with teachers who continue to perform below par.

PROMOTING TEACHERS' CONTINUING GROWTH

- Provide flexible professional development opportunities for all teachers.

RECOGNIZING ACCOMPLISHED TEACHING

- Enact incentives and supports for National Board certification in every school district and state; and
- Establish pay incentives that reward teachers for improving their practice and create rewarding leadership positions for accomplished educators.

ALL ALONG THE WAY

- Provide compensation and working conditions for teachers that respect their professional standing in American society.

LINKS IN THE CHAIN OF ACCOUNTABILITY

Action Steps	Who's Job Is It?				
	Federal Government	States	Districts	Schools	Professional Organizations
STAFFING ACTIONS					
Develop data-driven school staffing systems and strategies		✓	✓	✓	
Create federal, state, and district level incentives to hire teachers in high-need disciplines and areas	✓	✓	✓		
Use modern technology to streamline teacher recruitment and hiring		✓	✓	✓	
Eliminate barriers to teacher mobility by creating portable licensure and make pension systems more uniform across states		✓	✓		✓
SUPPORTING NEW TEACHERS					
Create and support mentored induction programs for new teachers and create peer assistance programs to provide support for experienced teachers		✓	✓	✓	✓
Establish outplacement procedures to deal with teachers who continue to perform below par			✓	✓	✓

LINKS IN THE CHAIN OF ACCOUNTABILITY

Action Steps	Who's Job Is It?				
	Federal Government	States	Districts	Schools	Professional Organizations
PROMOTING TEACHERS' CONTINUING GROWTH					
Provide flexible professional development opportunities for all teachers			✓	✓	
RECOGNIZING ACCOMPLISHED TEACHING					
Enact incentives and supports for National Board certification in every school district and state		✓	✓		
Establish pay incentives that reward teachers for improving their practice and create rewarding leadership positions for accomplished educators		✓	✓	✓	✓
ALL ALONG THE WAY					
Provide compensation and working conditions for teachers that respect their professional standing in American society		✓	✓	✓	

A CONCLUDING NOTE

The nation's recently renewed focus on the learning of children has been appropriate, both for them and for our society. Our children are, after all, the ones who will reap America's future. A basic determinant of our success in that effort has now become much clearer. We must have strong lines and structures of accountability for quality teaching.

"Accountability" in education is basically a chain of shared responsibility for learning that links students, teachers, administrators, and policymakers. In recent years, much progress has been made in designing and refining educational standards for student achievement. But until now most of the high-stakes consequences for meeting these new educational standards have fallen on our children. Now, under the No Child Left Behind Act of 2001 (and related provisions of the Higher Education Act), educators at every level are accountable for the quality of teaching in our schools.

There is always a danger, however, that forging a chain of accountability will lead only to more finger pointing and ever-more-urgent top-down mandates. It will take more than promulgating policy in a loud voice to ensure implementation. Staffing our schools with high-quality teachers requires everyone who has a stake in education to become a strong link in the chain. Guaranteeing the quality of teachers just entering the profession ought to be a shared responsibility among states, teacher training institutions, and school districts. A coordinated system of teacher recruitment, quality teacher preparation, clinical practice, induction, mentorship, and continuing professional development, with accountability built in at each stage, is essential for ensuring high-quality teaching for all students.

These are high aims. The task of achieving them cannot be laid at the doorstep of the teaching profession alone. Because we all have a stake in high-quality teaching, we are all, ourselves, accountable for bringing the best people we can to the teaching profession—and keeping them there.

And that, in the final analysis, is what is at stake here. Whether we think of it that way or not, we are betting the future of this country every day on our teachers. We are daily entrusting the dreams of our young people to their teachers. And whether those dreams are delayed or denied—or fulfilled—is ours to decide.

**APPENDIX, NOTES,
AND BACKGROUND
INFORMATION ON
FIGURES AND TABLES**

APPENDIX

Links to Selected National Reports That Build On NCTAF 1996 Recommendations

Achieve Inc., Raising the Bar and Closing the Gap, Report of the 2001 National Education Summit, [www.achieve.org/dstore.nsf/Lookup/2001Annual/\\$file/2001Annual.pdf](http://www.achieve.org/dstore.nsf/Lookup/2001Annual/$file/2001Annual.pdf)

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Alliance for Excellent Education, Every Child a Graduate: A Framework for an Excellent Education for All Middle and High School Students, www.all4ed.org

American Association of State Colleges and Universities, A Call for Teacher Education Reform, www.aascu.org/pdf/acallforteachered.pdf

