Meeting the Highly Qualified Teachers Challenge

The Secretary's Annual Report on Teacher Quality

U.S. Department of Education
Office of Postsecondary Education

2002

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No Child
LEFT BEHIND

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June 2002

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A Message from the Secretary of Education

Just a few months ago, President George W. Bush and the United States Congress issued a compelling challenge to our nation: to ensure that in this great land, no child is left behind. I take that challenge seriously, and I take it literally.

Meeting that challenge will require the hard work and attention of parents, business leaders, concerned citizens, school administrators, and students. But more than anyone, meeting that challenge will require the talent and dedication of America's teachers. As President Bush said recently, "We give our teachers a great responsibility: to shape the minds and hopes of our children. We owe them our thanks and our praise and our support."

As a part of the *No Child Left Behind Act*, Congress issued another challenge to ensure that, by the end of the 2005-2006 school year, every classroom in America has a teacher who is "highly qualified." After all, only with a talented teacher in every classroom will our students have the opportunity to excel. Will our nation meet the "highly qualified teachers" challenge? As this report explains, this challenge will be met only if our state policies on teacher preparation and certification change dramatically.

This report and information provided on an accompanying Web site (www.title2.org) meet the requirements of Title II of the *Higher Education Act*, which created a national reporting system on the quality of teacher preparation. It provides a wealth of new information on teacher quality in the United States. I hope it also serves as a useful guide as jurisdictions work to meet the requirements of the new law by placing a highly qualified teacher in every classroom. Most importantly, I hope it serves as a helpful tool as all of our communities work to ensure that no child is left behind.

Sincerely,

Rod Paige

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Meeting the Highly Qualified Teachers Challenge

Executive Summary

The Title II Reporting System

Under the 1998 reauthorization of Title II of the *Higher Education Act*, the secretary of education is required to issue annual reports to Congress on the state of teacher quality nationwide. *Meeting the Highly Qualified Teachers Challenge* is the inaugural report on this important issue. The 1998 reauthorization also established a reporting system for states and institutions of higher education to collect information on the quality of their teacher training programs. Data collected under the Title II reporting system are available at www.title2.org and include information on state teacher certification requirements, the performance of prospective teachers on state licensure tests and the number of teachers hired on temporary or emergency certificates.

The Vital Role of Teachers in Leaving No Child Behind

As President Bush said recently, "We give our teachers a great responsibility: to shape the minds and hopes of our children. We owe them our thanks and our praise and our support." Because of the vital role that teachers play in the lives of our children, the *No Child Left Behind Act* requires that all teachers in core academic subjects be highly qualified by the end of the 2005-2006 school year.

As part of the new law, Congress defines highly qualified teachers as those who not only possess full state certification but also have solid content knowledge of the subjects they teach. For example, beginning Fall 2002, all new elementary school teachers will have to pass tests in subject knowledge and teaching skills in math, reading and writing, while new middle and high school teachers must pass rigorous subject-matter tests or have the equivalent of an undergraduate major, graduate degree or advanced certification in their respective fields. As this report details, research suggests teachers with strong academic backgrounds in their subjects are more likely to boost student performance.

The Title II reporting system reveals that states have a long way to go in meeting these requirements, largely because of states' outdated certification systems. Many academically accomplished college graduates and mid-career professionals with strong subject matter backgrounds are often dissuaded from entering teaching because the entry requirements are so rigid. At the same time, too many individuals earn certification even though their own content knowledge is weak. States' systems seem to maintain low standards and high barriers at the same time.

A Broken System

The data collected for this report suggest that schools of education and formal teacher training programs are failing to produce the types of highly qualified teachers that the *No Child Left Behind Act* demands. Some highlights from the Title II reporting system:

- Only 23 states to date have implemented teacher standards tied to their respective academic content standards for grades K-12.

- Academic standards for teachers are low. On one popular teacher licensure test used by 29 states, only one state set its passing score near the national average in reading, while 15 set their respective passing scores below the 25th percentile. On math and writing tests, only one state set its passing score above the national average. Not surprisingly, more than 90 percent of teachers pass these tests.

- Forty-five states have developed alternate routes into the profession to bypass some of the burdensome requirements of the traditional system. While performance on licensure tests is higher among alternate route teachers than traditionally prepared teachers in most states, alternate routes are still larded with a variety of requirements.

- States are increasingly relying on teachers who are hired on waivers and lack full certification (a practice that is to be phased out under the new law). Nationwide, 6 percent of teachers lack full certification, but the share of uncertified teachers is higher in high-poverty schools and certain fields like special education, math and science.

Ensuring a Highly Quality Teacher in Every Classroom

Data collected for this report, and outside sources, confirm that states have a long way to go in aligning their certification regimes with the requirements of the *No Child Left Behind Act*. In order to comply with the new law, states and universities may well have to transform their preparation and certification systems, by basing their programs on rigorous academic content, eliminating cumbersome requirements not based on scientific evidence and doing more to attract highly qualified candidates from a variety of fields.

Across the country, there are several promising experiments that recruit highly qualified candidates who are interested in teaching but did not attend schools of education and place them quickly into high-need schools, providing training, support and mentoring. If states are to meet the requirements of the *No Child Left Behind Act* these programs should become models for the future, as states make it less burdensome for exceptional candidates to find teaching positions in our nation's schools.

In order to leave no child behind, we need a highly qualified teacher in every classroom. Clearly, states and universities have much work to do in the years ahead. This report points the way.

Introduction

Background on the Secretary's Report

Few adults are as important in the lives of children as teachers are. Ensuring that all students have access to highly qualified teachers is of paramount importance, especially for disadvantaged children. Fulfilling the promise of leaving no child behind rests on our ability to staff our schools with the best teachers our nation can produce.

Recognizing the vital role that teachers play, Congress recently required the secretary of education to issue an annual report on the state of teacher quality and teacher preparation in the 50 states. This is the first full report submitted to Congress on these topics.

This report contains a variety of data collected under the requirements of Title II of the *Higher Education Act*. Last amended in 1998, Title II requires three annual reports on teacher preparation. First, institutions of higher education are to report various data to states. These data include the pass rates on state certification and licensure examinations of students completing their teacher-training programs.

Second, using reports from institutions of higher education as well as other sources, states are to report the following information to the U.S. Department of Education:

- State certification and licensure requirements for completers of traditional and alternate teacher preparation programs;
- Statewide pass rates on the most recent state assessments of graduates of teacher preparation programs, pass rates disaggregated by institution, and quartile rankings of their institutions based on their pass rates;
- The number of teachers on waivers or emergency and temporary permits;
- Information on teacher standards and their alignment with student standards; and
- Criteria for identifying low-performing schools of education.

Finally, the secretary of education is to report to Congress on national patterns and their implications (the topics of this document and related material found at www.title2.org).

Outline of the Secretary's Report

This report attempts to do more than present the key findings from the Title II reporting system. It also seeks to place these findings within the context of state and federal policy and rigorous scientific research. Here is a brief overview:

Chapter One: "The Quest for Highly Qualified Teachers." This chapter will provide a summary of the sweeping reforms enacted by the *No Child Left Behind Act*, especially the new requirement that all teachers be "highly qualified" by 2005-2006. It also draws upon solid research to answer the question: What do we know about highly qualified teachers?

Chapter Two: "Preparing and Certifying Highly Qualified Teachers: Today's Broken System and Its Alternative." Chapter Two investigates how teacher recruitment, preparation and certification systems in place today impede the development of highly qualified teachers and presents a more promising model for the future.

Chapter Three: "Are States Doing Enough to Produce Highly Qualified Teachers? Lessons from the Title II Reporting System." Chapter Three presents findings from the Title II reporting system, as well as rigorous evidence from other sources, about the "state of the states" vis-à-vis the preparation and certification of highly qualified teachers.

Chapter Four: "Looking Forward: A Highly Qualified Teacher in Every Classroom." The concluding chapter presents some final insights into the state of teacher quality today and offers suggestions for states as they seek to meet the requirements of the *No Child Left Behind Act* to provide a highly qualified teacher in every classroom.

Chapter One

The Quest for Highly Qualified Teachers

The *No Child Left Behind Act* is the most fundamental transformation of federal education policy in at least 35 years. Upon its signing, President George W. Bush said: "Today begins a new era, a new time in public education in our country. As of this hour, America's schools will be on a new path of reform and a new path of results."[1] Congress signaled its support by passing the law by an overwhelming bipartisan majority.

The *No Child Left Behind Act* brings new thinking and new resources to the challenge of educating all of the nation's children. Many of the new ideas and new funds are directed at the issue of improving teacher quality. Here is a snapshot of some of the most important initiatives in this area:

Teacher Quality State Grants: Under the new law, states and school districts will be eligible for almost $3 billion in flexible grants to improve the quality of teachers and principals using research-based strategies. In return, districts must demonstrate annual progress in ensuring that all teachers teaching in core academic subjects are highly qualified.

Reading First: This major new initiative is aimed at helping every student become a successful reader by the end of third grade. The president has requested $1 billion for this program in 2003. Most of these funds will support professional development in research-based reading instruction.

Troops to Teachers and **Transition to Teaching:** Both programs seek to streamline the entry of talented mid-career professionals into the classroom through alternate routes to certification.

Other formula-based programs will also provide substantial resources for professional development, including Title I ($11.4 billion proposed for 2003), Educational Technology State Grants ($700 million) and the English Language Acquisition State Grants ($665 million). Access to information about all U.S. Department of Education teacher quality grants is available through a searchable database at http://www.ed.gov/offices/OESE/TPR/index.html.

In addition, the president's budget for 2003 calls for a major expansion of loan forgiveness for teachers serving in high-poverty schools, from the current maximum of $5,000 to a maximum of $17,500.[2]

Demanding Highly Qualified Teachers

These bold initiatives represent the federal government's serious commitment to improving teacher quality. But perhaps the most dramatic policy shift in *No Child Left Behind* is the new requirement that all teachers of core academic subjects be "highly qualified." What are the consequences of this new requirement? For school districts receiving Title I funds, the consequences are dramatic and immediate. Starting in the coming school year—that is, *Fall 2002*—Title I funds may not be used to hire new teachers in targeted assistance Title I programs who do not meet the definition of "highly qualified." Though final regulations are forthcoming, the Department has indicated that Title I schools using a schoolwide approach may not hire *any* new teachers to teach in the core academic areas who are not highly qualified. Schools using a pullout approach may not use their Title I funds to support teachers who do not meet the definition of "highly qualified." School districts that are out of compliance could lose their Title I dollars.

Non-Title I schools will be affected as well. States must ensure that by the end of the 2005-2006 school year, all teachers teaching in core academic subjects must be highly qualified. In addition, states must ensure that districts make annual progress toward that end.

With such large consequences at stake, understanding the definition of "highly qualified" teachers becomes imperative. It is worth quoting part of the *No Child Left Behind Act*, Public Law 107-110, Section 9101(23). First, it establishes the definition of "highly qualified" for all teachers of core academic subjects:

> The term 'highly qualified'—
>
> **(A)** when used with respect to any public elementary school or secondary school teacher teaching in a State, means that—
>
> > **(i)** the teacher has obtained full State certification as a teacher (including certification obtained through alternative routes to certification) or passed the State teacher licensing examination, and holds a license to teach in such State, except that when used with respect to any teacher teaching in a public charter school, the term means that the teacher meets the requirements set forth in the State's public charter school law; and
> >
> > **(ii)** the teacher has not had certification or licensure requirements waived on an emergency, temporary, or provisional basis;

Therefore, except for charter school teachers, all teachers of core academic subjects must have full state certification or licensure to be considered "highly qualified." But new teachers of core academic subjects face even stricter requirements:

> [The term 'highly qualified'—]
>
> **(B)** when used with respect to—

(i) an elementary school teacher who is new to the profession, means that the teacher —

(I) holds at least a bachelor's degree; and

(II) has demonstrated, by passing a rigorous State test, subject knowledge and teaching skills in reading, writing, mathematics, and other areas of the basic elementary school curriculum (which may consist of passing a State-required certification or licensing test or tests in reading, writing, mathematics, and other areas of the basic elementary school curriculum); or

(ii) a middle or secondary school teacher who is new to the profession, means that the teacher holds at least a bachelor's degree and has demonstrated a high level of competency in each of the academic subjects in which the teacher teaches by—

(I) passing a rigorous State academic subject test in each of the academic subjects in which the teacher teaches (which may consist of a passing level of performance on a State-required certification or licensing test or tests in each of the academic subjects in which the teacher teaches); or

(II) successful completion, in each of the academic subjects in which the teacher teaches, of an academic major, a graduate degree, coursework equivalent to an undergraduate academic major, or advanced certification or credentialing;

Notice that these additional requirements focus entirely on rigorous subject matter preparation, demonstrated either through adequate performance on a test or through successful completion of a major, graduate degree, or advanced credentialing. Next, the law provides further detail on the definition of 'highly qualified' as it applies to existing teachers of core academic subjects:

[The term 'highly qualified'—]

(C) when used with respect to an elementary, middle, or secondary school teacher who is not new to the profession, means that the teacher holds at least a bachelor's degree and—

(i) has met the applicable standard in clause (i) or (ii) of subparagraph (B), which includes an option for a test; or

(ii) demonstrates competence in all the academic subjects in which the teacher teaches based on a high objective uniform State standard of evaluation that—

(I) is set by the State for both grade appropriate academic subject matter knowledge and teaching skills;

(II) is aligned with challenging State academic content and student academic achievement standards and developed in consultation with core content specialists, teachers, principals, and school administrators;

(III) provides objective, coherent information about the teacher's attainment of core content knowledge in the academic subjects in which a teacher teaches;

(IV) is applied uniformly to all teachers in the same academic subject and the same grade level throughout the State;

(V) takes into consideration, but not be based primarily on, the time the teacher has been teaching in the academic subject;

(VI) is made available to the public upon request; and

(VII) may involve multiple, objective measures of teacher competency.

Again, the focus of the law is on "content knowledge." Congress has made it clear that it considers content knowledge to be of paramount importance. The law also implies, through these detailed definitions, that Congress suspects that current state certification systems are not doing enough to ensure preparation in solid content knowledge—otherwise the definition could have ended after subparagraph (A). As we will learn, from both research and the Title II data, these concerns are well founded.

What We Know about Highly Qualified Teachers

By adding strict new mandates about "highly qualified" teachers, Congress indicated the importance of teacher quality in improving the nation's schools. By focusing its definition of "highly qualified" teachers on preparation in content knowledge, as opposed to components such as pedagogy or teaching practicums, it expressed its opinion of what matters most. Is teacher quality an important indicator of school success? Does content knowledge relate to academic achievement? Aren't other things, like methods courses or practice teaching, essential as well? Let us turn to the scientific evidence for guidance.

Evidence That Good Teachers Matter

For many years, research has found teacher quality to be a key determinant of student success. Large-scale studies suggest that teacher quality is more closely related to student achievement than other factors, such as class size, spending and instructional materials. As part of his landmark 1966 study, *Equality of Educational Opportunity*, sociologist James Coleman noted that among African American students, there was a correlation between student achievement and teachers' scores on vocabulary tests. Among students generally, however, Coleman found no discernable pattern.[3]

But Coleman's evaluation was aggregated at the school level, meaning important variations among individual teachers and classrooms within the same school were not measured. In recent years, a new approach to measuring teacher quality has been developed, focusing on the value that teachers provide to individual students in their classrooms. By testing students annually and comparing the growth of individual students and individual classrooms, researchers can pinpoint the effect teachers are having on their students. Because the analysis is focused on learning gains, and not absolute test scores, the influence of background characteristics like socioeconomic status can be parsed out. Not surprisingly, researchers have found that some teachers are much more effective than others.

Value-added measures also permit researchers to examine the cumulative effects a string of high- quality versus low-quality teachers can have on student performance over several years. Some of the best research on this subject has been done by statistician William Sanders in Tennessee. The state of Tennessee evaluates all of its teachers based on the learning gains individual students make while in their respective classrooms. Using this information, Sanders categorized the state's teachers into quintiles based on the performance of their students. As part of his research, he tracked two comparable sets of third-graders: one group which had three successive teachers from the top quintile, and the other that had three successive teachers from the bottom quintile. By the end of fifth grade, the set with the least effective teachers posted academic achievement gains of 29 percent, compared to gains of 83 percent by the set assigned to the most effective teachers—a gap of more than 50 percent. Moreover, Sanders found that the effect was both additive and cumulative, denying students the full opportunities they might have had to acquire an excellent education.

Similar studies in Boston and Dallas have confirmed these findings. According to some estimates, the difference in annual achievement growth between having a good teacher and having a bad teacher can be more than one grade level of achievement in academic performance. The implication is that not only does teacher quality matter—it matters a lot. Students unfortunate enough to face several bad teachers in a row face devastating odds against success.[4]

Evidence of the Importance of Verbal Ability and Content Knowledge

Ever since the publication of the Coleman report, studies have consistently documented the important connection between a teacher's verbal and cognitive abilities and student achievement. Teachers' verbal ability appears to be especially important at the elementary level, perhaps because this is when children typically learn to read. Stanford University economist Eric Hanushek, who has conducted extensive academic literature reviews on teacher quality, said, "[P]erhaps the closest thing to a consistent conclusion across studies is the finding that teachers who perform well on verbal ability tests do better in the classroom [in boosting student achievement]." [5]

More recent studies suggest that subject-matter background can also have a positive effect on student performance. Research has generally shown that high school math and science teachers who have a major in the subjects they teach elicit greater gains from their students than out-of-field teachers, controlling for student's prior academic achievement and socioeconomic status. These same studies also suggest that possessing an undergraduate major in math and science has a greater positive effect on student performance than certification in those subjects.[6] Research has not always produced consistent results on the effects of teachers having a master's degree, but in the better designed studies the effects are weak, at best.[7]

Yet even as research demonstrates the importance of content knowledge, new data from the National Center for Education Statistics (NCES) suggests that too many students, especially in the middle-school grades, have teachers who are not fully qualified in their subject areas. For example, in 1999-2000, 15 to 22 percent of middle-grade students in English, math and science had teachers who lacked a postsecondary major, minor or certification in the subject taught. In biology and life science, physical science and English as a Second Language (ESL) or bilingual education classes, the data are even more troubling. Between 30 and 40 percent of middle-grade students had teachers who lacked a major, minor or certification in these subjects.[8]

The Evidence on Pedagogy and Education Degrees

This report shows that verbal ability and content knowledge of teachers have been linked to higher student achievement, but what about other attributes, like knowledge of pedagogy, degrees in education or amount of time spent practice teaching? After all, these are the requirements that make up the bulk of current teacher certification regimes.

There is a great deal of contention surrounding the evidence on these components, with some studies linking these requirements to improved student achievement. However, the quality of many of these studies has been called into question. A report by the Abell Foundation evaluated approximately 175 studies spanning the past 50 years, all of which purported to demonstrate a connection between certification and improved student outcomes. The analysis found that virtually all of these evaluations were not scientifically rigorous, did not use generally accepted statistical techniques to gather data and relied too much on anecdotal evidence.[9]

Scientific evidence also raises questions about the value of attendance in schools of education. In a recent study, economists Dan Goldhaber and Dominic Brewer found that while certified math and science teachers outperformed those who lack certification (as measured by their students' achievement), there was no statistical difference in performance between teachers who attended conventional training programs and received traditional teaching licenses versus those who did not complete such programs and were teaching on emergency or temporary certificates.[10]

Conclusion: The Challenge of Highly Qualified Teachers

As this chapter made clear, the federal government is serious about raising the quality of the nation's teaching force. And because the best available research shows that solid verbal ability and content knowledge are what matters most, it is clear that Congress wrote its definition of "highly qualified teachers" wisely.

