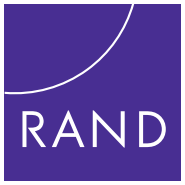

RAND EDUCATION

THE ARTS
CHILD POLICY
CIVIL JUSTICE
EDUCATION
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INTERNATIONAL AFFAIRS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
SUBSTANCE ABUSE
TERRORISM AND HOMELAND SECURITY
TRANSPORTATION AND INFRASTRUCTURE
WORKFORCE AND WORKPLACE

This PDF document was made available from www.rand.org as a public service of the RAND Corporation.

Jump down to document

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

Support RAND

Browse Books & Publications

Make a charitable contribution

For More Information

Visit RAND at www.rand.org

Explore RAND Education

View document details

This product is part of the RAND Corporation reprint series. RAND reprints present previously published journal articles, book chapters, and reports with the permission of the publisher. RAND reprints have been formally reviewed in accordance with the publisher's editorial policy, and are compliant with RAND's rigorous quality assurance standards for quality and objectivity.

State and Local Implementation of the *No Child Left Behind Act*
Volume II—
Teacher Quality Under *NCLB*: Interim Report

A report from the National Longitudinal Study of *No Child Left Behind* (NLS-*NCLB*) and the Study of State Implementation of Accountability and Teacher Quality Under *No Child Left Behind* (SSI-*NCLB*)

Prepared by:

Beatrice F. Birman
Kerstin Carlson Le Floch
Amy Klekotka
Meredith Ludwig
James Taylor
Kirk Walters
Andrew Wayne
Kwang-Suk Yoon
American Institutes for Research

Series Principal Investigators

NLS-*NCLB*
Georges Vernez, RAND
Beatrice F. Birman, AIR
Michael S. Garet, AIR

SSI-*NCLB*
Jennifer O'Day, AIR

Prepared for:

U.S. Department of Education
Office of Planning, Evaluation and Policy Development
Policy and Program Studies Service

2007

This report was prepared for the U.S. Department of Education under Contract Number ED00CO0087 with RAND and Contract Number ED-01-CO-0026/0024 with AIR. Stephanie Stullich served as the contracting officer's representative for the National Longitudinal Study of *No Child Left Behind*, and Collette Roney and Elizabeth Eisner served as contracting officer's representatives for the Study of State Implementation of Accountability and Teacher Quality Under *No Child Left Behind*. The views expressed herein do not necessarily represent the positions or policies of the Department of Education. No official endorsement by the U.S. Department of Education is intended or should be inferred.

U.S. Department of Education
Margaret Spellings
Secretary

Office of Planning, Evaluation and Policy Development
Doug Mesecar
Acting Assistant Secretary

Policy and Program Studies Service
Alan Ginsburg
Director

Program and Analytic Studies
David Goodwin
Director

August 2007

This report is in the public domain, except for the cover photo which is Image #107015, © Getty Images, 2004. Authorization to reproduce it in whole or in part is granted. While permission to reprint this publication is not necessary, the suggested citation is: U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service, *State and Local Implementation of the* No Child Left Behind Act*, Volume II—Teacher Quality Under* NCLB*: Interim Report,* Washington, D.C., 2007.

To order copies of this report, **write**:

ED Pubs
Education Publications Center
U.S. Department of Education
P.O. Box 1398
Jessup, MD 20794-1398;

Or **fax**, dial (301) 470-1244;

You may also call toll-free: 1-877-433-7827 (1-877-4-ED-PUBS). If 877 service is not yet available in your area, call 1-800-872-5327 (1-800-USA-LEARN); Those who use a telecommunications device for the deaf (TDD) or a teletypewriter (TTY), should call 1-877-576-7734.

To order online, point your Internet browser to: www.edpubs.org.

This report is also available on the Department's Web site at:
www.ed.gov/about/offices/list/opepd/ppss/reports.html#title.

On request, this publication is available in alternate formats, such as Braille, large print, or computer diskette. For more information, please contact the Department's Alternate Format Center at 202-260-0852 or 202-205-0818.