American Association of State Colleges and Universities, To Create a Profession: Supporting Teachers as Professionals, www.aascu.org/resources/to_create/default.htm

American Council on Education, To Touch the Future: Transforming the Way Teachers Are Taught, www.acenet.edu/bookstore/index.cfm?pubID=67

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American Federation of Teachers, Building a Profession, www.aft.org

BellSouth Foundation, ReCreating Colleges of Teacher Education, www.bellsouthfoundation.org/pdfs/recreate01.pdf

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Education Commission of the States, Professional Standards Boards-State Level, www.ecs.org/clearinghouse/18/25/1825.htm

Education Trust, Dispelling the Myth Revisited, www.edtrust.org/main/documents/DTMreport.pdf

Education Trust, Not Good Enough: A Content Analysis Of State Licensing Examinations, www.edtrust.org/main/documents/k16_spring99.pdf

Education Trust, Interpret with Caution: The First State Title II Reports on the Quality of Teacher Preparation, www.edtrust.org

Educational Testing Service, How Teaching Matters: Bringing the Classroom Back into Discussions of Teacher Quality, www.ets.org/research/pic/teamat.pdf

Educational Testing Service, Teaching the Teachers: Different Settings, Different Results, www.ets.org/research/pic/tt.pdf

National Alliance of Business, Investing in Teaching, www.nab.com/PDF/invest_teaching_report.pdf

National Association of Elementary School Principals, Leading Learning Communities: What Principals Should Know and Be Able to Do, www.naesp.org/llc.pdf

National Association of Secondary School Principals, Breaking Ranks: Changing an American Institution, http://store.principals.org/timssnet/products/tnt_products.cfm?primary_id=2109601&action=long.

National Association of State Boards of Education, Any Time, Any Place, Any Path, Any Pace: Taking the Lead on e-Learning Policy, www.nasbe.org/e_Learning.html

National Association of State Boards of Education, The Full Circle: Building a Coherent Teacher Preparation System, www.nasbe.org

National Board for Professional Teaching Standards, A Distinction That Matters: Why National Teacher Certification Makes a Difference, <http://new.nbpts.org/Press/valstudy.pdf>

National Board for Professional Teaching Standards, The Impact of National Board Certification on Teachers: A Survey of National Board Certified Teachers and Assessors, <http://new.nbpts.org/Press/ResRpt.pdf>

National Council for the Accreditation of Teacher Education, How Professional Development Schools Make a Difference: A Review of Research

National Governors Association, Teacher Supply and Demand: Is There a Shortage?, www.nga.org/cda/files/000125TEACHERS.pdf

National Research Council, How People Learn: Brain, Mind, Experience, and School: Expanded Edition, www.nap.edu/catalog/9853.html

National Research Council, How People Learn: Bridging Research and Practice, www.nap.edu/catalog/9457.html

National Research Council, Testing Teacher Candidates: The Role of Licensure Tests in Improving Teacher Quality, www.nap.edu/catalog/10090.html

Office of Technology Assessment, U.S. Congress, Teachers and Technology: Making the Connection, www.wss.Princeton.edu/~ota/disk1/1995/9541.html.

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Recruiting New Teachers, Inc., A Guide to Today's Teacher Recruitment Challenges, www.rnt.org/publications/toolkit1.pdf

Urban Institute, Absence Unexcused: Ending Teacher Shortages in High-Need Areas, www.urban.org

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U.S. Department of Education, E-Learning: Putting a World-Class Education at the Fingertips of All Children, www.ed.gov/Technology/elearning

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- 7 The terms *teacher turnover* and *teacher attrition* are often used interchangeably. However, in most survey and statistical data *teacher turnover* includes both those teachers who move to new teaching jobs in other schools ("movers") and those teachers who leave teaching altogether ("leavers"), whether for the short term (eventually to return at some later date), or to retire or leave the profession permanently. Therefore, throughout this report we refer to *teacher turnover* as including both movers and leavers. When we use the term *teacher attrition*, we refer specifically to those who are leaving the profession. We believe that *teacher attrition* is problematic for the field as a whole, but turnover is of serious concern to each school that must rebuild the school community each time it loses a teacher, no matter where that teacher may eventually go.
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BACKGROUND INFORMATION FOR TABLES AND FIGURES

Table 1: Progress on NCTAF Indicators of Teaching

Quality and Conditions

NCATE-accredited institutions: The 1996-97 data come from NCATE 10-year report, www.ncate.org; 2000-02 data come from personal conversation with NCATE staff during January 2003. Programs in the process of applying refers to candidates and precandidates for accreditation.