What are the implications of this new law for state policy? How can states design preparation and certification systems that produce enough highly qualified teachers for every classroom? These and other questions will be answered in Chapter Two.

Chapter Two

Preparing and Certifying Highly Qualified Teachers: Today's Broken System and Its Alternative

Introduction

While Chapter One examined the research on highly qualified teachers, Chapter Two focuses on systems of teacher preparation and certification. How can states make it more likely that every child will have a highly qualified teacher in his or her classroom? Are today's standard certification systems helping or hurting? The chapter begins with a brief history of teacher preparation and certification and then examines the effectiveness of today's system. Finally, this chapter proposes a more promising model for preparing and certifying tomorrow's teachers.

A Brief History of American Teacher Preparation

Briefly charting the history of teacher preparation is instructive in learning how the United States arrived at its current model. While state-approved teacher preparation programs are the norm throughout the nation today, this has not always been the case. It was only after the Civil War that most states required teachers to pass a locally administered examination to receive a state certificate, typically including a test in basic skills, but also in U.S. history, geography, spelling and grammar. Still, the state role in teacher preparation was kept to a minimum, with no uniform approach to teacher certification applied in the 19th century. Around the turn of the century, however, relatively small teachers colleges and departments of pedagogy at some of the nation's universities were converted into undergraduate and graduate schools of education. These revamped institutions developed specializations in fields such as school administration, curriculum development and educational psychology.[11]

As historians David Angus and Diane Ravitch have argued, the creation of schools of education marked a turning point in the history of American education. The formal establishment of schools of education had two reverberating effects: the division between classroom teachers and teacher educators, and the formalized split between pedagogy and the traditional disciplines of the liberal arts and sciences.

Whereas history, English and science departments stressed the importance of subject-area knowledge for teachers, the new leaders of the teaching profession in schools of education and teacher colleges stressed the importance of courses in pedagogy and passing related tests. Authority over teacher certification was increasingly focused at the state level, and its substance was increasingly focused on the completion of teacher education programs. This replaced the former system, which had emphasized local certificates and the passing of subject-matter examinations. Leaders in the teaching profession sought to boost the professional image and prestige of teaching, seeking to elevate it to the status of law or

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medicine, by controlling entry into the teaching ranks through increasingly prescriptive state laws and regulations. Did the reforms improve the prestige of the profession and the quality of the teaching force? Judging by today's data, it seems they did not.[12]

Today's System: High Barriers, Low Standards

As noted in Chapter One, research emphasizes the importance of recruiting teachers with solid content knowledge and verbal ability, but today's certification system seems to work against the recruitment of these individuals. Of course, many teachers are smart and know their subjects well, but our system allows too many poorly qualified individuals into the classroom while creating barriers for the most talented candidates.

While 99 percent of teachers possess bachelors' degrees and 52 percent have graduate degrees, according to recent data from the National Center for Education Statistics (NCES), only 38 percent have an undergraduate or graduate degree in an academic field outside of a school of education (Table 1). Even at the high school level, where most of the curriculum is focused on the academic disciplines, a full third of teachers in the United States lack a degree in an academic field.[13]

Table 1: Percent of full-time public school teachers who majored in various fields of study for a bachelor's or graduate degree, by selected school and teacher characteristics: 1998

School characteristic	Academic field	Subject area education[1]	General education	Other education[2]
All targeted public school teachers[3]	38	18	37	7
School instructional level				
Elementary school	22	9	58	11
Middle school	44	22	27	7
High school	66	29	5	1
Combined	55	35	8	2
Teaching experience				
3 or fewer years	50	11	37	2
4 to 9 years	41	16	39	5
10 to 19 years	32	20	37	11
20 or more years	36	20	36	8

[1]Subject area education is the teaching of an academic field, such as mathematics education.

[2]Examples of other education fields are special education, curriculum and instruction, and educational administration.

[3]Targeted public school teachers were full-time public school teachers in grades 1 through 12 whose main teaching assignment was in English/language arts, social studies/social sciences, foreign languages, mathematics, or science, or who taught a self-contained classroom.

Note: Percents are computed across each row but may not sum to 100 because of rounding. Major fields of study were selected in the order of academic field, subject area education, other education and general education.

Source: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Teacher Survey on Professional Development and Training, 1998.

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The same data reveal that the remaining 62 percent of teachers have degrees in education-related subjects, typically obtained through schools of education and teacher-training programs. Historically, research suggests that students enrolled in schools of education are not as academically accomplished as other university students. One such study, conducted by *Education Week*, tracked the top quartile of 1992-1993 college graduates, and found that just 14 percent entered some type of teacher-preparation program, only 12 percent actually taught, and a mere 11 percent stayed in the teaching profession through 1997.[14]

Similar data from NCES also suggest that schools of education fail to attract the best students. For example, among college graduates who majored in education, just 14 percent had SAT or ACT scores in the top quartile, compared to 26 percent who majored in the social sciences and 37 percent who majored in mathematics, computer science, or the natural sciences. In contrast, 25 percent of uncertified teachers scored in the top quartile on these tests, as did 33 percent of private-school teachers (Figure 1).[15]

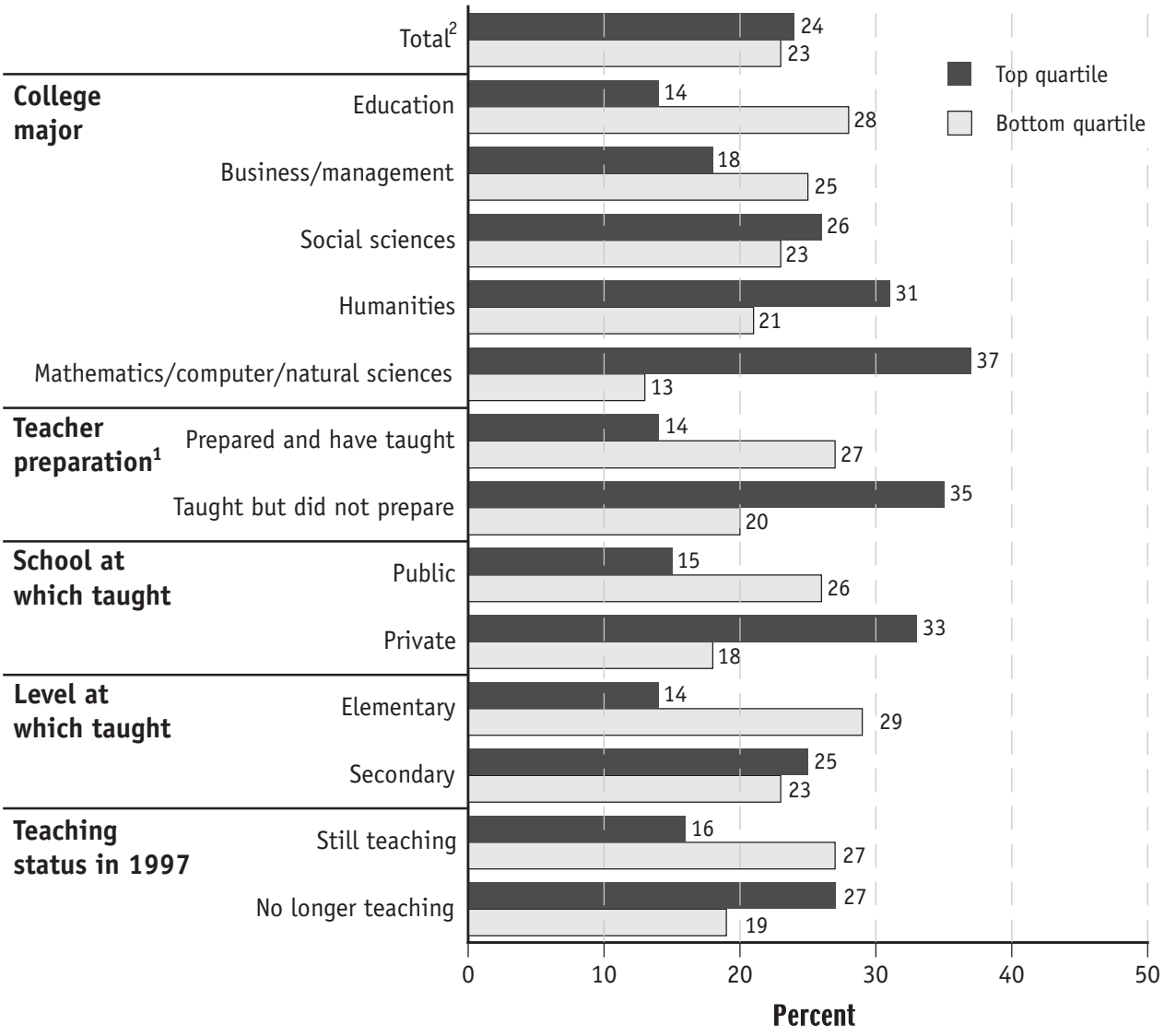
Why Teacher Training Programs Fail to Attract the Best Students

Why are the best students the least likely to enter traditional teacher-training programs? There are several possible answers. Low pay compared to other high-skilled professions might be one answer. However, compensation in most private schools is lower than in public schools—yet nonetheless, on average, private schools are more effective at recruiting top students into teaching than public schools, despite the generally lower pay offered by these schools.

Some of the difficulty with attracting the best students may lie with the rigidity of training programs and at least partial dissatisfaction among teachers with the content of such programs. As University of Virginia assistant professor Frederick Hess observes, other professions that employ highly qualified recent college graduates, such as management consulting or journalism, use a flexible approach to hiring, recruiting students from a variety of fields. However, schools of education firmly control the entry process into teaching, as most states require completion of a number of education school courses in order to qualify for certification.

Also, there are significant opportunity costs associated with teaching that simply do not exist in other professions. Because the typical undergraduate education major requires several semesters of courses, prospective teachers must decide relatively early in their academic careers that teaching is the field they wish to pursue. If they realize during their junior or senior years that they wish to enter teaching, candidates typically have to enroll in one to two years of graduate study and spend thousands more dollars on tuition, books, supplies and other expenses.

Figure 1: Academic qualifications: percentage of 1992–93 college graduates in the top and bottom quartile of SAT or ACT scores by selected characteristics: 1997



1. Graduates classified as "prepared to teach" had completed a student-teaching assignment or earned a teaching certificate.

2. Top and bottom quartiles in this analysis do not equal 25 percent because SAT and ACT scores were not available for some graduates.

Note: Excludes 1992–93 bachelor's degree recipients who had taught before receiving their bachelor's degree.

Source: U.S. Department of Education, NCES. Baccalaureate and Beyond Longitudinal Study, "Second Follow-up" (B&B:1993/1997), Data Analysis System.

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As Hess points out, candidates must sacrifice the opportunity to work while attending classes, endure additional certification requirements if they attempt to teach outside of the state in which their training program is located and must practice teach for extended periods of time with little or no pay. This process imposes significant costs on highly qualified candidates with a variety of career options. Other fields that may offer more generous compensation do not erect these added barriers, which only drive up the costs associated with teaching. These barriers to entry are particularly onerous for many highly skilled minority candidates with other career possibilities, who may be discouraged from teaching because of the financial costs of enrolling in a preparation program.[16]

Furthermore, the teacher compensation system discourages interested candidates from entering teaching. Teacher pay scales negotiated at the local level are typically based on seniority and the number of credentials that teachers possess. While beginning employees in every profession typically earn less than their more experienced colleagues, employees in nearly every other field often qualify for bonuses, based in large measure on their job performance. Moreover, employees in these professions often have more opportunities to advance based upon hard work and exceptional performance. Unfortunately, teaching does not reward performance, innovation or creativity; teachers gradually move up the pay ladder year by year, regardless of what takes place in their classrooms.

The most talented prospective teachers might also be discouraged by the lack of rigor of the courses offered in many schools of education. A majority of graduates of schools of education believe that traditional teacher preparation programs left them ill prepared for the challenges and rigors of the classroom. According to NCES data, fewer than 36 percent of new teachers feel "very well prepared" to implement curriculum and performance standards, less than 30 percent feel prepared to integrate technology into instruction and less than 20 percent feel prepared to meet the needs of diverse students or those with limited English proficiency.[17]

In sum, at the same time that states should be seeking teaching candidates with solid content knowledge and high verbal ability, our system of teacher certification is thwarting the aspirations of our most talented individuals—while at the same time maintaining low academic standards and failing to prepare teachers for the reality of the classroom. There must be a better way.

Alternate Routes to Certification: A Model for the Future

An interesting innovation has developed in recent years that points the way toward a more promising system of teacher preparation and certification. Alternate routes to certification, as opposed to the traditional routes offered by colleges of education, streamline the process of certification to move qualified candidates into the classroom on a fast-track basis. Interested individuals must pass the same certification or licensure exams as their traditionally certified peers, but many of the other requirements—course work in education philosophy or methods, pedagogy, practice teaching, etc.—are often shortened or

waived entirely. Many times, extra support is given to these new teachers once they are in the classroom. By reducing the barriers to entry, these programs enlarge the pool of potential teachers. Thus, an interesting question is raised: Can states boost the quantity and quality of teachers at the same time? As we will see, the answer appears to be yes.

One argument made against alternate routes is that they attract teachers who do not intend to stay in teaching for the long term. Yet initial evidence suggests that retention rates for teachers certified through alternate routes are higher than for teachers who enter the classroom through traditional routes. Nationwide, about 85 percent of teachers certified through alternate routes remain in the classroom five years later, demonstrating that truncated training programs with highly qualified candidates do not result in those same teachers leaving the profession early in their careers.[18]

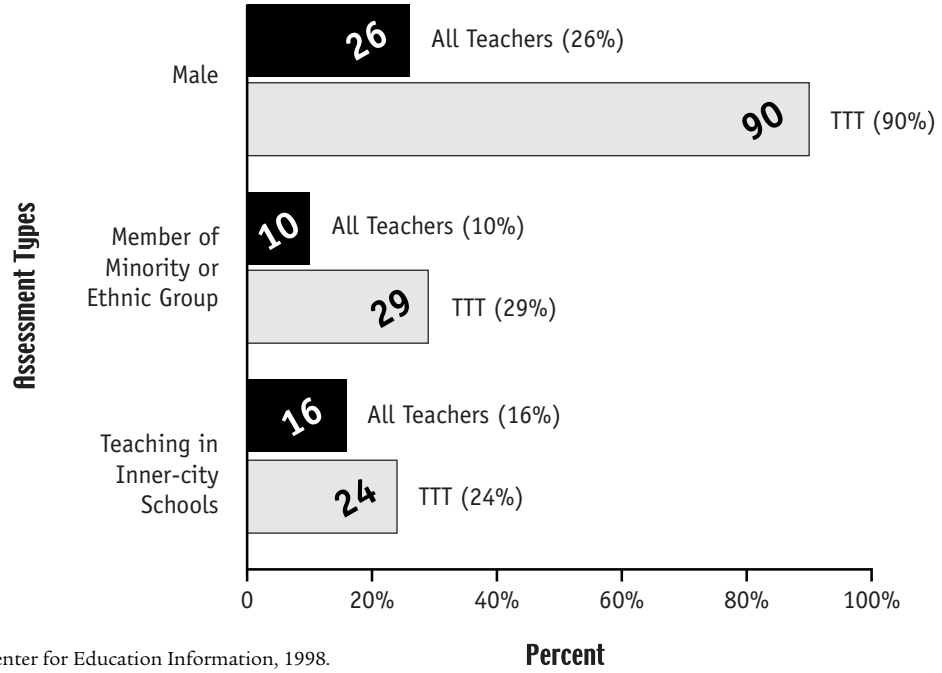
In many states, alternate routes are popular career choices among candidates from racial or ethnic minority groups. In Texas for example, while 91 percent of all teachers are white, 41 percent of teachers entering through alternate routes are from minority groups. Moreover, retention rates are higher for African American teachers who entered teaching through an alternate route as compared to their traditionally certified peers. Teachers certified through alternate routes in Texas are also more likely to pass the state's initial certification exam on the first try.

In California, just under a third of the state's new teachers in 2000-2001 were teachers certified through alternate routes. Ethnic minorities compose about 46 percent of this group of teachers, compared to approximately 25 percent of the overall teacher force. In addition, between 25 and 40 percent of graduates from the state's traditional teacher-training programs do not take teaching jobs in the state's schools, while about 87 percent of teachers who are hired as interns (the state's most typical alternate route) remain in the profession after three years.[19]

There are several well-known programs nationwide that recruit highly qualified candidates using alternate routes, including the Troops to Teachers program. This program provides financial assistance and training to retiring military personnel and helps to place them in local school districts, thus providing a new source of teachers to schools in 20 states.

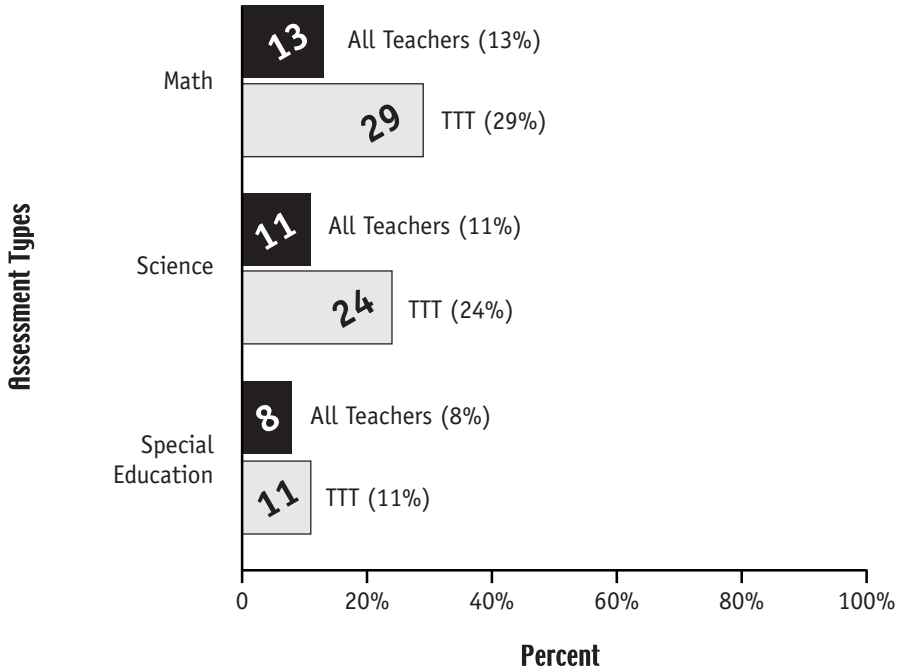
According to the National Center for Education Information, teachers certified through alternate routes bring diversity to the classroom and are more apt to take challenging assignments. Ninety percent of teachers in the Troops to Teachers program are male, compared to just 26 percent in the overall teaching force. About 30 percent of teachers in the program are from a minority or ethnic group, compared to just 10 percent overall. These teachers are also placed in high-demand subject areas, with 29 percent teaching math and 24 percent teaching in the sciences, while 11 percent were special education teachers. About 25 percent were teaching in inner-city schools, compared to 16 percent overall nationwide (Figures 2 and 3).[20]

Figure 2: Characteristics of troops to teachers (TTT) compared with the overall teaching force: 1998



Source: National Center for Education Information, 1998.