EXECUTIVE SUMMARY

Ensuring that every child is taught by a highly qualified teacher is a central feature of the *No Child Left Behind Act of 2001* (*NCLB*), the most recent reauthorization of the *Elementary and Secondary Education Act of 1965* (*ESEA*). *NCLB* requires states to set standards for all teachers to be considered highly qualified and districts to notify parents of students in Title I programs if their child's teacher does not meet these standards. The requirements apply to all teachers of core academic subjects—English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography—and the requirements also apply to teachers who provide instruction in these subjects to students with limited English proficiency (LEP) and students with disabilities. To help improve the qualifications of teachers, *NCLB* provides funds that states can use for a wide variety of efforts, from improving certification systems to supporting strategies to recruit and retain highly qualified teachers. The law also supports ongoing professional development for all teachers regardless of their highly qualified status. Finally, *NCLB* sets standards for the qualifications of instructional paraprofessionals (teacher aides) employed with Title I funds, recognizing that, in many Title I schools, paraprofessionals play a substantial role in children's educational experiences. Taken together, the requirements of *NCLB* represent a federal commitment to providing the nation's children—in all states, districts and schools—with teachers and paraprofessionals who will help them achieve at high levels of proficiency.

KEY FINDINGS

Based on findings from two federally funded studies—the *Study of State Implementation of Accountability and Teacher Quality Under NCLB* (SSI-*NCLB*) and the *National Longitudinal Study of NCLB* (NLS-*NCLB*)—this report describes the progress that states, districts, and schools have made implementing the teacher and paraprofessional qualification provisions of the *No Child Left Behind Act* through 2004–05. Generally, the studies found that:

- Most teachers met their states' requirements to be considered highly qualified under *NCLB*. However, state policies concerning highly qualified teachers varied greatly, both in the passing scores that new teachers must meet to demonstrate content knowledge on assessments and in the extent to which state "HOUSSE" policies give existing teachers credit for years of prior teaching experience versus emphasizing more direct measures of content knowledge and teaching performance.
- The percentage of teachers who are not highly qualified under *NCLB* is higher for special education teachers, teachers of LEP students and middle school teachers, as well as for teachers in high-poverty and high-minority schools. Moreover, even among teachers who were considered highly qualified, teachers in high-poverty schools had less experience and were less likely to have a degree in the subject they taught.
- Although nearly all teachers[1] reported taking part in content-focused professional development related to teaching reading or mathematics, a relatively small proportion participated in such learning opportunities for an extended period of time. For example, only 20 percent of elementary teachers participated for more than 24 hours in professional development on

[1] Teachers is a category that includes general education elementary teachers, middle school teachers (teaching English or mathematics or both subjects), and high school teachers (teaching English or mathematics or both subjects).

instructional strategies in reading;[2] only 8 percent received more than 24 hours of professional development on instructional strategies in mathematics.

- About two-thirds of instructional paraprofessionals were considered qualified under *NCLB*, but nearly a third (28 percent) did not know their status or did not provide a response to the study questions. Most paraprofessionals reported working under the direct supervision of a teacher, but some Title I instructional paraprofessionals indicated that they worked with students on their own without close supervision from a teacher.

In general, the SSI-*NCLB* and NLS-*NCLB* studies indicate that states and districts are working to implement and comply with the *NCLB* requirements for teacher and paraprofessional qualifications. However, variation in state policies concerning highly qualified teachers raises questions about whether some states have set sufficiently high standards for considering teachers to be highly qualified, and enduring inequities in access to highly qualified teachers continue despite *NCLB*'s goal of ensuring that all students have knowledgeable and effective teachers.

This report presents findings from these two national studies, and summarizes major issues in state-, district-, and school-level implementation of the teacher qualifications provisions of *NCLB*. This report addresses the following broad questions:

- How do states designate teachers as highly qualified? What is the capacity of states to collect and accurately report on teacher and paraprofessional qualifications?
- How many teachers meet *NCLB* requirements to be highly qualified (as operationalized by their states)? How does this vary across states, districts, schools, and types of teachers?
- What are states, districts, and schools doing to increase the number and distribution of highly qualified teachers?
- To what extent are teachers participating in high-quality professional development (e.g., professional development that is sustained, intensive, and content-focused)?
- How many instructional paraprofessionals meet the *NCLB* qualification requirements? What are states, districts, and schools doing to help paraprofessionals meet these requirements?

NCLB REQUIREMENTS

To ensure that teachers are highly qualified and paraprofessionals are qualified, *NCLB* sets requirements for their qualifications; requires the provision of information to educators, parents and other stakeholders about these qualifications; and provides support for actions by states, districts and schools.

To set teacher and paraprofessional qualifications, *NCLB* requires the following:

- States must have ensured that all teachers of core academic subjects—English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography—were designated as highly qualified by the end of the 2005–06 school

[2] For simplicity, the term "reading" is used throughout this report to refer to the set of subjects that may be variously known as reading, English, or language arts.

year,[3] although teachers hired after *NCLB* took effect were expected to meet the law's requirements when hired.