NBPTS certified teachers: The data for 1996-97 and 2000-02 come from NBPTS Web site, www.nbpts.org.

Incentives for NBPTS certification: The data for 1996-97 come from the National Board for Professional Teaching Standards monthly report, June 1996. Data for 2000-02 come from National Board for Professional Teaching Standards monthly report, June 2002.

Professional Standards Boards: Data for 1996-97 come from *Education Week, Quality Counts 1997*, www.edweek.org/reports/qc97/indicators/tables/tea-t3.htm. Data for 2000-02 come from National Education Association, Status of State Boards of Teaching in the United States, 2002.

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Eliminating barriers to teacher mobility: 1996-97 data come from NCTAF *Doing What Matters Most*. 2000-02 data taken from NASDTEC Online: The NASDTEC Interstate Contract 2000-2005. www.nasdtec.org/contract.tpl.

Streamline/modernize recruitment: 2000-02 data come from *Education Week, Quality Counts 2000*, www.edweek.org/reports/qc00/tables/incentives-t1c.htm.

Teacher salaries: Data for 1996-97 come from American Federation of Teachers (AFT) Survey and Analysis of Teacher Salary Trends 2000, reporting 1996 data. Data for 2000-02 come from AFT Survey and Analysis of Teacher Salary Trends 2002, based on 2001 data.

Figure 1: NCTAF Partner States

Figure includes states partnering with the National Commission on Teaching and America's Future as of November 2002.

For Table 2 and Figures 2, 4, 5, 7, 8, and 12

The data for Table 2 and for Figures 2,4,5,7,8,and12 come from analyses of the National Center for Education Statistics' (NCES) nationally representative Schools and Staffing Survey (SASS) and its supplement, the Teacher Followup Survey (TFS). The data presented in the table and figures include teachers from both public and private schools.

SASS/TFS is the largest and most comprehensive data source available on the staffing, occupational, and organizational aspects of elementary and secondary schools and was designed specifically to remedy the lack of nationally representative data on these issues. The U.S. Census Bureau collects the SASS data for NCES from a random sample of schools stratified by state, public/private sector, and school level. The SASS samples are unusually large—about 53,000 teachers from 11,000 schools from all 50 states. There have been four SASS cycles: 1987-88, 1990-91, 1993-94, 1999-2000. Each cycle of SASS includes separate, but linked, questionnaires for administrators and for a random sample of teachers in each school. In addition, after 12 months, the same schools are again contacted, and all those in the original teacher sample who have moved from or left their

teaching jobs are given a second questionnaire to obtain information on their departures. This latter group, along with a representative sample of those who stayed in their teaching jobs, make up the TFS.

The newest TFS (from 2000-01) was not entirely released as of fall 2002, hence, teacher turnover data from that cycle in the figures and Table 1 are preliminary. However, it should also be noted that data on rates of, differences in, and reasons for teacher turnover are highly consistent across the four cycles of the TFS.

Also note that the estimates in Table 2 are calculated at the level of the school. Hence hires and departures refer to those newly entering or departing a particular school. Movers includes transfers among schools within districts. Reassignments within a school are not defined as hires or as departures.

Figure 3: Teacher Turnover is High Compared to Many Other Occupations

The estimates on teacher turnover were calculated from preliminary data from the 2000-2001 TFS. "Movers" refer to teachers who moved to a teaching job in another school. "Leavers" refer to teachers who left teaching altogether. The data on teacher turnover includes those from both public and private schools.

The data on employee turnover from other occupations are an approximate average calculated for the period 1988 to 2002 and drawn from the 2002 Bulletin to Management published by the Bureau of National Affairs, one of the best known sources of national data on rates of employee turnover. The Bureau of National Affairs, a leading research and information service for both business and non-business organizations, has gathered data on employee turnover for over two decades through quarterly surveys of human resource and employee relations executives. Its 1997 fourth-quarter survey, for example, included 230 respondents representing about 300,000 employees from a wide range of organizations. The latter vary in size from those employing less than 100 to those employing thousands and include manufacturing, non-manufacturing, finance, and health care establishments. Employee turnover includes both movers to other organizations and those leaving the occupation altogether.

Figure 4: Beginning Teacher Attrition Is a Serious Problem

The cumulative rates of beginning teacher attrition are calculated using preliminary data from the 2000-01 TFS. Similar results are found using each of the other three cycles of the TFS: 1988-89, 1991-92, 1994-95. It should be recognized that the data shown in Figure 2 are an approximation. The SASS/TFS data do not follow a particular class of newly hired teachers to ascertain how many remain in teaching after five years. Instead, the cumulative loss of beginning teachers is calculated by multiplying together the probabilities of staying in teaching for teachers with experience from one to five years. (i.e., year-one probability of staying in teaching x year-two probability x year-three probability x year-four probability x year-five probability). These cumulative estimates also do not account for those who later re-enter teaching—which has been found to be as much as 25 percent.