Figure 3: Subjects taught by troops to teachers (TTT) versus all teachers: 1998



Source: National Center for Education Information, 1998.

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Another popular and successful program associated with alternate routes to teaching is Teach For America (TFA). This nationwide nonprofit organization recruits accomplished college graduates without formal backgrounds in education to teach in high-need urban and rural schools. Candidates apply to the program and, if selected, attend a summer training course before being placed in school districts across the country. Teach for America and the host school districts provide new teachers with support during the two-year program, after which some teachers return to graduate school, transfer to other professions or continue teaching. Since its inception in 1989, TFA has placed more than 8,000 talented young men and women in our nation's neediest schools. This organization is well known for the quality of the teachers it produces and has garnered the support of First Lady Laura Bush and the American Federation of Teachers and several other groups concerned with improving the quality of our nation's teaching force.

Have teachers involved with the Teach for America program been successful in boosting student outcomes? The initial evidence suggests they have. One of the largest districts using TFA teachers is the Houston Independent School District, which has been involved with the program since 1993. A recent study conducted by the Center for Research on Education Outcomes evaluated the performance of TFA teachers in Houston from 1996 to 2000. The study examined the effect of the average TFA teacher on student test scores compared to the average non-TFA teacher and compared the best and worst TFA teachers to the best and worst non-TFA teachers.

The evaluation found that, on average, across different grades and subjects, the effect of a TFA teacher was always neutral or positive. The differences between the average TFA teacher and the average non-TFA teacher are generally not statistically significant. However, TFA teachers show less variation in quality than non-TFA teachers. The evaluation reveals the district's highest performing teachers are consistently TFA teachers, while the lowest performing teachers are consistently not TFA teachers.[21]

The evidence in Houston indicates that TFA teachers are at the very least no worse than non-TFA teachers, and there is ample evidence suggesting they may in fact elicit greater academic gains from their students than non-TFA teachers.

In addition to national and state-level approaches, some local school districts are taking matters into their own hands by developing their own alternate route programs. Elk Grove Unified School District, located in northern California, is an encouraging example. Enrolling just 18,000 students in 1987, the district now enrolls close to 50,000 and is expected to grow to 80,000 students by 2010. In order to keep up with its surging growth, the district has had to recruit teachers in unconventional ways. Since 1993, Elk Grove has partnered with San Francisco State University to run the Teacher Education Institute (TEI), preparing teachers from noneducation backgrounds to teach in the district.

While the state's typical teacher-training route can take up to two years to complete before students are able to lead their own classrooms, TEI interns take their course work during the afternoon and night for a period of 11 months, allowing them to complete a teaching practicum and serve as substitute teachers under the direction of mentor teachers and school administrators. Instruction is based on proven research-based methods and the state's academic standards. Since its inception, the program has trained 400 teachers and has a retention rate of more than 96 percent, and the performance on state tests by TEI interns exceeds those of other teachers.[22]

The lesson for policymakers and the public is that traditional teacher-training programs do not necessarily produce graduates with superior teaching skills, while at the same time they impose significant costs and challenges on prospective teachers, especially the most talented candidates.

Putting It all Together: A New Model for Teacher Preparation and Certification

In summary, we have found that rigorous research indicates that verbal ability and content knowledge are the most important attributes of highly qualified teachers. In addition, there is little evidence that education school course work leads to improved student achievement. Furthermore, today's certification system discourages some of the most talented candidates from entering the profession while allowing too many poorly qualified individuals to teach. Finally, alternate routes to certification demonstrate that streamlined systems can boost the quantity of teachers while maintaining—or even improving—their quality.

With these facts in mind, what would a rational teacher preparation and recruitment model look like? It would have the following characteristics:

1) High Standards for Verbal Ability and Content Knowledge. Developing challenging assessments in these areas and maintaining high passing scores would be one obvious way for states to ensure high standards for teachers. Ideally, these assessments would be linked to student academic content standards. Requiring content area majors for prospective teachers is another approach.

2) Streamlined Certification Requirements. Other regulations would be kept to a minimum. Attendance at schools of education would be optional; if teacher-training programs based in schools of education proved valuable to teachers and their employers, then demand for such programs would remain. Unpaid practice teaching would not be required (but would be optional), and any other bureaucratic hurdles would be eliminated.

In sum, a model for tomorrow would be based on the best alternate route programs of today.

Highly Qualified Teachers and Standards-Based Reform

A few final points on this new model: First, it fits nicely into the larger context of standards-based reform. This reform movement—embodied by the *No Child Left Behind Act*—is based on what former Secretary of Education Lamar Alexander calls the great "horse trade." Schools are accepting greater accountability for results in return for greater flexibility and control. Therefore, schools must focus on student academic standards with a laser-like intensity and face stiff consequences for lack of progress for all or some of their students. But at the same time, schools will enjoy much greater authority over their own affairs.

As a part of standards-based reform, schools must have a much greater say in whom they hire. A streamlined certification system works to this end. After all, just because an individual becomes certified, it does not mean that he or she will be hired. It merely means that a school leader can consider that person for a position. Higher academic standards for teachers ensure that principals do not hire teachers with weak content knowledge. Removing other requirements—those not linked by research to improved student achievement—dramatically expands the pool of potential teachers, allowing principals greater discretion in choosing among qualified applicants.

Is it just wishful thinking that school principals would hire the best teachers for the job, if given the chance? Charter schools provide a useful experiment. These public schools are granted greater autonomy in their affairs in return for strict accountability for results. In most states, charter schools are allowed to hire whomever they think best, including teachers who lack state certification. Do charter school principals use this power wisely? According to a report by Dale Ballou and Michael Podgursky, they do indeed. In a nationally representative survey, charter school leaders said that they tend to look for strong content knowledge when hiring. Interestingly, these leaders do not express much concern for whether or not their teachers are certified; these leaders have made up their minds that certified does not always mean qualified.[23]

One last point: This new approach would not necessarily mean the end of schools of education. Rather, it might signal a new beginning for these institutions, which could come to resemble graduate schools of business. No state requires entrepreneurs or corporate managers to obtain an MBA. Students typically enter these programs because the degrees they offer are marketable and improve future job prospects. If employers no longer value a degree from a particular program, the prestige of the institution is likely diminished. Under this model, schools of education would adopt a similar approach. If students and school districts think an education degree connotes added value, students would be likely to attend these programs. If the degree is viewed as superfluous and not linked to creating highly qualified teachers, these programs will become irrelevant. According to James W. Fraser, dean of the school of education at Northeastern University in Boston:

> The breaking up of our monopoly would force us to convince students, their tuition-paying parents and the school districts that do the hiring that our programs produce teaching candidates who are more qualified and skilled than candidates who obtained their training elsewhere or who come in with no training.[24]

Although schools of education would lose their "exclusive franchise" over teacher preparation, they would likely emerge stronger in the long run.

With this context in place, it is time to ask the core questions of this report: are states doing enough to ensure that a highly qualified teacher is in every classroom? Are they raising academic standards while reducing bureaucratic barriers for talented individuals? Are they encouraging the development of rigorous alternate routes to certification while streamlining their traditional systems? Answers to these questions and more will be examined in Chapter Three by using the data from the Title II reporting system.

Chapter Three

Are States Doing Enough to Produce Highly Qualified Teachers? Lessons from the Title II Reporting System

In Chapter Two, a more promising model of teacher preparation and certification was presented that relies upon high standards for verbal ability and content knowledge and streamlined certification requirements. Alternate routes to certification were identified as promising examples of this model. In this chapter, we shall examine what states are doing in these important areas. We will also consider the consequences of the failure of today's certification system: staggering numbers of classrooms filled with unprepared teachers who are teaching on waivers.

Raising Standards for Verbal Ability and Content Knowledge: Are States Doing Enough?

If one were to judge states' commitment to academic standards by counting the number of tests offered for teacher certification, the picture would be quite impressive. Most states offer more than 50 different types of credentials, spanning grades K-12 (Alaska leads the way with 229).[25] Certification exams are focused on tests of basic skills, professional knowledge and academic content, to name a few areas. While some states like Alabama have streamlined testing systems, other states have dozens of different certification exams. Florida offers 71 different tests; Oregon, Maryland and other states offer 51; and Iowa offers 43.

Obviously, though, what matters is not the number of tests but their rigor. This is where states fall far short. All too often, states set the passing rates, or "cut scores," on certification tests well below national averages. Equally troubling, only 24 states to date have implemented teacher standards tied to their respective academic content standards for grades K-12 (Figure 4).

States typically use licensure examinations to ensure that teachers have a minimum level of knowledge. But what states consider "minimum" is often shockingly low. For example, California requires all teachers to at least pass the California Basic Educational Skills Test, or CBEST. Unfortunately, the test is set at roughly the 10th-grade level.[26] According to the Education Trust, which examined the states' licensure and certification exams, the lack of demanding content is not confined to just California:

> Most of the content on licensing examinations is most typically found in high-school curricula. On the few occasions that tests addressed content beyond high school, it was at the level of the first or second year of college, never at the level of a bachelor's degree. Such low levels of content are insufficient.[27]

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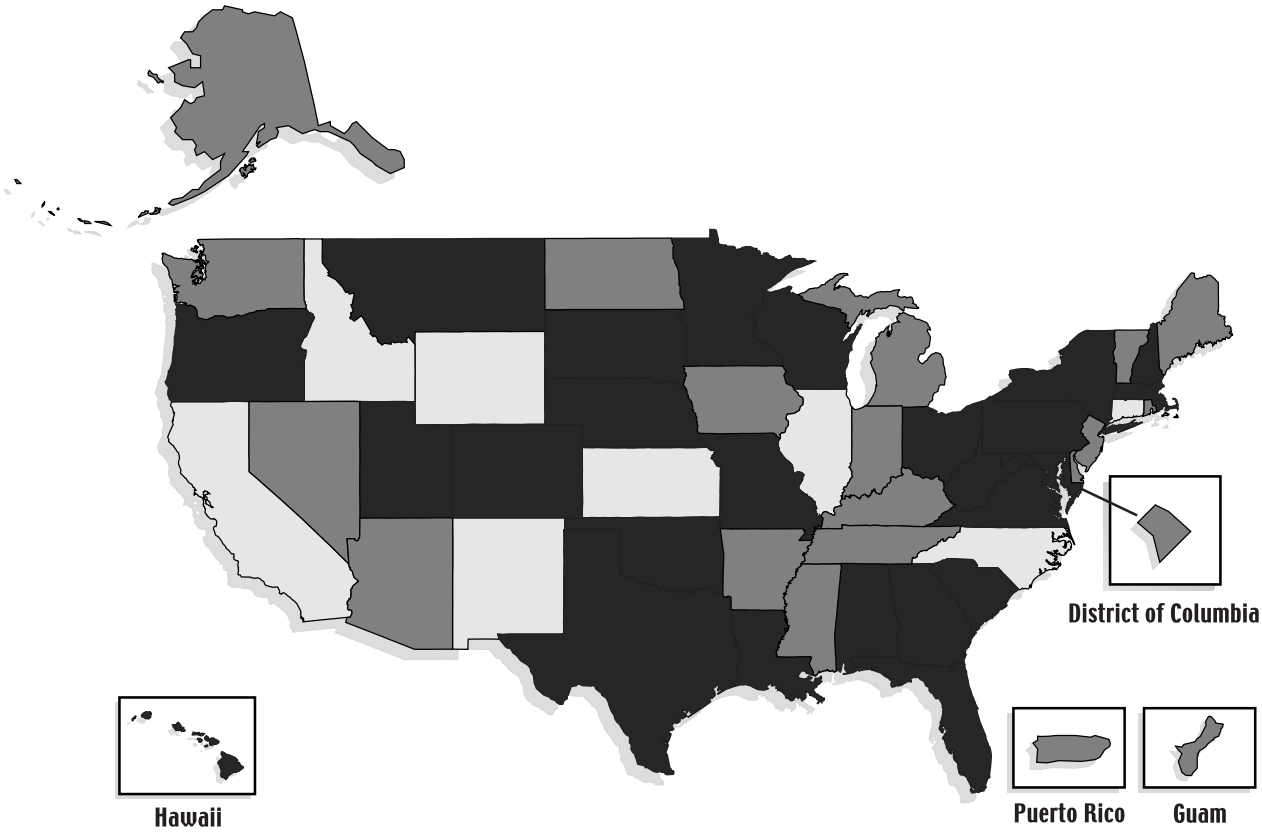
Figure 4: Number of states that have or are in the process of implementing policy that links teacher certification and student content standards: 2001



Standards in Place		In process		Standards Not Set
Alabama	In place	California	2004	Alaska
Colorado	2001	Connecticut	2003	Arizona
Florida	2002	Idaho	2003	Arkansas
Georgia	2001	Illinois	2003	Delaware
Hawaii	2001	Kansas	2003	District of Columbia
Louisiana	2002	New Mexico	2004	Indiana
Maryland	2001	North Carolina	2003	Iowa
Massachusetts	2001	Wyoming	2003	Kentucky
Minnesota	2001			Maine
Missouri	1998			Michigan
Nebraska	2002			Mississippi
New Hampshire	1999			Nevada
New York	1993			New Jersey
Ohio	1998			North Dakota
Oklahoma	1997			Rhode Island
Oregon	1998			Tennessee
Pennsylvania	2002			Vermont
South Carolina	2001			Washington
South Dakota	2000			Guam
Texas	1999			Puerto Rico
Utah	2000			
Virginia	2000			
West Virginia	2001			
Wisconsin	2001			

Total States In Place/In Process: 32

Source: Title II Data Collection System, 2001.

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States use a variety of different examinations, but one of the more common tests is the Praxis Pre-Professional Skills Test (PPST), which assesses prospective teachers in the areas of math, reading and writing. Of the 29 states that use the PPST, Virginia set a passing rate closest to the national average in reading. All other states had cut scores below the 50th percentile and 14 of the 29 set passing rates below the 25th percentile. Nine states, including larger states like Florida and Texas, and the District of Columbia, set cut scores below the 20th percentile (Figure 5).

In math, only Virginia set its cut score at the national average. The majority of the 29 states set cut scores around the 20-30th percentile range (Figure 6). In writing, again only Virginia had a cut score at or above the national average. (Figure 7).

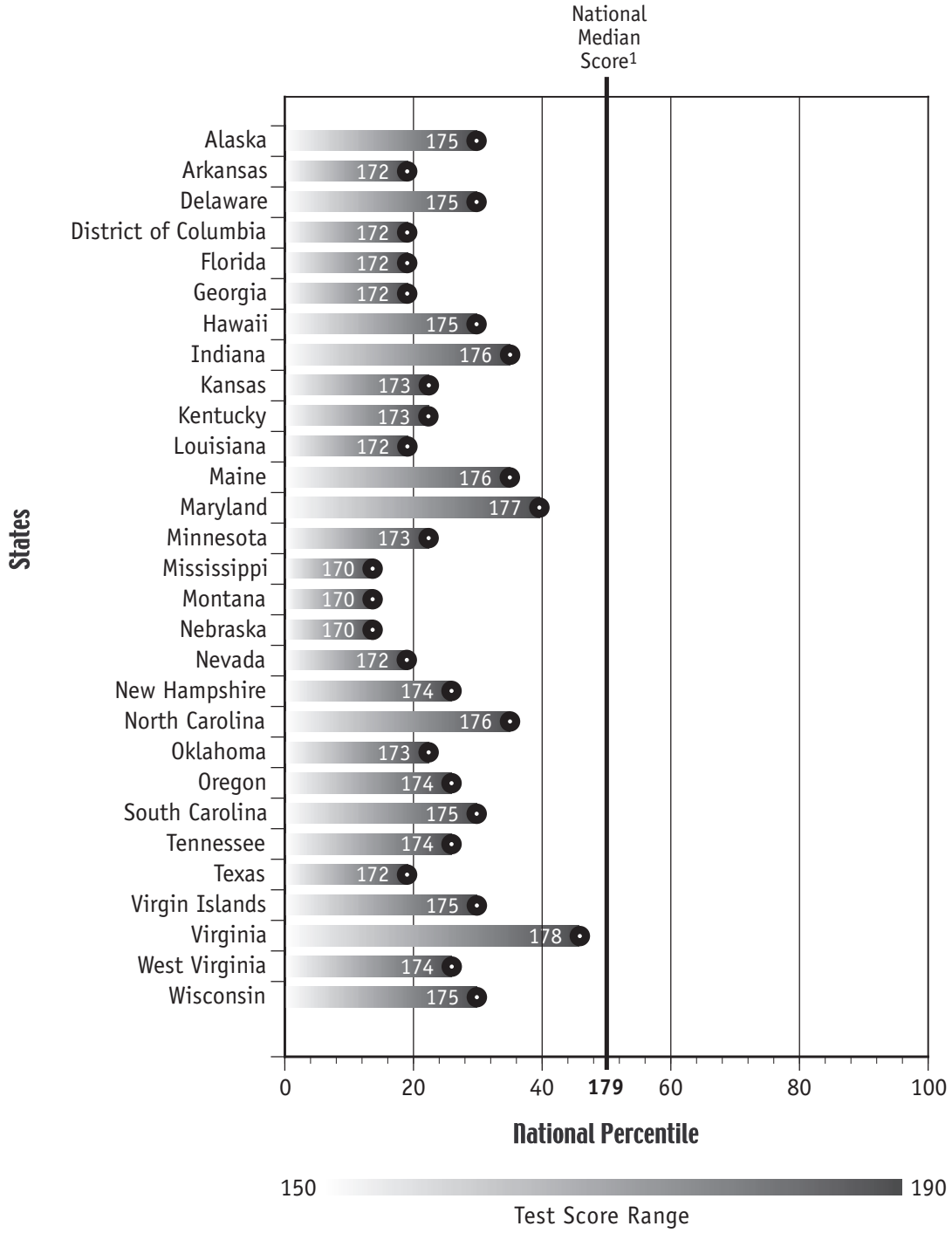
Not surprisingly then, according to data reported by the states as required by Title II of the *Higher Education Act*, the vast majority of teacher preparation program completers are passing the assessments required by their states for certification (Figure 8). During the 1999-2000 school year, 93 percent of prospective teachers passed various state examinations necessary for initial certification. Virginia, with the highest standards, had the lowest overall pass rate of 80 percent. However, six states posted pass rates of 100 percent, suggesting that academic standards for teachers, in far too many states, are extremely low.