- New elementary teachers must demonstrate subject-matter competency by passing a rigorous state test. New secondary teachers must either pass a state test in each core academic subject they teach; have completed an academic major, course work equivalent, or an advanced degree; or have obtained advanced certification.
- Existing teachers must also meet these requirements, although states may choose to offer teachers not new to the profession[4] the option of demonstrating subject matter competency through a High Objective Uniform State Standard of Evaluation (HOUSSE).
- Teachers who primarily teach students with limited English proficiency (LEP) or students with disabilities must meet the *NCLB* requirements if they provide instruction in a core academic subject.
- Title I paraprofessionals must have two years of postsecondary education, an associate degree or higher, or a passing score on a formal state or local academic assessment of ability to assist in teaching reading, writing and mathematics.

To provide information about teacher and paraprofessional qualifications, *NCLB* requires that:

- States and districts report annually on progress toward the annual measurable objectives set forth in their state plans to ensure that all teachers who teach in core academic subjects are highly qualified by the end of the 2005–06 school year and
- Parents of children attending Title I schools have access to information about the professional qualifications of their children's teachers.

To improve the knowledge and support ongoing learning of all teachers, *NCLB*:

- Requires that districts spend at least 5 percent of their Title I funds for professional development activities to ensure that all teachers are highly qualified. Schools that have been identified for improvement must spend at least 10 percent of their Title I allocations on professional development or other strategies that directly support teachers.
- Provides many sources of support that can be tapped to help teachers and paraprofessionals meet the law's requirements as well as to enhance the knowledge and skills of the teaching force more generally. For example, Title II, Part A, provides funds to districts and states for a wide range of activities, including professional development and strategies to recruit and retain highly qualified teachers; Title III, Part A, the *English Language Acquisition, Language Enhancement, and Academic Accountability Act*, requires subgrantees to provide high-quality professional development to teachers, principals, administrators, and others to improve instruction and assessment of LEP students.

[3] In October 2005, the Department announced that states making a good-faith effort to ensure that there was a highly qualified teacher in every classroom were invited to submit a revised state plan for accomplishing that goal by the end of the 2006–07 school year.

[4] States define "teachers not new to the profession" differently, thus, when the reader encounters this term, note that it encompasses varying state approaches.

STATE POLICIES AND DATA SYSTEMS FOR HIGHLY QUALIFIED TEACHERS

How do states designate teachers as highly qualified?

Although *NCLB* sets basic requirements for teachers to be designated as highly qualified and for paraprofessionals to be designated as qualified, states determine the specifics of how teachers may demonstrate content knowledge in each core subject they teach. By December 2004, all states had drafted criteria for determining whether teachers were highly qualified under *NCLB*. Since then, many of the state policies were adjusted to take into account flexibility offered by the U.S. Department of Education.[5]

State policies concerning highly qualified teachers varied greatly with regard to requirements for teachers to demonstrate content knowledge.

The first two *NCLB* requirements for highly qualified teachers—that they have a bachelor's degree and full certification—were fairly straightforward, and all states incorporated these as basic elements of their policies for highly qualified teachers.[6] However, the third *NCLB* requirement for highly qualified teachers—that they demonstrate adequate content knowledge in every subject taught—revealed the greatest variation in how states approached their policies for highly qualified teachers. For example, regarding the HOUSSE[7] option, most states had developed policies, but some were more stringent in their requirements than others. For teachers not new to the profession, HOUSSE provisions in some states allowed experience to be weighted more heavily than more direct indicators of subject matter knowledge. Even for new teachers, states differed dramatically in the passing scores for tests used to determine teachers' knowledge. For example, on the Praxis II test, *Elementary Education: Curriculum, Instruction, and Assessment*, the minimum required scores ranged from 135 in Mississippi to 168 in Pennsylvania (out of a maximum score of 200).

What is the capacity of states to collect and accurately report on teacher and paraprofessional qualifications?

States reported they were improving their data systems for teacher qualifications, but still could not connect all relevant variables.

States implemented data systems necessary to track teacher qualifications, but many of these systems were not yet adequate to serve the reporting requirements of *NCLB*. In 2004–05, 46 states had data systems that included unique teacher identifier codes, and 46 states and the District of Columbia were tracking the licenses or certifications held by teachers, including the subject, grade, and date of certification. However, fewer states could track data elements that were directly related to the newer requirements of *NCLB*, such as whether teachers had passed HOUSSE (23 states) or whether teachers had completed course work equivalent to a major (20 states).