Figure 5: Annual Teacher Turnover, 2000-01

The data on school-to-school differences in turnover are from the preliminary 2000-01 TFS. High-poverty schools refers to those with a poverty enrollment of more than 80 percent. Low-poverty schools refers to those with a poverty enrollment at or below 10 percent.

Figure 6: Retirement is Not the Most Significant Factor Driving Teacher Turnover and Figure 11: School Conditions are the Greatest Factor for Dissatisfaction-Related Turnover

These data are from the 1994-95 TFS, because the relevant data from the 2000-2001 TFS were not released as of autumn 2002. "School Staffing Actions" refer to reductions-in-force/lay-offs/school closings/reassignments. "Family or Personal" refers to family or personal moves; pregnancy/child rearing; health; other family or personal reasons. "To Pursue Other Job" refers to pursue another career; to take courses to improve career opportunities in or outside the field of education; for better teaching job. "Dissatisfaction" refers to dissatisfied with teaching as a career; dissatisfied with the school; for better salary or benefits.

Figure 7: America's Teachers Lose About the Same Number of Teachers as They Hire Each Year and Figure 8: Teacher Turnover: A Revolving Door

The data in Figures 7 and 8 are from the 1999-2000 SASS and the preliminary 2000-01 TFS. As in Table 2, the estimates are calculated at the level of the school. Hence hires and departures refer to those newly enter-

ing or departing a particular school. Movers includes transfers among schools within districts. Reassignments within a school are not defined as hires or as departures.

Figure 9: Percentage Annual Teacher Turnover, By Field

The data on differences in teacher turnover by field are from the preliminary 2000-2001 TFS.

Figures 10a, 10b, and 10c: Distribution of Underprepared California Teachers, by Student Poverty Level; by Percentage of Minority Students; and by School-Level API Score, 2000-01

These figures were developed based on an analysis conducted by the Center for the Future of Teaching and Learning, as reported in *Teaching and California's Future: The Status of the Teaching Profession 2001*.

Figure 12: Teacher Preparation Reduces Attrition of First-Year Teachers

The data in Figure 6 are from the 1999-2000 SASS and the preliminary 2000-01 TFS. The figure refers to only those newly hired in the 1999-2000 school year. In the figure, the bottom bar, "Practice Teaching," refers to those who had at least 10 weeks of practice teaching during their preparation.

Figure 13: Steady Growth in NCATE Accredited Institutions and Figure 13a: Number of Institutional Candidates for NCATE Accreditation

This figure was developed from data taken from NCATE Web site www.ncate.org and personal conversations with NCATE staff during January 2003.

Figure 14: Number of National Board Certified Teachers, 1996-2002

This figure was developed from data taken from the National Board for Professional Teaching Standards Web site, December 2002, www.nbpts.org/nbct/nbctdir_byyear.cfm.

Figure 15: Number of National Board Certified Teachers per 10,000 Public School Teachers: NCTAF Partner States vs. Non-Partner States

This figure was developed based on an analysis by NCTAF of state-by-state data on National Board certified teachers from the NBPTS Web site, December 2002, www.nbpts.org/nbctdir_bystate.cfm.

Figure 16: Teacher Salaries Compared to Other Professions (2001)

This figure was developed using data from the Bureau of Labor Statistics in Occupational Employment Statistics, Average Annual Wages, 2001. While the Bureau of Labor Statistics reports the average annual wages in 2001 for "Teachers, Elementary and Secondary School" as \$44,040, slightly lower annual teacher salary figures are reported by the American Federation of Teachers (AFT) and the National Education Association (NEA). The AFT "Survey and Analysis of Teacher Salary Trends 2001" (www.aft.org/research/survey01/trends.htm) reports the average teacher salary in 2001 as \$43,250 (cited in the text of this report on page 134). In "Rankings and Estimates, 2000-2001" (www.nea.org/edstats), the NEA reports the average salary of a U.S. public school teacher for the 2000-01 school year as \$43,335.

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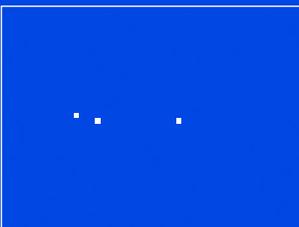
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