However, there is *some* good news to report. For example, 38 states now require a bachelor's degree with a major or minor in an academic content area for certification, usually for middle or high school teachers (Figure 9). NCES data reveal that half of the nation's newest teachers (with three or less years of teaching experience) have an academic major, compared to 32 to 41 percent of more experienced teachers.[28]

Some states, like Pennsylvania, have aggressively raised teacher standards. Since the 1999-2000 school year, state teaching candidates must obtain a GPA of at least 3.0 in college-level liberal arts and sciences courses, not including education classes, before they are eligible to enter a training program. Candidates must also take the same courses as majors in their respective academic subjects and obtain a 3.0 GPA to graduate. Passing scores in Pennsylvania are also gradually increasing on certification tests.[29]

What's the lesson to be learned? While academic standards for teachers are too low in most states, change is possible in those states with the will to make it happen. Virginia and Pennsylvania are laudable examples.

IGURE 5: STATE MINIMUM PASSING SCORES, PREPROFESSIONAL SKILLS TEST: READING, 1999–2000



1. National median score is defined by the score realized by the 50th percentile test taker.

Note: States not listed did not participate in Praxis Pre-Professional Skills Testing Program in 1999-2000.

Source: Educational Testing Service. Analysis by Westat, March, 2002.

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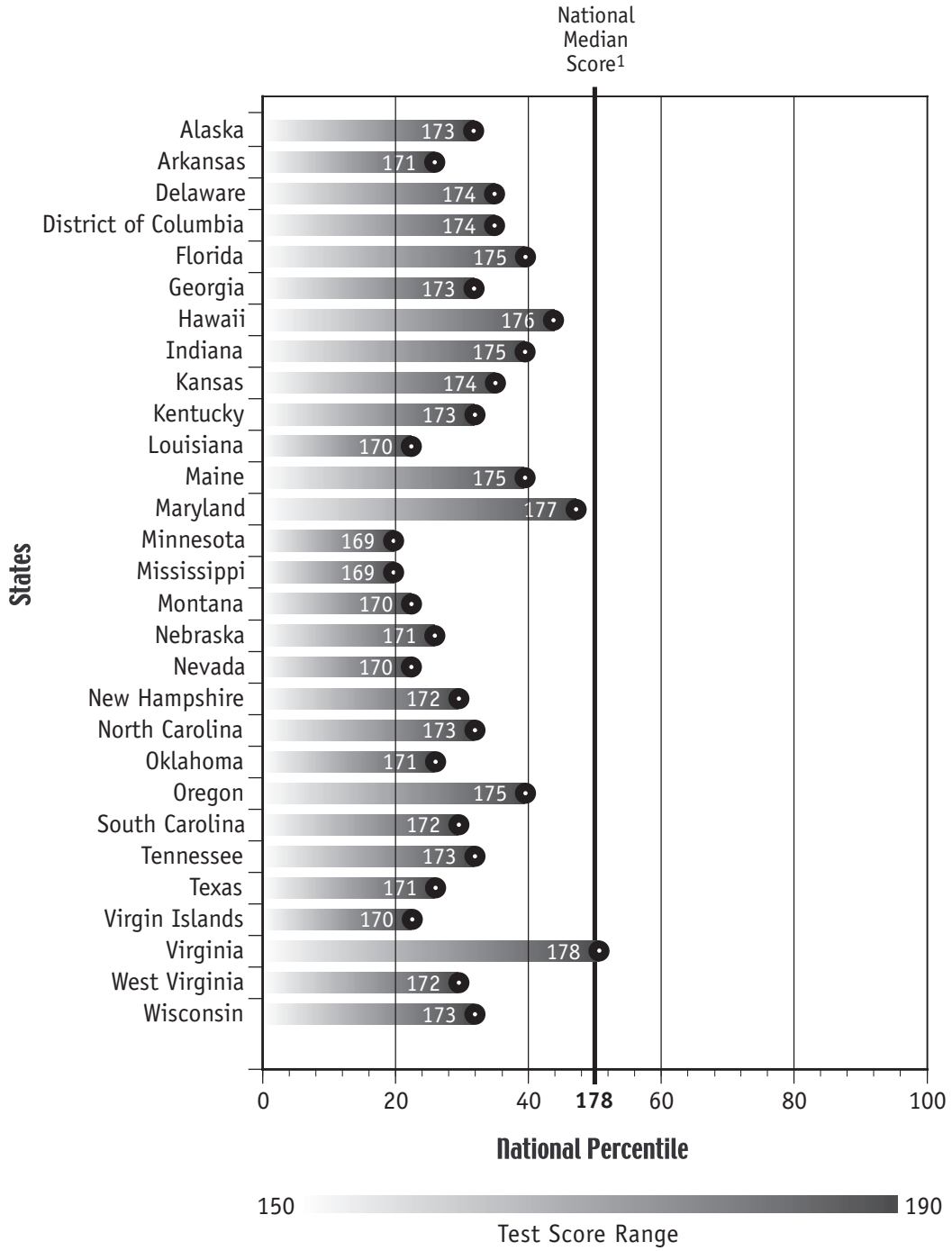
Figure 6: State minimum passing scores, preprofessional skills test: mathematics, 1999–2000



1. National median score is defined by the score realized by the 50th percentile test taker.

Note: States not listed did not participate in Praxis Pre-Professional Skills Testing Program in 1999-2000.

Source: Educational Testing Service. Analysis by Westat, March, 2002.

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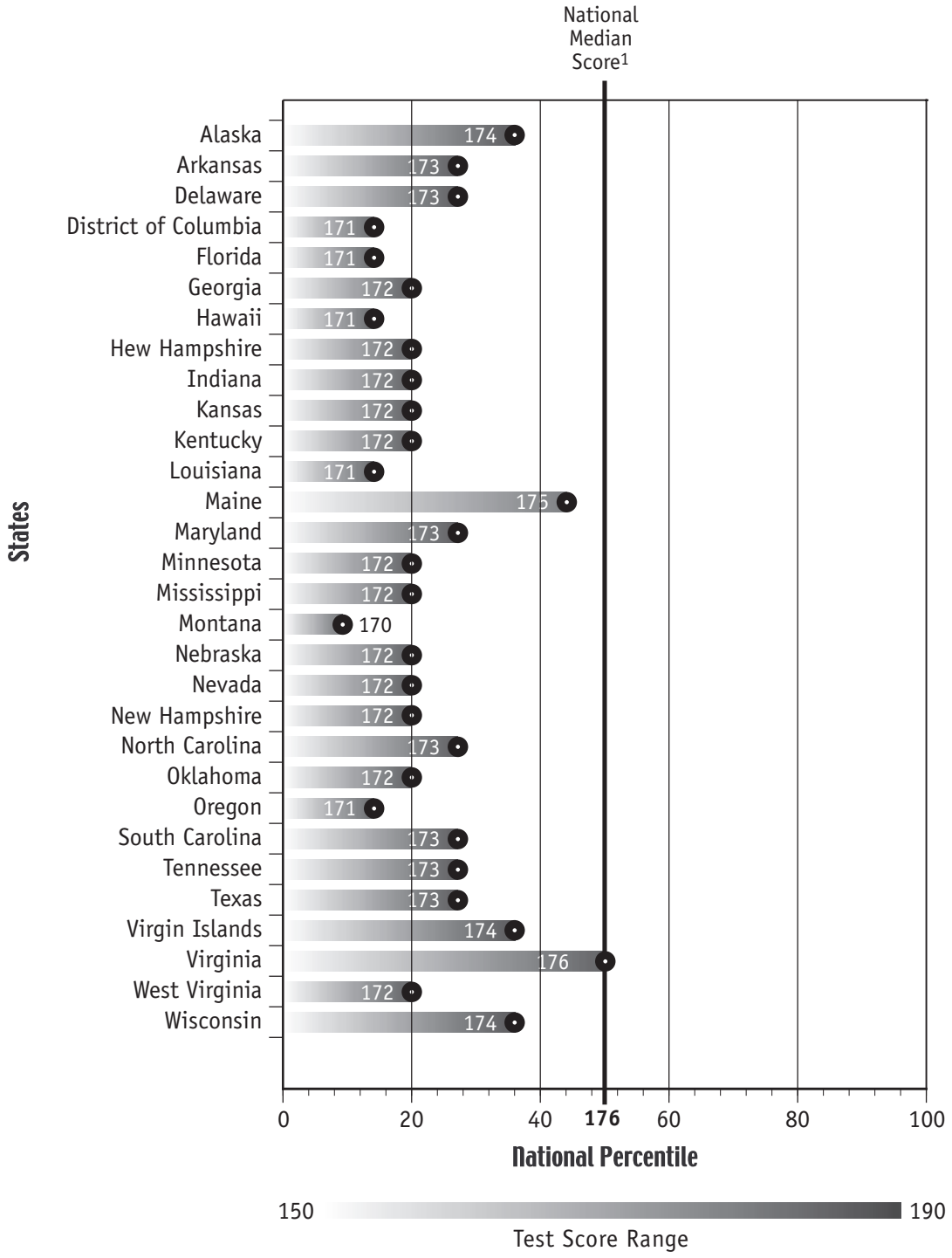
Figure 7: State minimum passing scores, preprofessional skills test: writing, 1999–2000



1. National median score is defined by the score realized by the 50th percentile test taker.

Note: States not listed did not participate in Praxis Pre-Professional Skills Testing Program in 1999-2000.

Source: Educational Testing Service. Analysis by Westat, March, 2002.

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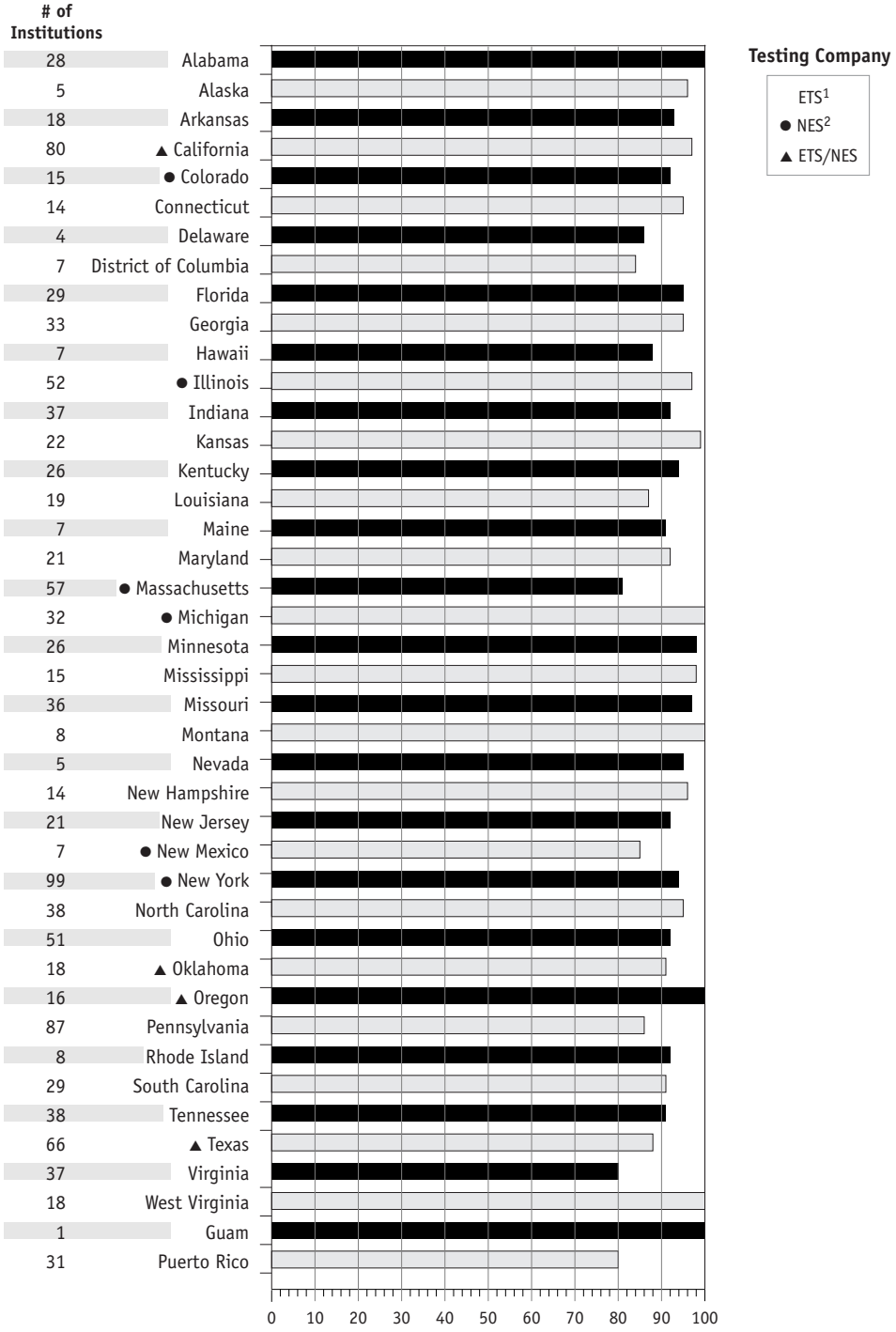
Figure 8: Summary pass rates by state and testing company: 1999–2000



1: Educational Testing Service (ETS)

2: National Evaluation Systems (NES)

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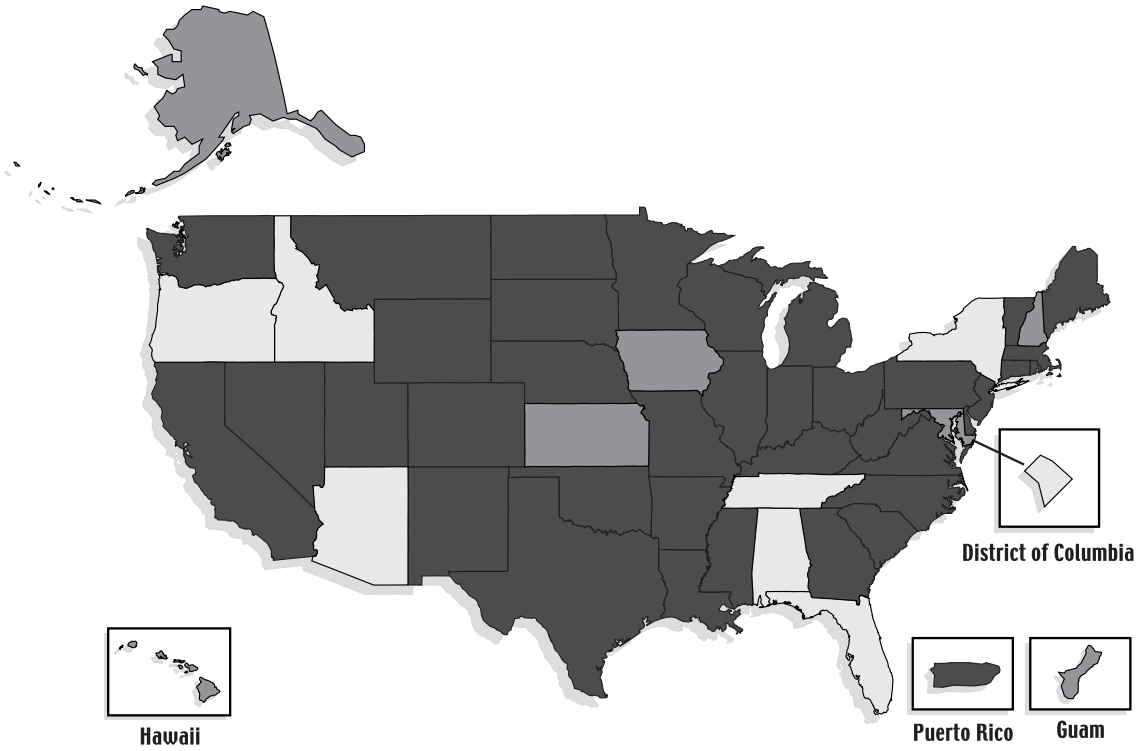
IGURE 9: REQUIREMENT OF A CONTENT AREA BACHELOR'S DEGREE FOR CERTIFICATION, BY STATE: 2001



Content area degree required

Arkansas
California
Colorado
Connecticut
Delaware
Georgia
Illinois
Indiana
Kentucky
Louisiana
Maine
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
Nevada
New Jersey
New Mexico
North Carolina
North Dakota
Ohio
Oklahoma
Pennsylvania
Puerto Rico
Rhode Island
South Carolina
South Dakota
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming

Total States: 38

Content area degree not required

Columbia
Florida
Idaho
New York
Oregon
Tennessee

Total States: 8

Data not Provided

Maryland
New Hampshire

Total States: 7

Note: Content area degrees are determined by the requirement for a major, minor or credit equivalence in a specific subject area.

Source: Title II Data Collection—State Reports, 2001. Supplemental information from National Association of State Directors of Teacher Education and Certification (NASDTEC), Manual on the Preparation and Certification of Educational Personnel, 2001.

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Streamlining Certification Systems: Are States Doing Enough?

As part of the Title II reporting system, states are required to submit information on their respective initial teacher certification requirements. The data show that many states mandate a shocking number of education courses to qualify for certification. For example, in order to obtain a provisional elementary teaching license in Arizona, teachers must take 45 hours of education courses with at least eight weeks of practice teaching. Indiana requires 64 semester hours in education courses for all of their initial teaching certificates. For middle and high school licenses, the state mandates 40 hours of general education course work and 24 hours of professional education and electives—over and above the other requirements for graduation, such as subject matter concentration. While New Jersey requires teaching candidates to major in their subject fields, it also mandates 200 hours of course work in pedagogy just for an initial license (Table 2).

These burdensome requirements are the Achilles heel of the certification system. They scare off talented individuals while adding little value. Certainly some of the required courses might be helpful, but scant research exists to justify these mandates. States have a long way to go on this front.

Developing Alternate Routes to Certification: Are States Doing Enough?

In recent years, states have increasingly experimented with alternate routes to certification to boost both the quantity and quality of their respective teaching forces. Currently, 45 states offer alternate routes to certification (Figure 10). In the last five years alone, 20 states have either passed new legislation or expanded existing programs to create 34 new alternative pathways into the profession. The growth of alternative certification is fueled in part by the increasing demand for teachers, especially in high-need areas like math, science and bilingual education and in high-poverty schools.