---

[5] See, for example, U.S. Department of Education. (March 15, 2004). *New, flexible policies help teachers become highly qualified.* Available online at: www.ed.gov/news/pressreleases/2004/03/03152004.html.

[6] While state requirements for teacher certification do vary across states, an analysis of teacher certification policy was not within the scope of the studies described in this report.

[7] While new teachers can only be designated as highly qualified by passing an exam (elementary and secondary teachers) or majoring in a content area (secondary teachers only), *NCLB* offers teachers who are not new to the profession another option. This is in an attempt to acknowledge that while these teachers should not be required to meet a new set of standards, they should also not be grandfathered in to highly qualified status. As such, Congress developed the High Objective Uniform State Standard of Evaluation, or HOUSSE. This is designed to allow greater flexibility to determine how teachers who are not new to the profession can demonstrate that they are highly qualified.

State officials described challenges associated with teachers of students with disabilities, teachers of students with limited English proficiency, middle school teachers, and teachers in rural settings.

Special education teachers who teach core academic subjects must meet *NCLB* requirements and obtain special education certification in their state, as required by the *Individuals with Disabilities Education Act* (*IDEA*). In 2004–05 state officials from 11 states reported concerns about subject knowledge requirements for special education teachers, particularly those teaching multiple core academic subjects.

Teachers who provide instruction in core academic subjects to LEP students also face a dual set of requirements: they must demonstrate content knowledge required under Title I and meet fluency requirements codified under Title III of *NCLB*. Teachers of LEP students in Title III districts must demonstrate English proficiency in oral, listening and reading comprehension, and in writing skills. A teacher in a district funded by Title III who does not teach a core academic subject must still meet the Title III requirements in order to instruct LEP students. To assist teachers of LEP students in becoming highly qualified under *NCLB*, six states included policies specifically targeted to such teachers in 2004–05.

Officials from six states expressed concerns about middle school teachers meeting the requirements for highly qualified teachers, particularly in cases in which these teachers had been allowed to teach with a K–8 certificate. Unless the state had set different requirements for middle school teachers, *NCLB* requires these teachers to meet the same content knowledge requirements as high school teachers.

Finally, because teachers in small rural schools often teach multiple subjects, state officials in nine states reported that rural districts faced challenges in ensuring that all teachers were highly qualified under *NCLB*. States reported that in small rural schools, a teacher may have to demonstrate competency in multiple subject areas, and it has been difficult to find teachers who have such multiple qualifications.

MEETING *NCLB* REQUIREMENTS FOR HIGHLY QUALIFIED TEACHERS

How many teachers meet the *NCLB* requirements to be highly qualified? How does this vary across states, districts, schools, and different types of teachers?

Overall, most teachers were designated as highly qualified by 2004–05, but some important differences in the distribution of highly qualified teachers existed.

About three-quarters of teachers reported they were considered highly qualified under *NCLB* for the classes they taught. Nearly one-quarter did not know their status, and 4 percent reported they were not considered highly qualified.

Thirty-three states reported that the large majority (90 percent or more) of classes were taught by highly qualified teachers in 2004–05; only five states and the District of Columbia reported that this percentage was 75 percent or lower. About three-quarters (74 percent) of teachers self-reported they were highly qualified under *NCLB* in 2004–05, and another 4 percent reported that they were *not* considered highly qualified. Middle school teachers were more likely to report that they were *not* considered highly qualified (9 percent) than were elementary teachers (2 percent) or high school teachers (4 percent). Nearly a quarter of general education teachers did not know whether they were highly qualified (see Exhibit S.1) and 29 percent of special education teachers reported not knowing whether they were highly qualified. A statistical analysis of the characteristics of the teachers who did not know their highly

qualified status found that 92 percent of such teachers were very similar in their educational and professional qualifications to teachers who reported they were highly qualified.

Exhibit S.1
Percentage of Teachers Reporting That They Were Considered Highly Qualified or Not Highly Qualified, or That They Did Not Know Their Status Under *NCLB*, 2004–05

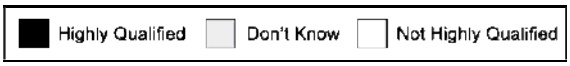

Exhibit Reads: Seventy-four percent of general education teachers reported they were considered highly qualified under *NCLB*, 4 percent were not highly qualified, and 23 percent reported they did not know their status.