All told, approximately 175,000 teachers nationwide hold alternative certificates, out of approximately 3.1 million teachers nationwide, accounting for only 6 percent of the current teacher force. However, given that alternative routes are relatively new phenomena, it is more telling to measure the number of new teachers who enter the profession through this route. While national data are limited, states that have the highest rates of new teachers entering through alternate routes still hire less than a quarter of their teachers using this approach. For example, in California and Texas, 10 and 16 percent of new teachers enter the profession through alternate pathways, respectively. Although New Jersey has the most aggressive alternate route program in the country, just 22 percent of the state's teachers enter the profession through this route.[30]

Why are so few candidates entering the profession through alternate routes? One reason may be that many of these "alternate" programs are just as burdensome as their more traditional cousins. For example, Colorado requires teachers pursuing licensure through an alternate route to take 225 clock hours of professional education courses in one year while

Table 2: Summary of State Initial Certification Requirements with Examples, 2001

Bachelor's Degree	Credit Hours	Specific Coursework
Every state mandates that teacher candidates have bachelor's degrees, and many require a subject specific degree in a content area for junior high and secondary teachers.	States regulate the total number of coursework hours in: (1) overall bachelor's degree programs or (2) the total of education class hours as a portion of undergraduate degree requirements.	States often mandate specific courses (or credit hours) in a subject area.
In New Jersey, at the secondary level, a major in the subject area taught is required for teachers holding a Certificate of Eligibility.	Arizona's provisional elementary certificate requires 45 hours of education courses.	Indiana requires 64 semester hours in education courses for all of the states' initial teacher licensees. For middle and high school certificates 40 hours of general education coursework and 24 hours of professional education courses are mandated.
Minimum GPA	**Assessments**	**Recency of Credit**
States require candidates to maintain a particular grade point average in either: (1) all college coursework overall, or (2) all education pedagogy classes.	All but nine states have a testing requirement for certification. The majority of states require a test in one or more of these areas: Basic skills or general knowledge, pedagogy or professional knowledge, content and subject areas, and special education.	States have recency of credit standards which dictate that a certain number of college credits must have been earned within a few years prior to application for licensure.
Pennsylvania requires a 3.0 GPA for entry and completion of its teacher preparation programs.	For the Kansas standard three-year certificate, an applicant must achieve a passing score on the Praxis Principles of Learning and Teaching exam.	A candidate for Delaware's Limited Standard License must have received his or her bachelor's degree within the five years prior to application.
Practice Teaching	**Background Check**	**Institutional Recommendation**
States direct that student teachers complete required hours of practicum teaching in the classroom as a graduation requirement.	The majority of states require fingerprinting and a background check.	Many states require that teacher preparation institutions recommend a candidate for certification based on their performance during the program.
In Colorado, the Provisional License requires 800 hours of preservice teaching, which usually corresponds to one semester.	Connecticut requires a state criminal record check prior to issuance of the Initial Educator certificate.	One example is New York's Provisional Elementary certificate; applicants who completed a state teacher education program must have a recommendation.

Source: Title II Data Collection—State Reports, 2001.

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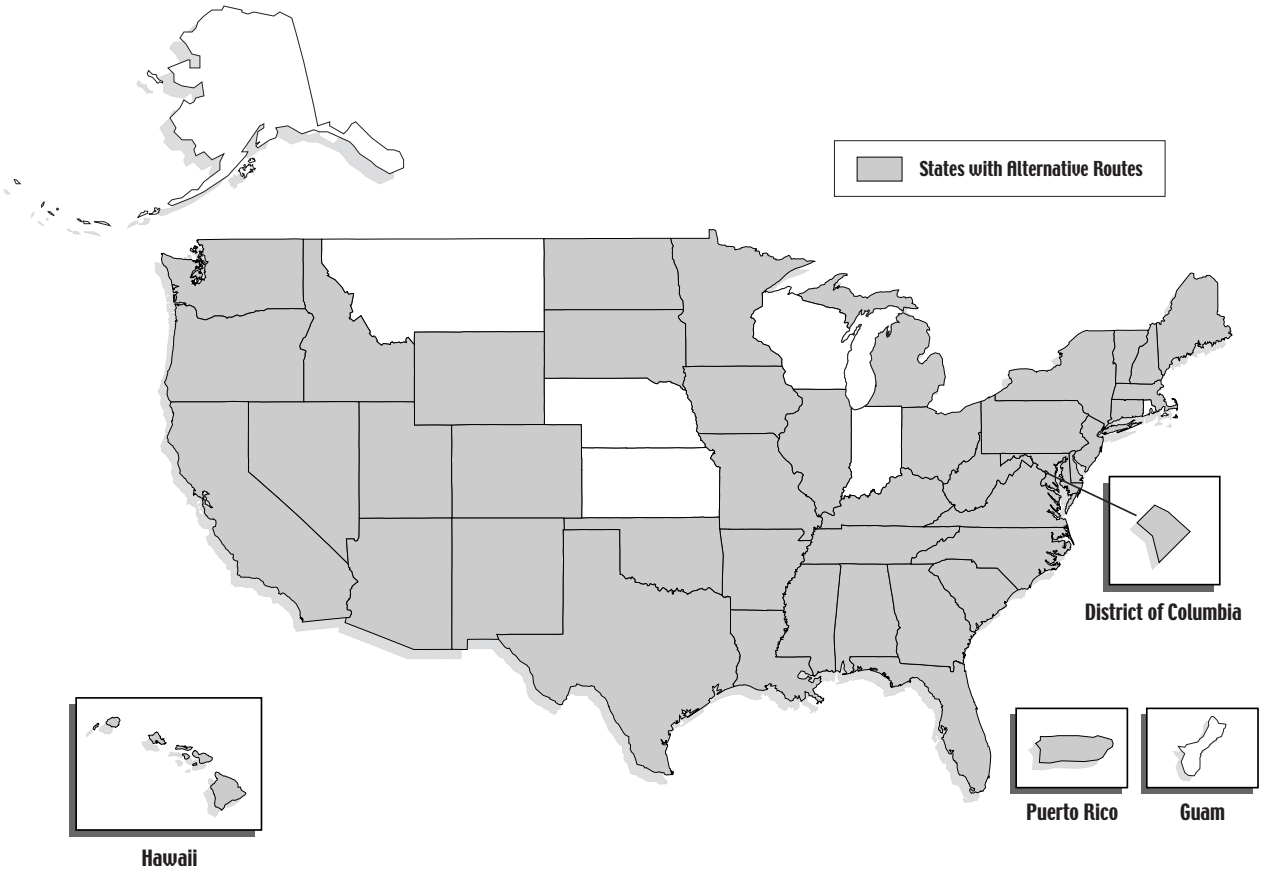
Figure 10: States with alternative routes : 2001



Notes: Alternative routes are as defined by state. They contrast traditional routes to teaching. Visit www.title2.org for more information on state alternative routes.

Although California's report indicates no alternative route, other sources indicate its existence.

Source: Title II Data Collection—State Reports, 2001.

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participants are also teaching. In Illinois, qualifying for a license through an alternate route can take up to three years. Similarly, in Kentucky, local school districts can hire teachers from outside the traditional preparation system (with as low as a 2.0 GPA) provided they receive 250 hours of formal instruction. The preparation course lasts 44 weeks, with an eight-week full-time seminar and practicum, 18 weeks half-time teaching, and 18 weeks full-time teaching. Programs such as these are "alternate routes" in name only, allowing states to boast of reform while maintaining artificial restrictions on the supply of new teachers.

Despite these impediments, Title II data reveal that 70 percent of the states report higher pass rates on licensure exams among teachers certified through alternate routes as compared to teachers with traditional licenses on certification or licensure exams (Figure 11). Streamlining the requirements has apparently led not only to an increase in teacher supply but also an increase in teacher quality.

Evidence That States Are Not Doing Enough: Reliance on Teacher Waivers

One crippling cost of the conventional teacher certification and compensation system is the shortage of teachers in high-poverty schools and in high-need fields like math and science. When states come up short, they rely on waivers and loopholes in their certification systems to help boost supply in these areas. Under the *No Child Left Behind Act*, by the end of the 2005-2006 school year, these waivers and loopholes will no longer be allowed.

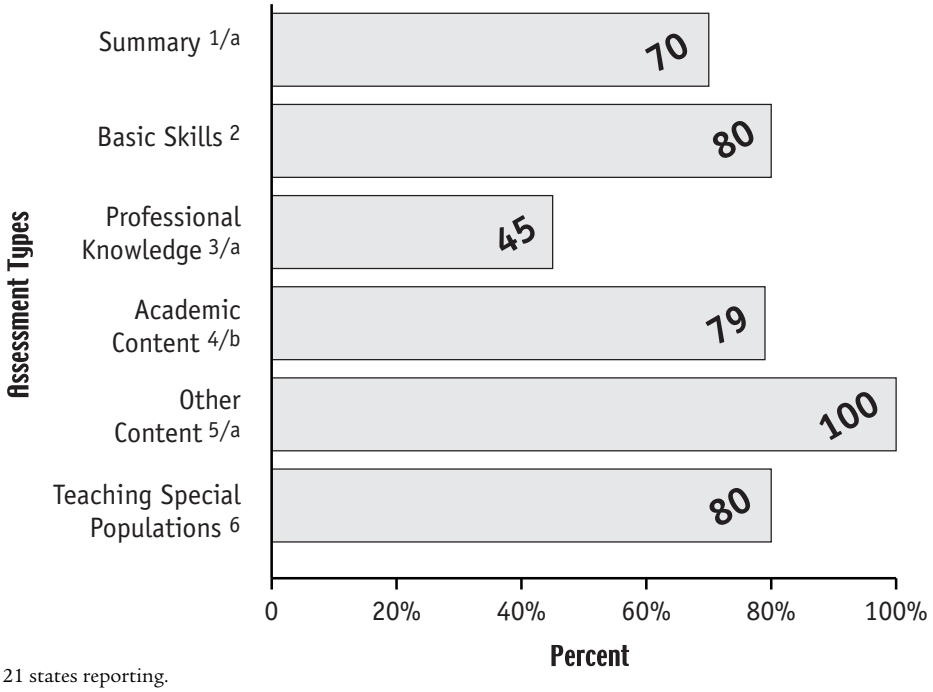
Nationwide, approximately 6 percent of the teaching force lacked full certification in 2000-2001. Nine states report having more than 10 percent of their teachers on waivers for that year, with Arizona, California and North Carolina leading the way with 16 percent. Four states report having all of their teachers fully certified, while 21 report employing 1 percent or less of their teachers on waivers (Figure 12). High-poverty school districts were more likely to employ teachers on waivers than more affluent districts, averaging 9 percent in the 2000-2001 school year compared to 5 percent in other districts (Figures 13 and 14). Six states report that more than 15 percent of teachers in their low-income districts are hired on waivers, including 23 percent in California and Louisiana respectively, 20 percent in New Mexico, and 18 percent in North Carolina.

Teachers lacking full certification are not evenly distributed across subject areas. The highest proportion of waivers goes to special education (9 percent); science and foreign languages (7 percent); and mathematics (6 percent) (Figure 15).

The news on waivers is not necessarily entirely bad. Almost 50 percent of teachers on waivers during the 2000-2001 school year either possess a major in their subject areas or have passed the state's content exams (Figure 16). In foreign language and science, 65 and 64 percent of teachers, respectively, have content experience in their fields. Under a streamlined certification system focused on content knowledge, these teachers would be considered highly qualified. These data suggest that such a system might attract more candidates with solid content knowledge, particularly in fields with acute shortages, to the profession.

Nevertheless, it is also evident that many of the teachers teaching on waivers are not much more than "warm bodies" filling the classroom. They demonstrate the great tragedy of today's certification systems: they allow individuals with marginal education into the classroom, while concurrently thwarting talented, well-educated individuals by way of bureaucratic barriers. States have managed to create a system that condones both low standards and high barriers. To ensure that a highly qualified teacher is in every classroom, and to ensure that no child is left behind, this system must be redesigned. Chapter Four explains how.

Figure 11: Percent of states where those in alternative programs of teacher preparation have equal or higher pass rates on state assessments than those in traditional programs: 2001



1. Based on the 21 states reporting.
2. Based on the 15 states reporting.
3. Based on the 12 states reporting.
4. Based on the 16 states reporting.
5. Based on the 5 states reporting.
6. Based on the 5 states reporting.

a. One state reported less than 10 test takers and was not included in the calculations.

b. Two states reported less than 10 test takers and were not included in the calculations.

Source: Educational Testing Service. Analysis by Westat, March, 2002. See www.title2.org for complete alternative route pass rate information.

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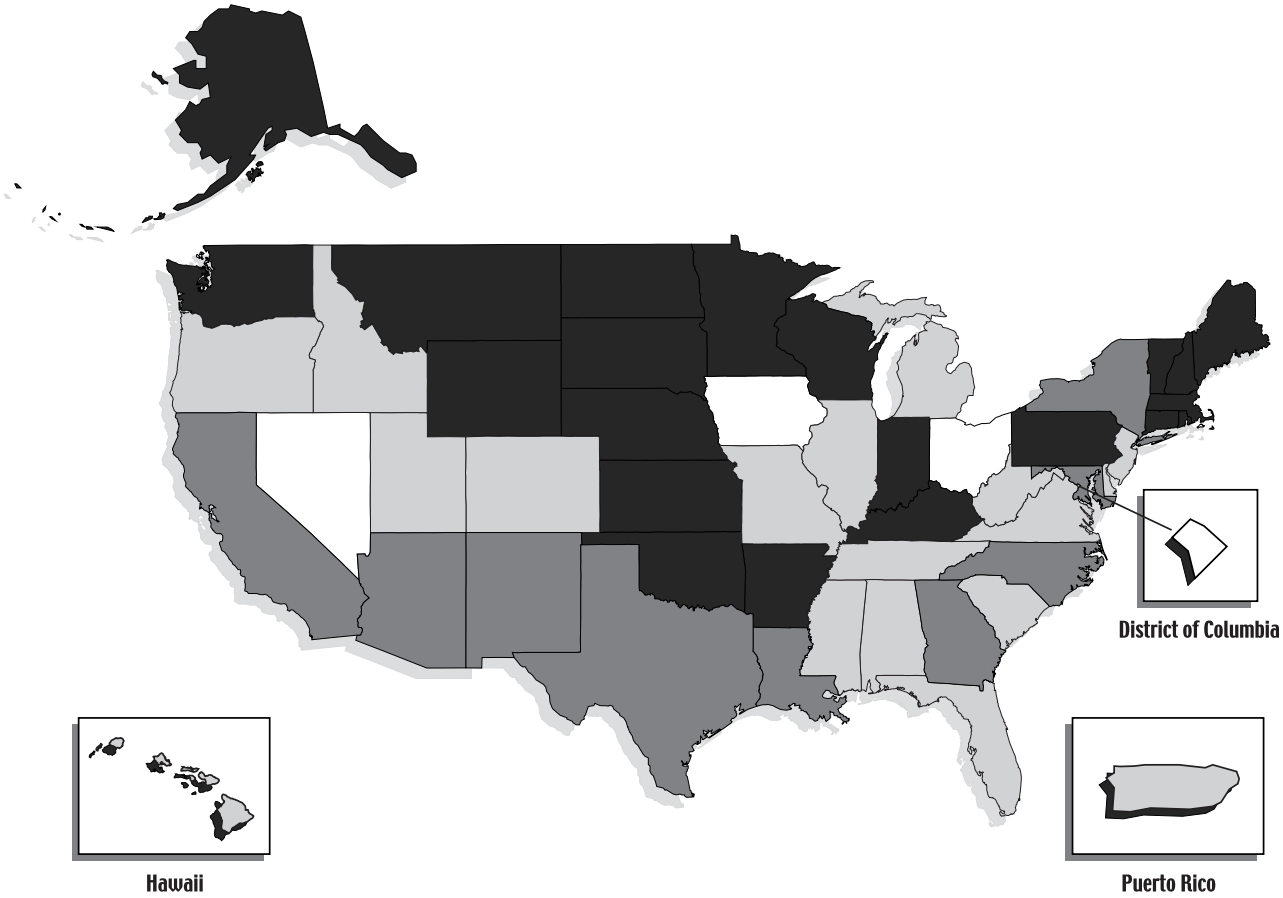
IGURE 12: PERCENTAGE OF TEACHERS ON WAIVERS: 1999–2000



None		Less than 2%		2% to 9%		10% or greater	
District of Columbia	0%	Alaska	1%	Alabama	2%	Arizona	16%
Iowa	0%	Arkansas	1%	Colorado	3%	California	16%
Nevada	0%	Connecticut	≤.5%	Delaware	6%	Georgia	10%
Ohio	0%	Indiana	1%	Florida	3%	Louisiana	15%
		Kansas	≤.5%	Hawaii	9%	Maryland	13%
		Kentucky	1%	Idaho	2%	New Mexico	10%
		Maine	≤.5%	Illinois	3%	New York	10%
		Massachusetts	≤.5%	Michigan	2%	North Carolina	16%
		Minnesota	≤.5%	Mississippi	5%	Texas	12%
		Montana	≤.5%	Missouri	3%		
		Nebraska	≤.5%	New Jersey	2%		
		New Hampshire	1%	Oregon	2%		
		North Dakota	≤.5%	Puerto Rico	3%		
		Oklahoma	≤.5%	South Carolina	5%		
		Pennsylvania	1%	Tennessee	3%		
		Rhode Island	≤.5%	Utah	7%		
		South Dakota	≤.5%	Virginia	7%		
		Vermont	1%	West Virginia	4%		
		Washington	≤.5%				
		Wisconsin	1%				
		Wyoming	≤.5%				

Source: Title II Data Collection—State Reports, 2001.

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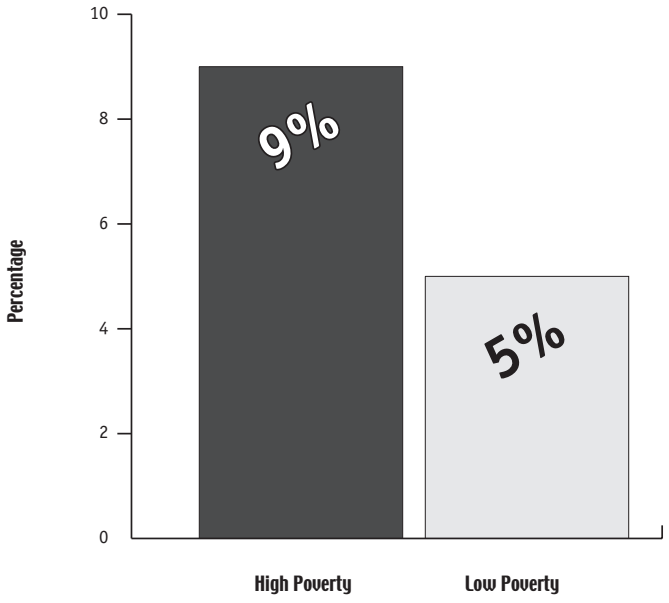
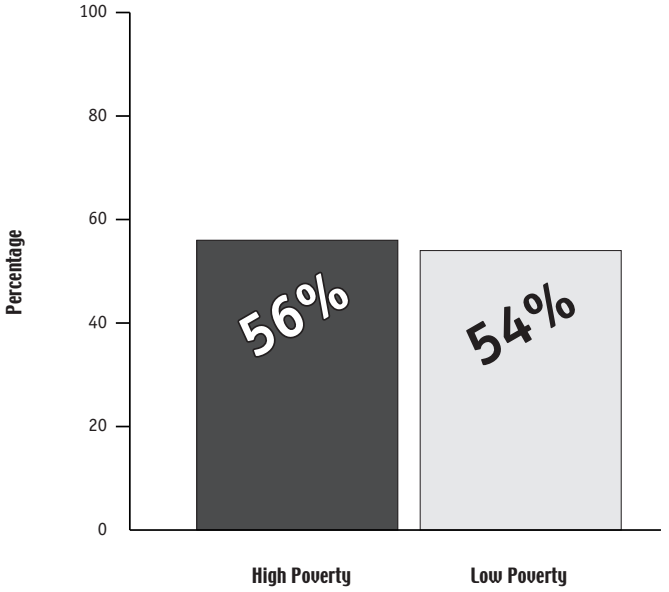
Figure 13: Percentage of teachers on waivers by poverty status of districts: 2000–2001



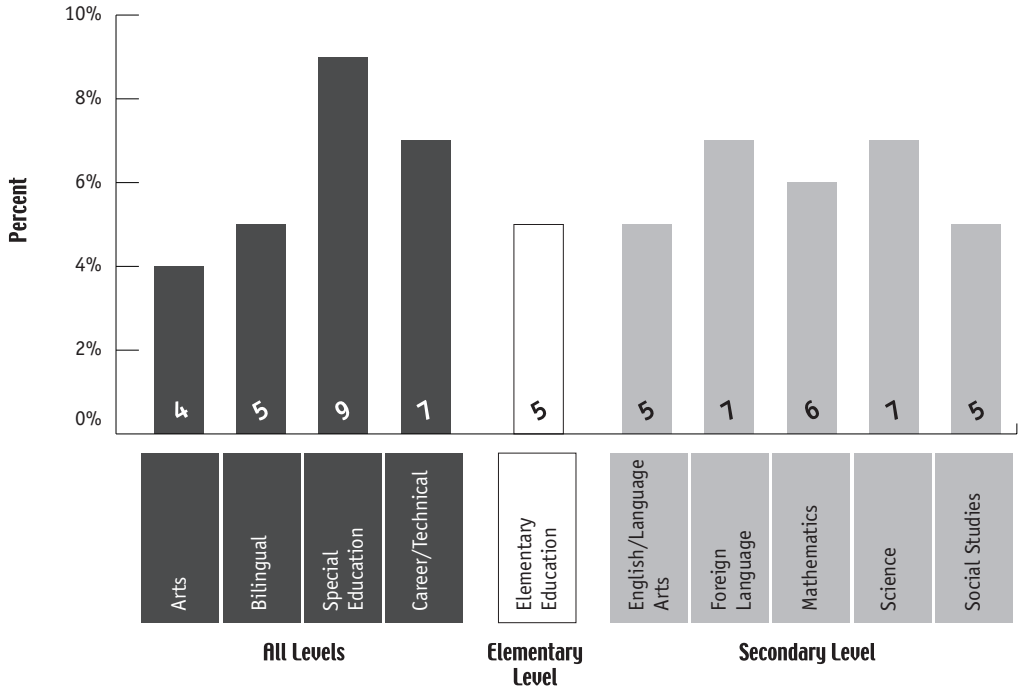
Source: Title II Data Collection—State Reports, 2001.

Figure 14: Percentage of teachers on waivers without content expertise, by poverty status of districts: 2000–2001



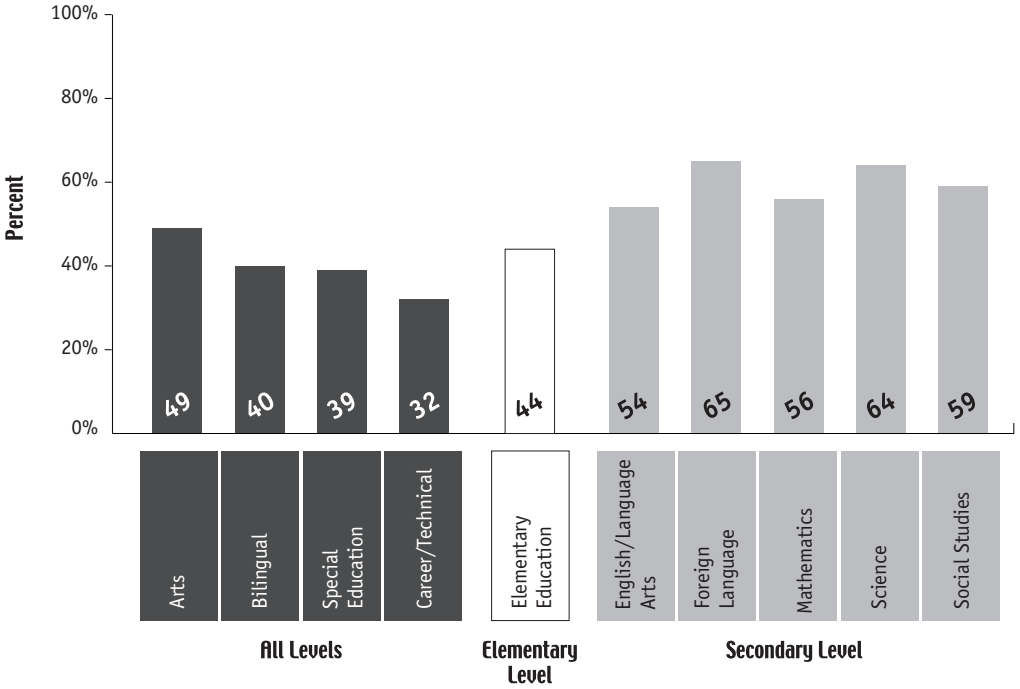
Source: Title II Data Collection—State Reports, 2001.

Figure 15: Percentage of teachers on waivers by subject



Source: Title II Data Collection—State Reports, 2001.

Figure 16: Percentage of teachers on waivers with content expertise, by subject



Source: Title II Data Collection—State Reports, 2001.

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Chapter Four

Looking Forward: A Highly Qualified Teacher in Every Classroom

The Highly Qualified Teachers Challenge

In less than four months, schools across the nation will open for the 2002-2003 academic year. Those schools receiving Title I funds face an immediate, daunting challenge: to ensure that all new teachers hired are highly qualified, as defined by the *No Child Left Behind Act*. All schools in America face a similar hurdle: to ensure that by the end of the 2005-2006 school year, all teachers—existing and new to the profession—are highly qualified. As the information presented in this report shows, most schools have a long way to go.

How will schools, districts and states meet this challenge? One must assume that most schools are not choosing to hire poorly qualified teachers over highly qualified teachers. Most schools that hire teachers on waivers, or through loopholes, do so out of necessity. The traditional certification system has failed to produce enough teachers, at least in certain areas or for certain schools. At the same time, this system has failed to uphold standards of quality, especially in the key area of content knowledge.

Schools will not meet this challenge by trying a little harder or making small adjustments. Schools will only be able to place a highly qualified teacher in every classroom if the states take bold action to fundamentally alter their certification systems.

Raising the Bar on What Matters Most

As Congress made clear through its definition of "highly qualified teachers," and as the scientific evidence supports, the only measurable teacher attributes that relate directly to improved student achievement are high verbal ability and solid content knowledge. The law specifically singles out content knowledge for special attention, implying that current certification systems are not rigorous enough in this area. This report has provided more evidence to that effect.

There is a risk, though, that states could meet the letter of the *No Child Left Behind Act* and keep their academic standards for future teachers quite low. Some might even be tempted to lower the academic bar further (if that is possible) out of fear of impending teacher shortages. This would be an enormous mistake, with disastrous consequences for children.

Instead, this time of change is an opportunity for states to increase dramatically their academic standards for incoming teachers. This is a chance for states to align their certification and licensure assessments with student academic standards, to improve the rigor of their tests and to raise their passing scores to loftier levels.

But will such standards-raising lead to even more teacher shortages and waivers and to failure to meet the "highly qualified teachers" mandate? Raising academic standards is only half of the equation. As Frederick Hess has argued, states must also tear down the wall that is keeping many talented individuals out of the profession.

Radically Streamlining the System

As this report makes clear, traditional certification requirements impose significant costs on talented individuals interested in teaching. Mandated education courses, unpaid student teaching, and the hoops and hurdles of the state certification bureaucracy discourage many potential teachers from even entering the pipeline. The tragedy is that none of these hurdles leads to improved quality, at least according to the best current research. Scant attention to the induction of new teachers, few incentives for performance, and little opportunity for growth discourages some of our best new teachers from staying in the profession once they arrive.

To meet the "highly qualified teachers" challenge, then, states will need to streamline their certification system to focus on the few things that really matter: verbal ability, content knowledge, and, as a safety precaution, a background check of new teachers. States need to tap into the vast pool of potential teachers who today are discouraged by the bureaucratic hoops and hurdles but tomorrow might be willing to fill their classrooms.

Such a streamlined system will shift much authority away from state certification officials and to local school principals. But that is only fair, as these principals are the ones who will be accountable for student academic achievement, as required by the *No Child Left Behind Act*. They have strong incentives to make good hiring decisions, focusing on well-educated people with solid content knowledge, in addition to all the immeasurable qualities that make a teacher great. If they find certain pedagogical skills essential—training in research-based reading instruction or classroom management, for example—they will be free to seek out individuals with these skills. Local teacher training programs, unleashed from their monopoly on the teacher preparation business, will likely respond to this demand by producing teachers with those skills that are in high demand. A streamlined certification system, then, empowers educators on the front lines.

Alternate Routes to the Solution

To meet the challenge of placing a highly qualified teacher in every classroom, states will need to reform their teacher certification systems—a feat that will take time and enormous political will. In the meantime, or at the same time, states can also seize upon alternate routes to certification as a mechanism for increasing the supply of teachers while maintaining (or improving) their quality. Such routes can also serve as models for the certification system as a whole.

Many states are wasting no time in developing alternate route programs, and surely the *No Child Left Behind Act* will only further encourage the development of such innovative and successful programs. States must be sure, though, to pay close attention to the quality and substance of these routes. Academic standards must remain high, while burdensome requirements must be kept to a minimum. An alternate route that takes two years and thousands of dollars to complete is an alternate route in name only. It will do little good to ease critical teacher shortages or boost overall quality.

Looking Ahead

It is clear that most certification systems limit the supply of teachers while maintaining low standards. It is also clear that alternate routes to certification, though popular, are not yet fulfilling their potential. Consequently, it is clear that many states are in jeopardy of not meeting Congress's challenge to ensure a highly qualified teacher in every classroom.

But this report also presents a vision of a brighter future. Our teacher certification systems are of our own making, and therefore they can be changed through the democratic process in each state. A better model exists, a model that can produce both the quantity and quality of the teachers we need. It is possible to ensure that every child in America has a highly qualified teacher. It is possible to design an education system that serves every child.

We just need the will to make it happen. During the next several years, in future editions of this report, we will find out if states are making progress toward meeting the challenge of providing a "highly qualified teacher" for all our children so that no child in America will be left behind.

Endnotes

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[2] More information on the president's budget for the U.S. Department of Education for FY 2003. Available at: http://www.ed.gov/offices/OUS/Budget03/.

[3] For more information on the Coleman study and other analyses of teacher quality, see remarks delivered by The Honorable Grover J. Whitehurst, Assistant Secretary of Education for Research and Improvement, at the White House Conference on Preparing Tomorrow's Teachers, March 2002. Available at: http://www.ed.gov.

[4] Kati Haycock, *Good Teaching Matters ... A Lot* (Washington, D.C.: The Education Trust, 1998). Available at http://www.edtrust.org.

[5] Ibid., p. 3.

[6] Dan D. Goldhaber and Dominic J. Brewer, "Teacher Licensing and Student Achievement," *Better Teachers, Better Schools*, eds. Chester E. Finn Jr. and Marci Kanstoroom (Washington, D.C.: Thomas B. Fordham Foundation, 1999). Available at: http://www.edexcellence.net/better/goldhab.pdf.

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[9] Kate Walsh, *Teacher Certification Reconsidered: Stumbling for Quality* (Baltimore, Md.: The Abell Foundation, 2001). Available at: http://www.abell.org.

[10] Goldhaber and Brewer.

[11] Diane Ravitch, Research Professor of Education, New York University, "A Brief History of Teacher Professionalism," remarks delivered at the White House Conference on Preparing Tomorrow's Teachers, March 2002. Available at: http://www.ed.gov.

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[14] "Attracting the Best and Brightest," *Education Week, Quality Counts 2000*. Available at: http://www.edweek.org.

[15] U.S. Department of Education, National Center for Education Statistics. *The Condition of Education*. Available at http://nces.ed.gov/programs/coe/2001/section4/indicator42.html.

[16] Frederick Hess, *Tear Down This Wall: The Case for a Radical Overhaul of Teacher Certification* (Washington, D.C.: Progressive Policy Institute, 2001). Available at: http://www.ppionline.org.

[17] *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers, NCES 1999-080*.

[18] C. Emily Feistritzer and David T. Chester, *Alternative Teacher Certification: A State By State Analysis 2002* (Washington, D.C.: National Center for Education Information, 2002). Available at: http://www.ncei.com.

[19] Ibid.

[20] *Profile of Troops to Teachers* (Washington, D.C.: National Center for Education Information, 1998). Available at: http://www.ncei.com.

[21] Margaret Raymond and Stephen Fletcher, "Teach for America," *Education Next*, Spring 2002. Available at: http://www.educationext.org.

[22] For more information on Elk Grove's Teacher Education Institute, please refer to remarks delivered by David W. Gordon, Superintendent of Elk Grove Unified School District, at the White House Conference on Preparing Tomorrow's Teachers, March 2002. Available at: http://www.ed.gov.

[23] Michael Podgursky and Dale Ballou, *Personnel Policy in Charter Schools* (Washington, D.C.: Thomas B. Fordham Foundation, 2001). Available at: http://www.edexcellence.net.

[24] James W. Fraser, "A Tenuous Hold," *Education Next*, Spring 2002. Available at: http://www.educationext.org.

[25] All Title II data referenced in this section can be accessed at http://www.title2.org.

[26] Richard Lee Colvin, "Test Given to Teaching Job Candidates Upheld as Legal," *Los Angeles Times*, September 19, 1996.

[27] Ruth Mitchell and Patte Barth, *How Teacher Licensing Tests Fall Short* (Washington, D.C.: The Education Trust, 1999), p. 15. Available at: http://www.edtrust.org.

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[30] Feistritzer and Chester.

Appendix A

Issues in Implementing Title II Requirements for Data Collection and Reporting

Section 207 of Title II of the *Higher Education Act*, as amended in 1998, requires the Department of Education (ED) to set up an accountability reporting system for institutions of higher education with teacher preparation programs. ED (and its National Center for Education Statistics) was charged with developing "key definitions for terms, and uniform reporting methods (including key definitions for the consistent reporting of pass rates)..." for this data system. The result was the Department's *Reference and Reporting Guide for Preparing State and Institutional Reports on the Quality of Teacher Preparation* found at www.title2.org. This guide provides instructions for Title II reporting.

Section 207 requires the submission of three annual reports on the quality of teacher preparation: institutions of higher education must report to their states; states must report to the secretary of education; and the secretary of education must report to Congress and the public. The first institutional reports were submitted April 9, 2001, and the first state reports were submitted October 9, 2001.

In their reports, institutions must include the pass rates of their graduates or program completers on required state teacher assessments as well as program information such as the number of students in their teacher preparation programs and the faculty-student ratio in supervised practice teaching. In addition to submitting this information to the state where they are located, institutions are also required to release this information to potential program applicants, secondary school guidance counselors and prospective employers of program graduates through publications such as catalogs and other promotional materials.

States' reports are required to include the pass rates of graduates on state assessments, ranked in quartiles, by their institution, as well as information on state teacher licensure and certification requirements, state assessments and their cut (passing) scores, and alternative routes to certification. States must also report the extent to which they waived requirements for certification in their teaching force.

State reporting was done through a Web-based reporting system in which ED's contractor, Westat, prefilled as much information as possible from publicly available administrative data sources. After the states submitted the reports and the contractor reviewed them for completeness, ED released them in November on the World Wide Web at www.title2.org. Reflecting the federal commitment to reduce paperwork, the collection and dissemination of the Title II state reports was completely paperless.

While much information in the state reports came from existing administrative records, the Title II data collection required new efforts by institutions and states in reporting a number of items. Some of the challenges involved the use of new definitions required by the system, and some involved other aspects of the data collection process.

Program Completers and Their Pass Rates

Section 207 requires institutions of higher education to report the pass rate of their graduates on state teacher tests. Here, the Department defined the term "graduate" as a program completer because many graduates of teacher preparation programs do not get a degree but rather a certificate or some other evidence of program completion. This definition specified that those who are reported as program completers for Title II purposes cannot be identified by their institutions on the basis of the institution issuing the person a recommendation for licensure. Program completers also may not be identified on the basis of passing a state teacher test unless it was a state or institutional condition for graduation or program completion. Because this federal definition is unlike the definition that most institutions and states use in identifying those who complete their programs, substantial confusion occurred initially in identifying program completers, which was the first step in the Title II data collection process.

This definition of a program completer also raised concern among institutions, which do not require passing state tests for graduation or program completion. Institutions requiring passing state tests for graduation will report 100 percent pass rates, but many institutions without such a requirement will not have 100 percent pass rates. Thus in the state rankings, institutions without such a requirement may well rank lower than those that do. Many of those institutions without a requirement to pass state tests argue that the value added by their programs to their students' knowledge and skills is just as great as that added by institutions with the requirement. But instead of incorporating into their academic requirements the state requirement for passing a test in order to teach, they allow the state to eliminate all those who do not pass required tests. A number of institutions told us informally that they would consider making passing the state test a condition of program completion in the future, suggesting that average pass rates for institutions reported in Title II will increase over time.

Title II also called for information on which institutions required passing a state test for admission, as a condition to be allowed to practice teach, or for graduation for this year's cohort of test-takers (see www.title2.org). This information will allow tracking over time those institutions changing their requirements for passing state tests.

Some have argued that the value of the pass rate data reported through the Title II system will erode if more and more institutions require passing state tests as a condition for program completion. One response in data collection might be to require not only the highest pass rate achieved by program completers but also their pass rate the first time they took

the test. This is a common practice in other professions, including results on state bar examinations taken by graduates of law schools. Reporting the pass rates the first and last time the state tests are taken would indicate the improvement achieved before graduation in cases where institutions require students to pass the test to graduate.

A more technical issue that could also arise in the future concerns the calculation of pass rates. Although pass rate calculations do not appear to have been a problem this year, in the future they may become more difficult. Pass rates for program completers of institutions of higher education are now calculated by the Educational Testing Service, National Evaluation Systems or the state in which the institution is located. The calculation of the pass rate for any given cohort in the year of their program completion is relatively straightforward for the year in which they complete their program. Thus, ED provided only general guidance to the organizations doing the calculation for this first cohort.

But in the future when cumulative pass rates covering a three-year period need to be calculated, complications will arise because changes will occur in the tests and the passing scores required by the different states. Agencies calculating pass rates will need to make numerous decisions as to how to incorporate these new requirements along with existing requirements into algorithms for pass rate calculations. As a result of having several different organizations calculating pass rates, discrepancies in procedures across the states may occur.

Alternative Routes to Certification

Alternative routes to certification or licensure also posed a special challenge to states. States have not routinely tabulated or reported information about these routes in the past. States have also never previously been required to report the pass rates on state tests of those seeking certification through alternative routes. As with regular certification, ED now allows states to define alternative routes. Therefore, there is little comparability of these routes across states. Without a standard definition, the Department did not collect uniform information on the characteristics of these routes or the individuals who participated in them.

The Title II system requires states and others with alternative routes to report pass rates separately for alternative and regular routes to certification. Of the 44 states reporting they had established alternative routes, 31 provided separate pass rates. The District of Columbia, New Mexico, Virginia and the Virgin Islands did not cite an explanation for why they did not report alternative route pass rates. Kentucky, Pennsylvania and West Virginia reported that they included the alternative route completers with the regular route completers in calculating the pass rates. These states are out of compliance with the Title II reporting requirements.