Note: Column totals may not sum to 100 percent due to rounding.

Source: NLS-*NCLB*, Teacher Survey.

Special education teachers were almost four times as likely to report that they were *not* considered highly qualified (15 percent) than were general education teachers (4 percent).

Overall, special education teachers[8] were less likely than general education teachers to report they were highly qualified under *NCLB*: of all special education teachers, 52 percent reported they were highly qualified. The percentage of special education teachers who reported they were highly qualified varied by school level: the percentage was lower for high school teachers (39 percent) than for elementary and middle school teachers (61 percent and 53 percent, respectively).

[8] Special education teachers are those who teach students with disabilities, including any part-time or itinerant special education teachers who might share with another school. As a rule, one special education teacher was randomly sampled from a roster of all special education teachers that was constructed at each of all the sampled schools. The total number of special education teachers who completed and submitted a special education survey version was 1,186.

Teachers considered highly qualified under *NCLB* were more likely to be fully certified, to have completed more courses in their subject area, to have a degree in the subject they were teaching, and be more experienced than teachers who were not highly qualified.

Most teachers (87 percent) who reported being highly qualified had earned their certification, compared with 73 percent of teachers who were not highly qualified. Similarly, 86 percent of highly qualified special education teachers reported holding a certificate compared with 51 percent of those who reported not being highly qualified. At the secondary level, about 50 percent of highly qualified English and mathematics teachers reported having an undergraduate or graduate degree in the subject taught, compared with 23 percent of teachers who reported they were not considered highly qualified. Among highly qualified high school mathematics teachers, 59 percent had completed an undergraduate or graduate degree[9] in mathematics, compared with 15 percent of high school mathematics teachers who reported they were not highly qualified. Teachers considered highly qualified and those considered not highly qualified under *NCLB* also differed on one of the qualifications indicating subject-matter expertise. At each level of school assignment, except for high school English, teachers who were highly qualified completed more courses than teachers who were not highly qualified in the subject related to their teaching assignment. Additionally, teachers who reported they were *not* highly qualified under *NCLB* were three times more likely to be new to teaching (23 percent) than were teachers who reported they were highly qualified (8 percent).

Traditionally disadvantaged schools had higher percentages of teachers who were not considered highly qualified than did other schools.

Although the percentages of not highly qualified teachers were generally low overall, the percentage of teachers who reported that they were not highly qualified under *NCLB* was higher in high-poverty and high-minority schools and in schools that were identified for improvement than other schools. For example, teachers who were not highly qualified were three times more likely to be teaching in high-minority schools than in low-minority schools (7 percent compared with 2 percent).

Highly qualified teachers in high-poverty, high-minority schools were more likely to be new to the profession than highly qualified teachers in low-poverty or low-minority schools.

Highly qualified teachers in high-poverty and high-minority schools were more likely to have three or fewer years of experience than were highly qualified teachers in low-poverty and low-minority schools. Moreover, among highly qualified secondary teachers of English and mathematics, those in low-poverty schools and suburban schools are more likely to have a degree in their field, compared to highly qualified teachers in high-poverty and rural schools.

While a majority of teachers seemed to be aware of state requirements for highly qualified teachers, nearly half of all teachers reported they had not been notified of their 2004–05 status.

According to their own accounts, teachers were generally aware of the requirements to attain highly qualified status in 2004–05. Eighty-three percent of teachers reported they were aware of the requirements for highly qualified teachers in their state. Although states, districts and schools adopted

[9] This aggregate category includes bachelor's degrees (1st or 2nd), master's degree (1st or 2nd), professional diploma, certificate of advanced graduate studies, or doctoral degree in English or mathematics.

various strategies for communicating with teachers about state requirements and for informing teachers about their status, nearly one-half (48 percent) of all general education teachers reported they were not notified of their highly qualified status as of the 2004–05 school year, and over half (57 percent) of all special education teachers reported they were not notified of their highly qualified status.

RECRUITMENT AND RETENTION OF HIGHLY QUALIFIED TEACHERS AND SUPPORT FOR TEACHERS WHO WERE NOT HIGHLY QUALIFIED

What are states, districts and schools doing to increase the number of highly qualified teachers?

Although relatively high proportions of teachers reported being highly qualified under *NCLB*, some states and districts faced challenges recruiting and retaining teachers with high qualifications. To mediate these challenges, states and districts have undertaken a variety of actions to increase and maintain the proportion of highly qualified teachers. These strategies included recruitment and retention incentives for highly qualified teachers and support for teachers who were not highly qualified to become highly qualified.