The remaining states offered the following reasons for not reporting:

- Alabama does not require assessments for completing alternative routes.
- Massachusetts and South Carolina require assessments for program entry but not as a condition for completion. Pass rates are 100 percent in these states.
- North Carolina and Michigan's programs are in their initial stages and pass rates are not yet available.
- Ohio and Oregon did not have any program completers for the 1999-2000 cohort year.
- Missouri had less than 10 alternative route completers, therefore they were required to suppress their data for privacy reasons.

In addition, California had information about its alternative routes on its Web site the day that the state Title II reports were due, but it indicated in its state report that it did not have such routes. When asked about this discrepancy, the California Commission on Teacher Credentialing offered the following explanation:

> The term that appears on the Commission's Web site refers to alternative delivery methods of teacher preparation. In California, the credentials that are offered (i.e., Multiple Subject, Single Subject and Education Specialist Level I Teaching Credentials) are the only documents that entitle the holder to teach in the classroom in the specified credential areas. There are a variety of ways in which a candidate may fulfill the credential requirements. All teacher preparation programs are held to the same set of rigorous standards of quality and effectiveness set forth by the Commission, and all candidates are held to the same competence and performance expectations. For the purposes of reporting the status of teacher quality for Title II, California's definition is appropriate. (Correspondence from Sam Swofford, California Commission on Teacher Credentialing to U.S. Department of Education, March 27, 2002.)

Teacher Assessments

Title II collected information on tests required by states for initial teacher certification or licensure. Sometimes statewide teacher tests are used for admissions into teacher preparation programs and not for teacher certification per se. Therefore, states may not be required to report results on a particular testing battery used in their state. This is most common with basic skills assessments. According to supplemental information collected from state Web sites and publications, Nebraska, Oklahoma and Wisconsin require use of basic skills tests in program admission but not for state certification. These states were not required to submit pass rates information on their basic skills assessments, although

teacher candidates are required to take them as a condition of admission in teacher preparation programs in the state. Testing companies routinely include results from these tests from these states in their national statistics. Visit www.title2.org for additional information on state assessment policies.

Certification and Waivers

ED's guide for Title II reporting allows initial teacher certificates or licenses to be defined by states, using National Association of State Directors of Teacher Education and Certification (NASDTEC) standards as guidance. NASDTEC's guidance is somewhat ambiguous in that level one (initial) certificates are issued to applicants who have completed an approved program (i.e., met state educational requirements) but have not yet completed ancillary requirements that must be met prior to the issuance of a level two certificate. This definition along with the overarching allowance for the certificates to be defined by the states has led to variance in its application across states.

Some states have broadly interpreted the term "ancillary requirements" to allow new teachers regardless of educational background into the count of those receiving an initial certificate. Typically, states place teachers who have not completed all of their pedagogy courses or passed all required assessments on emergency or temporary licenses. However, for Title II purposes, some states consider these conditions as ancillary and have reported the licenses as their (full) initial certificates. The extent of this type of reporting is not known because there is no comprehensive database of certification requirements, sorted by state, with which to compare the Title II reported information. This type of variation across states affects reporting on the number of new teachers getting initial certificates versus those teaching on waivers.

Title II requires states to report the extent to which their teachers were on waivers–that is, teaching on the basis of an emergency, temporary or provisional license, not on a full initial or higher license or certificate. Although as noted above states have their own definitions for what constitutes a certified teacher and hence one teaching on a waiver, Title II established a national definition for waivers. Use of this definition requires a number of states to alter their data systems and in some cases to collect new data.

Most states reported difficulty in meeting the Title II definition for the first reporting year. Common problems cited by states included:

- *Defining away their emergency permits or waivers.* As we discussed above, states define what constitutes an initial certificate. Some states have interpreted the requirements broadly by including all teachers, regardless of educational background, in the count of those holding some form of "first certificate." In reviewing Web sites and other published materials, we believe that the District of Columbia, Iowa and Ohio may have included certificates normally considered to be provisional in their description of initial certificates, and therefore, excluded these teachers from their waiver count. The District of

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Columbia did not report teachers on a provisional license; Iowa failed to report the existence of a One-Year Conditional License; and Ohio did not report its alternate route completers or those on a One-Year Conditional License as waivers.

- *Not being able to disaggregate out-of-field teachers or teachers licensed in other states from the total waiver counts.* It is common for states to put teachers who transfer from other states or who are not trained in their primary teaching field on emergency licenses, certificates or permits until they can meet all state requirements.

- *An inability to modify their data collection systems to gather data at the district rather than the state level.* In some states, school districts issue waivers and maintain information about them. States reported that they did not have adequate time to revise their district-level data collection systems to meet the Title II reporting deadlines.

- *No definition of what constitutes a long-term substitute.* States are required to report the number of long-term substitutes in the Title II waiver counts. Several states reported that they did not have a common definition for the length of time a teacher must work before he or she is considered to be employed long term as a substitute. Other states reported that districts hire substitutes with little or no state control and that the numbers of substitutes are not reported to the state education agency.

- *Not being able to take a snapshot of the number of teachers working on waivers as of October 1, 2000.* When NCES developed the waiver definition, it assumed that states would collect the data as part of their annual fall district-level enrollment and staffing surveys. NCES believed that states would ask districts to report the number of teachers working on waivers on or about October 1, 2000. However, most states collect these data through the teacher certification or licensure offices, maintaining information on the full roster of teachers who applied for and received emergency or temporary licensure. States tended to report the total number of teachers on waivers for the entire school year, rather than the October 1 snapshot.

- *Not being able to report on the number of noncertified teachers with content expertise.* Few states were able provide counts of the number of teachers on waivers who had content expertise. Content expertise is defined as having a major or minor in some teaching field or passing an assessment in the subject. The nonresponse rates were high in several subject areas ranging from 40 percent of states in English, foreign languages and science to 58 percent for bilingual education.

As a result of these data discrepancies, the Department allowed states to report the waiver data in a manner as close to the definition as possible for the first year of the collection. States must report using the uniform definition next year. The problems that states experienced with collecting and reporting these data prompted the Department to convene a task force to examine how to improve the waiver definition and how to best provide technical assistance to states in revising their data collection systems, but it failed to resolve many of these issues.

General Notes and Data Limitations

Many of the items on the Title II state data collection instrument were open-ended questions. Where possible, the Department attempted to develop constructs or analytic frameworks to summarize information from states. The absence of a response by a state does not, however, necessarily mean that a state does not have a particular initiative, regulation or policy but rather the state used a different approach to addressing the question than the analysis used for the secretary's report. Greater specificity and detail in Title II data items may be necessary to ensure comprehensive and comprehensible data are collected in the future.

Appendix B

Selected Data Tables

Appendix B1: Summary of regular route pass rates: 1999-2000

State	Summary					Basic skills				
	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)
Alabama[a]	28	3,310	3,310	100	100	28	3,310	3,310	100	100
Alaska	5	294	282	96	89-100	5	294	282	96	89-100
Arizona[b]										
Arkansas	18	1,562	1,452	93	54-100	18	1,504	1,501	100	98-100
California	80	18,390	17,921	97	88-100	80	18,379	18,379	100	100
Colorado	15	2,105	1,929	92	81-100	—	—	—	—	—
Connecticut	14	1,800	1,701	95	84-100	13	1,129	1,127	100	96-100
Delaware	4	441	379	86	42-100	4	441	379	86	42-100
District of Columbia	7	314	263	84	55-94	7	300	259	86	50-100
Florida	29	5,031	4,780	95	59-100	29	4,314	4,183	97	50-100
Georgia	33	13,550	12,815	95	63-100	30	6,449	6,216	96	63-100
Hawaii	7	502	442	88	50-93	7	485	471	97	58-100
Idaho[c]										
Illinois	52	8,726	8,493	97	58-100	52	8,586	8,526	99	92-100
Indiana	37	4,354	4,019	92	68-100	37	4,262	3,948	93	68-100
Iowa[c]										
Kansas	22	1,700	1,682	99	75-100	22	1,658	1,641	99	75-100
Kentucky[a]	26	2,323	2,185	94	55-100	—	—	—	—	—
Louisiana	19	2,057	1,795	87	33-100	19	1,992	1,957	98	87-100
Maine	7	456	414	91	78-94	7	456	414	91	78-94
Maryland	21	2,056	1,896	92	59-100	21	1,997	1,923	96	63-100
Massachusetts	57	3,647	2,950	81	46-100	57	3,630	3,234	89	47-100
Michigan	32	6,283	6,283	100	100	32	5,858	5,858	100	100
Minnesota	26	3,375	3,296	98	83-100	26	3,375	3,296	98	83-100
Mississippi	15	1,348	1,319	98	80-100	—	—	—	—	—
Missouri	36	3,654	3,544	97	74-100	—	—	—	—	—
Montana	8	776	776	100	100	8	776	776	100	100
Nebraska[a]										
Nevada	5	862	820	95	89-99	5	780	759	97	89-99
New Hampshire	14	760	732	96	82-100	14	759	743	98	86-100
New Jersey	21	3,407	3,124	92	50-100	—	—	—	—	—
New Mexico	7	497	422	85	65-91	7	464	401	86	77-93
New York	99	14,779	13,932	94	41-100	—	—	—	—	—
North Carolina	38	7,793	7,370	95	90-100	38	2,765	2,723	98	46-100
North Dakota[c]										
Ohio	51	7,133	6,573	92	42-100	—	—	—	—	—
Oklahoma[a]	18	1,545	1,405	91	82-98	—	—	—	—	—
Oregon	16	1,628	1,628	100	100	16	1,628	1,628	100	100
Pennsylvania	87	10,572	9,058	86	17-100	87	10,301	9,906	96	29-100

No Child LEFT BEHIND

Appendix B1: Summary of Regular Route Pass Rates: 1999-2000 continued

State	Summary					Basic skills				
	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)
Rhode Island	8	889	820	92	82-100	8	889	820	92	82-100
South Carolina	29	2,126	1,925	91	30-100	29	2,186	2,186	100	100
South Dakota[c]										
Tennessee	38	3,778	3,447	91	46-100	—	—	—	—	—
Texas	66	12,425	10,878	88	63-100	66	12,425	12,425	100	100
Utah[c]										
Vermont[d]	14	—	—	—	—	—	—	—	—	—
Virginia	37	2,813	2,262	80	27-100	37	2,802	2,282	81	27-100
Washington[c]										
West Virginia[a]	18	1,096	1,096	100	100	—	—	—	—	—
Wisconsin[a]										
Wyoming[c]										
Guam	1	115	115	100	100	1	115	115	100	100
Puerto Rico	31	1,984	1,587	80	27-97	31	1,983	1,676	85	40-98
Total	1,160	162,256	151,120	93		805	106,292	103,344	97	

— Data not reported. For more information on state testing requirements, visit www.title2.org.

[a] Institutions in Alabama, Kentucky, Nebraska, Oklahoma, West Virginia, and Wisconsin require applicants to pass a basic skills test as a condition of admission to a teacher preparation program. These states are not required to submit their basic skills pass rates because they do not require the assessments for certification. Oklahoma has additional tests that are required for certification.

[b] Arizona is in the process of implementing a statewide assessement program. Data will be reported for the 2000-01 cohort.

[c] Idaho, Iowa, North Dakota, South Dakota, Utah, Washington, and Wyoming do not have statewide testing programs.

[d] Vermont requires only a performance assesment. All completers passed this assessment in 1999-2000.

Source: Title II Data Collection—State reports, 2001.

No Child LEFT BEHIND

Appendix B1: Summary of Regular Route Pass Rates: 1999-2000 Continued

State	Professional knowledge					Academic content				
	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)
Alabama[a]	—	—	—	—	—	—	—	—	—	—
Alaska	—	—	—	—	—	—	—	—	—	—
Arizona[b]										
Arkansas	18	1,528	1,456	95	45-100	17	1,257	1,197	95	89-100
California	79	12,558	12,089	96	84-100	68	1,483	1,483	100	100
Colorado	—	—	—	—	—	15	1,858	1,723	93	83-100
Connecticut	9	47	47	100	100	14	1,552	1,466	94	83-100
Delaware	—	—	—	—	—	—	—	—	—	—
District of Columbia	6	28	22	79	88-88	7	100	92	92	82-100
Florida	29	4,464	4,418	99	94-100	26	3,780	3,646	96	75-100
Georgia	—	—	—	—	—	28	1,363	1,251	92	56-100
Hawaii	7	432	419	97	94-100	5	339	302	89	80-91
Idaho[c]										
Illinois	—	—	—	—	—	52	7,469	7,293	98	67-100
Indiana	6	46	46	100	100	37	3,575	3,519	98	91-100
Iowa[c]										
Kansas	21	1,660	1,659	100	99-100	—	—	—	—	—
Kentucky[a]	—	—	—	—	—	26	2,104	1,974	94	56-100
Louisiana	19	1,961	1,850	94	62-100	19	1,832	1,627	89	39-100
Maine	—	—	—	—	—	—	—	—	—	—
Maryland	21	1,572	1,532	97	82-100	21	1,759	1,676	95	74-100
Massachusetts	—	—	—	—	—	57	2,984	2,530	85	50-100
Michigan	—	—	—	—	—	32	8,617	8,617	100	100
Minnesota	—	—	—	—	—	—	—	—	—	—
Mississippi	15	1,958	1,928	98	93-100	15	1,207	1,189	99	80-100
Missouri	20	144	142	99	94-100	36	3,148	3,026	96	73-100
Montana	—	—	—	—	—	—	—	—	—	—
Nebraska[a]										
Nevada	4	91	84	92	79-100	4	195	178	91	78-99
New Hampshire	—	—	—	—	—	12	115	102	89	67-100
New Jersey	—	—	—	—	—	21	3,422	3,137	92	50-100
New Mexico	7	429	396	92	75-100	—	—	—	—	—
New York	99	14,389	13,917	97	74-100	—	—	—	—	—
North Carolina	34	2,453	2,310	94	62-100	—	—	—	—	—
North Dakota[c]										
Ohio	51	6,965	6,660	96	77-100	51	6,136	5,738	94	37-100
Oklahoma[a]	18	1,440	1,341	94	89-100	18	1,561	1,503	96	85-100
Oregon	9	23	23	100	—	16	1,393	1,393	100	100
Pennsylvania	87	9,467	8,688	92	52-100	86	9,272	8,280	89	56-100

No Child LEFT BEHIND

Appendix B1: Summary of Regular Route Pass Rates: 1999-2000 continued

State	Professional knowledge					Academic content				
	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)
Rhode Island	—	—	—	—	—	—	—	—	—	—
South Carolina	19	1,318	1,248	95	50-100	29	1,928	1,799	93	35-100
South Dakota[c]										
Tennessee	38	3,654	3,447	94	46-100	32	1,350	1,191	88	33-100
Texas	66	11,611	10,488	90	58-100	66	11,006	10,106	92	71-100
Utah[c]										
Vermont	—	—	—	—	—	—	—	—	—	—
Virginia	—	—	—	—	—	30	602	556	92	74-100
Washington[c]										
West Virginia[a]	—	—	—	—	—	18	983	983	100	100
Wisconsin[a]										
Wyoming[c]										
Guam	—	—	—	—	—	—	—	—	—	—
Puerto Rico	31	1,957	1,715	88	47-99	—	—	—	—	—
Total	713	80,195	75,925	95		858	82,390	77,577	94	

— Data not reported. For more information on state testing requirements, visit www.title2.org.

[a] Institutions in Alabama, Kentucky, Nebraska, Oklahoma, West Virginia, and Wisconsin require applicants to pass a basic skills test as a condition of admission to a teacher preparation program. These states are not required to submit their basic skills pass rates because they do not require the assessments for certification. Oklahoma has additional tests that are required for certification.

[b] Arizona is in the process of implementing a statewide assessement program. Data will be reported for the 2000-01 cohort.

[c] Idaho, Iowa, North Dakota, South Dakota, Utah, Washington, and Wyoming do not have statewide testing programs.

Source: Title II Data Collection—State reports, 2001.

No Child LEFT BEHIND

Appendix B1: Summary of Regular Route Pass Rates: 1999-2000 Continued

State	Other content					Teaching special populations				
	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)
Alabama[a]	—	—	—	—	—	—	—	—	—	—
Alaska	—	—	—	—	—	—	—	—	—	—
Arizona[b]										
Arkansas	10	60	60	100	100	7	54	47	87	86-100
California	72	7,169	7,169	100	100	—	—	—	—	—
Colorado	1	36	27	75	80	7	211	179	85	58-100
Connecticut	4	15	14	93	93	6	205	187	91	83-100
Delaware	—	—	—	—	—	—	—	—	—	—
District of Columbia	—	—	—	—	—	5	54	50	93	82-97
Florida	—	—	—	—	—	—	—	—	—	—
Georgia	33	3,895	3,567	92	54-100	18	1,843	1,781	97	83-100
Hawaii	2	13	13	100	100	5	103	93	90	64-100
Idaho[c]										
Illinois	7	176	172	98	91-100	26	1,686	1,622	96	86-100
Indiana	21	230	230	100	100	12	171	171	100	100
Iowa[c]										
Kansas	—	—	—	—	—	—	—	—	—	—
Kentucky[a]	14	167	160	96	87-100	11	257	226	88	64-98
Louisiana	8	14	14	100	100	—	—	—	—	—
Maine	—	—	—	—	—	—	—	—	—	—
Maryland	1	—	—	—	—	10	136	124	91	73-100
Massachusetts	57	22	18	82	82-82	57	353	334	95	81-100
Michigan	23	208	208	100	100	10	361	361	100	100
Minnesota	—	—	—	—	—	—	—	—	—	—
Mississippi	3	15	15	100	100	7	70	63	90	62-100
Missouri	17	101	100	99	95-100	17	319	318	100	98-100
Montana	—	—	—	—	—	—	—	—	—	—
Nebraska[a]										
Nevada	2	—	—	—	—	2	24	24	100	100
New Hampshire	—	—	—	—	—	—	—	—	—	—
New Jersey	6	31	30	97	93-100	1	19	19	100	100
New Mexico	—	—	—	—	—	—	—	—	—	—
New York	99	14,558	13,913	96	43-100	—	—	—	—	—
North Carolina	35	2,554	2,322	91	72-100	—	—	—	—	—
North Dakota[c]										
Ohio	31	186	186	100	100	38	843	825	98	85-100
Oklahoma[a]	2	22	22	100	100	2	49	46	94	91-96
Oregon	10	102	102	100	100	6	133	133	100	100

No Child LEFT BEHIND

Appendix B1: Summary of Regular Route Pass Rates: 1999-2000 continued

State	Other content					Teaching special populations				
	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)	# of institutions	# Tested	# Passing	Pass rate (%)	Range (%)
Pennsylvania	42	782	771	99	91-100	42	1,532	1,346	88	57-100
Rhode Island	—	—	—	—	—	—	—	—	—	—
South Carolina	4	31	31	100	100	11	173	155	90	80-100
South Dakota[c]										
Tennessee	16	196	187	95	93-100	17	418	401	96	85-100
Texas	37	179	178	99	100	42	600	543	91	72-100
Utah[c]										
Vermont	—	—	—	—	—	—	—	—	—	—
Virginia	4	18	18	100	—	—	—	—	—	—
Washington[c]										
West Virginia[a]	6	26	26	100	—	—	—	—	—	—
Wisconsin[a]										
Wyoming[c]										
Guam	—	—	—	—	—	—	—	—	—	—
Puerto Rico	—	—	—	—	—	—	—	—	—	—
Total	567	30,921	29,668	96		359	13,333	12,755	96	

— Data not reported. For more information on state testing requirements, visit www.title2.org.

[a] Institutions in Alabama, Kentucky, Nebraska, Oklahoma, West Virginia, and Wisconsin require applicants to pass a basic skills test as a condition of admission to a teacher preparation program. These states are not required to submit their basic skills pass rates because they do not require the assessments for certification. Oklahoma has additional tests that are required for certification.

[b] Arizona is in the process of implementing a statewide assessement program. Data will be reported for the 2000-01 cohort.

[c] Idaho, Iowa, North Dakota, South Dakota, Utah, Washington, and Wyoming do not have statewide testing programs.

Source: Title II Data Collection—State reports, 2001.

No Child LEFT BEHIND

Appendix B2: Classroom teachers on waivers, overall and by poverty status of district, by by state: 2000–2001

State	All districts					High poverty districts					Low poverty districts				
	Total number of teachers	Teachers on waivers				Total number of teachers	Teachers on waivers				Total number of teachers	Teachers on waivers			
		Total		With content expertise			Total		With content expertise			Total		With content expertise	
		Number	Percent	Number	Percent		Number	Percent	Number	Percent		Number	Percent	Number	Percent
Alabama	47,855	935	2	432	46	8,296	278	3	123	44	39,559	657	2	309	47
Alaska	8,117	109	1	—	—	8,082	—	—	—	—	35	—	—	—	—
Arizona	43,580	7,106	16	—	—	5,086	—	—	—	—	38,494	—	—	—	—
Arkansas	27,428	339	1	339	100	5,552	103	2	103	100	21,876	236	1	236	100
California	284,628	45,489	16	—	—	88,831	20,122	23	—	—	195,797	25,367	13	—	—
Colorado	42,799	1,142	3	748	65	7,557	379	5	274	72	35,242	763	2	474	62
Connecticut[a]	55,976	38	*	—	—	18,725	13	*	—	—	37,251	25	*	—	—
Delaware	7,516	464	6	10	2	1,266	89	7	2	2	6,250	375	6	8	2
District of Columbia	5,044	0	0	—	—	—	—	—	—	—	—	—	—	—	—
Florida	107,607	3,692	3	1,470	40	4,711	261	6	73	28	102,896	3,431	3	1,397	41
Georgia	91,467	8,747	10	8,747	100	10,838	550	5	550	100	77,636	3,549	5	3,549	100
Hawaii	11,142	991	9	620	63	2,498	251	10	152	61	8,644	740	9	468	63
Idaho	13,714	330	2	13	4	1,215	79	7	—	—	12,499	251	2	—	—
Illinois	132,692	3,520	3	404	11	46,542	2,512	5	323	13	86,150	1,008	1	75	7
Indiana	132,896	1,141	1	—	—	44,523	471	1	0	*	88,369	670	1	—	—
Iowa	38,624	0	0	—	—	11,633	—	—	—	—	26,991	—	—	—	—
Kansas	39,277	95	*	55	58	6,942	41	1	6	15	32,355	54	*	49	91
Kentucky	40,068	375	1	92	25	6,788	19	*	8	42	33,280	356	1	84	24
Louisiana	55,429	8,399	15	—	—	9,179	2,142	23	—	—	46,250	6,257	14	—	—
Maine	16,348	35	*	—	—	2,304	10	*	—	—	14,044	25	*	—	—
Maryland	53,500	7,126	13	2,650	37	14,208	2,676	19	1,663	62	39,292	4,450	11	987	22
Massachusetts	64,198	161	*	—	—	30,972	47	*	—	—	33,226	114	*	—	—
Michigan	111,789	2,288	2	23	1	23,900	56	*	1	2	87,889	2,232	3	22	1
Minnesota	90,636	307	*	265	86	21,874	87	*	147	169	68,762	220	*	118	54
Mississippi	31,017	1,684	5	71	4	5,108	452	9	12	3	25,909	1,232	5	59	5
Missouri	65,389	1,803	3	1,003	56	12,542	715	6	357	50	52,847	1,170	2	646	55
Montana	10,323	30	*	—	—	—	11	—	—	—	—	19	—	—	—
Nebraska	26,014	83	*	83	100	11,514	32	*	32	100	14,500	51	*	51	100
Nevada	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Hampshire	10,240	96	1	74	77	5,298	40	1	25	63	4,942	56	1	49	88
New Jersey	98,072	1,815	2	1,370	75	32,098	921	3	668	73	65,974	894	1	702	79
New Mexico	21,467	2,187	10	—	—	3,323	671	20	—	—	18,144	1,516	8	—	—
New York	211,073	20,602	10	—	—	95,157	16,182	17	—	—	115,916	4,420	4	—	—
North Carolina	85,667	13,484	16	7,991	59	10,099	1,819	18	1,160	64	75,568	11,665	15	6,831	59
North Dakota	8,603	15	*	15	100	1,007	4	*	4	100	7,596	11	*	11	100

Appendix B2: Classroom teachers on waivers, overall and by poverty status of district, by state: 2000–2001 continued

State	All districts					High poverty districts					Low poverty districts				
	Total number of teachers	Teachers on waivers				Total number of teachers	Teachers on waivers				Total number of teachers	Teachers on waivers			
		Total		With content expertise			Total		With content expertise			Total		With content expertise	
		Number	Percent	Number	Percent		Number	Percent	Number	Percent		Number	Percent	Number	Percent
Ohio	111,000	0	0	—	—	—	—	—	—	—	—	—	—	—	—
Oklahoma	49,607	80	*	80	100	—	80	—	80	100	—	—	—	—	—
Oregon	26,088	638	2	638	100	3,978	83	2	83	100	22,110	555	3	555	100
Pennsylvania	118,080	953	1	—	—	35,062	737	2	—	—	83,018	216	*	—	—
Rhode Island	11,854	56	*	38	68	5,110	44	1	29	66	6,744	12	*	9	75
South Carolina	33,426	1,819	5	861	47	1,655	89	5	51	57	31,771	1,730	5	810	47
South Dakota	9,493	12	*	—	—	1,458	4	*	—	—	8,035	8	*	—	—
Tennessee	56,818	1,828	3	497	27	11,809	1,067	9	109	10	45,009	761	2	388	51
Texas	280,108	32,228	12	10,712	33	63,302	8,048	13	3,301	41	216,806	24,180	11	7,411	31
Utah	35,288	2,535	7	—	—	2,393	165	7	—	—	32,895	2,370	7	—	—
Vermont	8,472	113	1	59	52	—	33	—	16	48	—	80	—	43	54
Virginia	86,415	5,838	7	4,936	85	16,012	476	3	59	12	70,403	5,362	8	4,877	91
Washington	57,504	122	*	—	—	—	13	—	—	—	—	119	—	—	—
West Virginia	21,839	931	4	708	76	3,481	152	4	110	72	18,358	779	4	598	77
Wisconsin	59,994	775	1	—	—	19,597	421	2	—	—	40,397	354	1	—	—
Wyoming	8,307	10	*	10	100	1,009	0	0	—	—	7,298	10	*	10	100
Guam	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerto Rico	39,090	1,007	3	35	3	—	—	—	—	—	—	—	—	—	—
Total (all states)	3,103,578	183,573	6	45,049	25	722,534	62,445	9	9,521	15	2,097,027	108,350	5	30,826	28
Total (only states reporting content data)	1,764,516	93,879	5	45,049	48	388,508	21,828	6	9,521	44	1,305,666	66,619	5	30,826	46
Total number of states reporting content data	32					30					29				

— Data not reported.

* Less than .5 percent

[a] Connecticut reported only long-term substitutes in the not fully certified category.

Note: A waiver is 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. Visit www.title2.org for additional information on waivers.

Source: Title II Data Collection—State Reports, 2001.

Appendix B3: Classroom teachers on waivers, by selected subject areas, by state : 2000-2001

State	Bilingual – all levels					Special education				
	Total number of teachers	Teachers on waivers				Total number of teachers	Teachers on waivers			
		Total		With content expertise			Total		With content expertise	
		Number	Percent	Number	Percent		Number	Percent	Number	Percent
Alabama	—	—	—	4	44	9,509	149	2	59	40
Alaska	80	—	—	—	—	434	29	7	—	—
Arizona	—	—	—	—	—	—	—	—	—	—
Arkansas	110	0	0	—	—	2,986	16	1	16	100
California	124,055	3,319	3	—	—	26,109	9,468	36	—	—
Colorado	845	79	9	33	42	3,412	181	5	72	40
Connecticut[a]	—	3	—	—	—	7,883	10	*	—	—
Delaware	9	1	11	—	—	1,589	85	5	—	—
District of Columbia	—	—	—	—	—	—	—	—	—	—
Florida	648	6	1	26	433	20,776	1,019	5	377	37
Georgia	479	51	11	51	100	13,323	1,739	13	1,739	100
Hawaii	68	14	21	9	64	1,953	527	27	219	42
Idaho	129	9	7	0	0	1,290	115	9	0	0
Illinois	3,149	800	25	10	1	22,709	388	2	63	16
Indiana	—	2	—	2	100	10,076	1,025	10	—	—
Iowa	222	—	—	—	—	4,935	—	—	—	—
Kansas	303	2	1	0	0	4,253	16	*	3	19
Kentucky	5,389	10	*	2	20	6,143	209	3	20	10
Louisiana	139	22	16	—	—	8,160	1,887	23	—	—
Maine	77	1	1	—	—	906	2	*	—	—
Maryland	320	79	25	0	0	6,433	1,267	20	8	1
Massachusetts	975	8	1	—	—	9,241	91	1	—	—
Michigan	344	46	13	—	—	17,397	297	2	—	—
Minnesota	2,115	27	1	38	—	6,330	82	1	53	65
Mississippi	—	—	—	—	—	3,599	591	16	—	—
Missouri	191	5	3	0	0	9,438	417	4	251	60
Montana	3	0	0	—	—	788	1	*	—	—
Nebraska	290	0	0	—	—	4,749	17	*	17	100
Nevada	—	—	—	—	—	—	—	—	—	—
New Hampshire	65	1	2	2	200	1,356	23	2	20	87
New Jersey	1,985	68	3	0	0	15,552	377	2	0	0
New Mexico	1,076	420	39	—	—	3,961	686	17	—	—
New York	38,966	2,133	5	—	—	31,305	2,611	8	—	—
North Carolina	844	360	43	145	40	21,258	2,759	13	1,325	48

No Child LEFT BEHIND

Appendix B3: Classroom teachers on waivers, by selected subject areas, by state : 2000-2001 continued

State	Bilingual – all levels					Special education				
	Total number of teachers	Teachers on waivers				Total number of teachers	Teachers on waivers			
		Total		With content expertise			Total		With content expertise	
		Number	Percent	Number	Percent		Number	Percent	Number	Percent
North Dakota	0	—	—	—	—	752	0	0	—	—
Ohio	—	—	—	—	—	—	—	—	—	—
Oklahoma	—	—	—	—	—	5,053	1	*	1	100
Oregon	493	49	10	49	100	3,381	89	3	89	100
Pennsylvania	—	—	—	—	—	16,269	168	1	—	—
Rhode Island	417	16	4	—	—	2,104	6	*	—	—
South Carolina	99	13	13	11	85	3,998	508	13	99	19
South Dakota	8,486	6	*	—	—	8,537	9	*	—	—
Tennessee	215	15	7	0	0	6,954	333	5	86	26
Texas	23,007	3,390	15	1,547	46	31,288	4,014	13	753	19
Utah	116	17	15	—	—	3,109	324	10	—	—
Vermont	—	3	—	3	100	—	18	—	4	22
Virginia	1,189	168	14	138	82	13,928	2,497	18	969	39
Washington	—	—	—	—	—	—	—	—	—	—
West Virginia	—	—	—	—	—	3,219	650	20	471	72
Wisconsin	487	69	14	—	—	8,053	329	4	—	—
Wyoming	0	—	0	—	—	401	2	*	2	100
Guam	—	—	—	—	—	—	—	—	—	—
Puerto Rico	0	—	0	—	—	3,031	26	1	1	4
Total (All States)	217,385	11,221	5	2,070	18	387,930	35,058	9	6,717	19
Total (Only States Reporting Content Data)	41,533	5,160	12	2,070	40	222,723	17,439	8	6,717	39
Total # States Reporting Content Data	22									

— Data not reported.

* Less than .5 percent

[a] Connecticut reported only long-term substitutes in the not fully-certified cateogory.

Note: A waiver is any temporary or emergency permit, license, or other authorization that permits an individual to reach in a public school classroom without having received an initial certification or license from that state or any other state. Visit www.title2.org for additional information on waivers.

Source: Title II Data Collection—State Reports, 2001.

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Appendix B3: Classroom teachers on waivers, by selected subject areas, by state: 2000-2001 continued

State	Mathematics (MS/HS)					Science (MS/HS)				
	Total number of teachers	Teachers on waivers				Total number of teachers	Teachers on waivers			
		Total		With content expertise			Total		With content expertise	
		Number	Percent	Number	Percent		Number	Percent	Number	Percent
Alabama	5,817	155	3	61	39	4,637	189	4	93	49
Alaska	—	—	—	—	—	—	—	—	—	—
Arizona	—	—	—	—	—	—	—	—	—	—
Arkansas	1,668	56	3	56	100	1,487	135	9	135	100
California	15,761	2,606	17	—	—	13,012	3,008	23	—	—
Colorado	2,858	106	4	68	64	2,646	98	4	81	83
Connecticut[a]	2,896	1	*	—	—	2,882	2	*	—	—
Delaware	406	23	6	—	—	401	25	6	3	12
District of Columbia	—	—	—	—	—	—	—	—	—	—
Florida	6,083	74	1	116	157	5,191	54	1	123	228
Georgia	5,001	207	4	207	100	3,864	266	7	266	100
Hawaii	480	47	10	34	72	508	37	7	34	92
Idaho	1,195	36	3	2	6	1,063	40	4	1	3
Illinois	7,597	90	1	17	19	6,954	129	2	25	19
Indiana	8,894	46	1	46	100	6,730	61	1	61	100
Iowa	2,844	—	—	—	—	2,456	—	—	—	—
Kansas	4,403	9	*	8	89	3,596	8	*	8	100
Kentucky	3,274	31	1	11	35	2,953	22	1	14	64
Louisiana	2,807	522	19	—	—	1,653	362	22	—	—
Maine	1,008	3	*	—	—	964	7	1	—	—
Maryland	2,463	508	21	512	101	2,702	480	18	488	102
Massachusetts	4,068	6	*	—	—	4,562	7	*	—	—
Michigan	5,340	103	2	6	6	4,761	93	2	5	5
Minnesota	9,118	19	*	33	174	7,735	16	*	41	256
Mississippi	1,518	43	3	—	—	828	22	3	—	—
Missouri	4,281	137	3	76	55	3,898	194	5	121	62
Montana	518	3	1	—	—	491	2	*	—	—
Nebraska	846	0	0	—	—	781	0	0	—	—
Nevada	—	—	—	—	—	—	—	—	—	—
New Hampshire	662	12	2	2	17	611	8	1	17	213
New Jersey	6,905	62	1	62	100	4,788	127	3	127	100
New Mexico	1,432	217	15	162	75	1,193	130	11	112	86
New York	16,342	1,516	9	—	—	14,769	1,675	11	—	—
North Carolina	8,579	968	11	680	70	9,045	1,302	14	929	71

No Child LEFT BEHIND

Appendix B3: Classroom teachers on waivers, by selected subject areas, by state : 2000-2001 continued

State	Mathematics (MS/HS)					Science (MS/HS)				
	Total number of teachers	Teachers on waivers				Total number of teachers	Teachers on waivers			
		Total		With content expertise			Total		With content expertise	
		Number	Percent	Number	Percent		Number	Percent	Number	Percent
North Dakota	371	0	0	—	—	365	3	1	3	100
Ohio	—	—	—	—	—	—	—	—	—	—
Oklahoma	2,852	17	1	17	100	2,695	12	*	12	100
Oregon	1,091	28	3	28	100	1,516	50	3	50	100
Pennsylvania	6,690	62	1	—	—	4,212	100	2	—	—
Rhode Island	708	9	1	5	56	768	15	2	10	67
South Carolina	2,937	184	6	101	55	2,374	223	9	162	73
South Dakota	4,854	4	*	—	—	4,791	5	*	—	—
Tennessee	6,901	221	3	94	43	6,807	250	4	140	56
Texas	19,992	2,574	13	843	33	16,838	2,443	15	1,013	41
Utah	2,839	239	8	—	—	1,814	221	12	—	—
Vermont	—	15	—	6	40	—	7	—	7	100
Virginia	4,814	393	8	330	84	4,197	431	10	359	83
Washington	—	—	—	—	—	—	—	—	—	—
West Virginia	5,630	22	*	14	64	2,948	53	2	46	87
Wisconsin	3,315	28	1	—	—	3,164	44	1	—	—
Wyoming	363	0	0	—	—	361	1	*	1	100
Guam	—	—	—	—	—	—	—	—	—	—
Puerto Rico	2,074	55	3	2	4	1,878	68	4	7	10
Total (all states)	200,495	11,457	6	3,599	31	171,889	12,425	7	4,494	36
Total (only states reporting content Data)	133,049	6,401	5	3,599	56	115,510	6,970	6	4,494	64
Total number of states reporting content data	29					32				

— Data not reported.

* Less than .5 percent

[a] Connecticut reported only long-term substitutes in the not fully-certified cateogory.

Notes: A waiver is any temporary or emergency permit, license, or other authorization that permits an individual to reach in a public school classroom without having received an initial certification or license from that state or any other state. Visit www.title2.org for additional information on waivers.
MS = Middle School; HS = High School.

Source: Title II Data Collection—State Reports, 2001.

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Appendix B4: Institutions identified as at-risk of being classified as low-performing or identified as low performing: 2001

State	At-Risk	Low-Performing
Mississippi	Jackson State University	None
Missouri	Central Methodist College Missouri Valley College	None
New York	Boricua College City University of New York-York College Long Island University-Brooklyn	None
North Carolina	None	Shaw University
Ohio	Heidelberg College Lake Erie College Denison University Urbana University Central State University Notre Dame College	None
Wyoming	The following teacher preparation programs at the University of Wyoming: Art, Adaptive Physical Education, Early Childhood Special Education, Elementary Education, English, Exceptional Children, Generalist, Journalism, Middle School, Music, Professional Education, Speech, Teaching Field	The following teacher preparation programs at the University of Wyoming: Agriculture, Drama, English as a Second Language, Modern Foreign Languages, Principal Endorsement Program Superintendent

Source: Title II Data Collection—State Reports, 2001.

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