A majority of districts had difficulty attracting highly qualified applicants in special education (57 percent), mathematics (60 percent), and science (65 percent).

Districts reported a variety of challenges associated with attracting and retaining highly qualified teachers (see Exhibit S.2). These challenges were most severe in high-minority, high-poverty, urban, and rural districts and for specific subject areas. Approximately two-thirds of all districts faced challenges in special education, science, and mathematics, but some districts faced more challenges than others. For example, in mathematics and science the percentage of high-minority districts that struggled to attract and retain highly qualified applicants was nearly double that of low-minority districts.

Compared with other districts, high-poverty, high-minority, and urban districts were more likely to describe competition with other districts and financial obstacles as recruitment barriers.

High-poverty, high-minority, and urban districts were more than twice as likely as low-poverty, low-minority, and rural districts to report competition with other districts as a barrier to improving teacher qualifications. With regard to inadequate teacher salaries and other financial incentives, more than two-thirds of high-poverty and high-minority districts faced financial hurdles

Exhibit S.2
District Challenges to Improving Teacher Qualifications, 2003–04

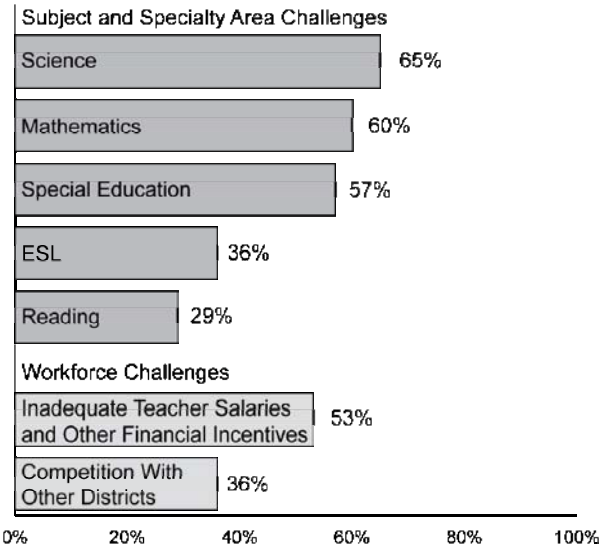

Exhibit Reads: Sixty-five percent of districts reported that attracting qualified science applicants posed a moderate or major challenge to improving teacher qualifications in 2003–04.

Source: NLS-*NCLB*, District Survey (n = 277 to 281).

when attempting to improve teacher qualifications, in contrast to approximately half of low-poverty and low-minority districts.

High-poverty and high-minority districts were most likely to offer financial incentives and alternate certification routes to recruit highly qualified applicants.

Even though fewer than one-quarter of districts used financial incentives, such as increased salaries, signing bonuses, or housing incentives to attract highly qualified candidates, more than three-quarters of high-minority districts offered such incentives. High-poverty, high-minority and large districts were also more likely than low-poverty, low-minority and small districts to offer alternate or "fast track" certification routes as a strategy to attract highly qualified applicants.

Less than 20 percent of districts reported that they needed state technical assistance for recruitment and retention—but large districts were most in need.

Only 17 percent of districts overall said they needed technical assistance in recruiting and retaining teachers, but large districts (41 percent) were most likely to report this need. Although only 20 percent of districts reported receiving state technical assistance regardless of whether they said they needed it, half of large districts reported receiving it. More than 80 percent of districts that received state technical assistance found it to be sufficient.

Schools were more likely than districts to report needing and receiving technical assistance in the areas of recruitment and retention.

Overall, one-third of schools reported they were in need of technical assistance from an outside source to support their recruitment and retention efforts, with almost 50 percent reporting that they received technical assistance in this area regardless of need. Similar to the district data, more than 85 percent of schools found the technical assistance sufficient. More than 60 percent of principals of these schools identified for improvement reported a need for state or district technical assistance, compared with about 25 percent of principals in schools not identified for improvement. High-poverty, high-minority and middle and high schools were more likely than low-poverty, low-minority and elementary schools to report this need.

A minority of districts provided targeted support for teachers who were *not* considered highly qualified.

In addition to efforts made to recruit and retain highly qualified teachers, districts and schools provided various types of support for teachers who were not highly qualified to meet state criteria. One-quarter of all districts required new—not yet highly qualified—teachers to complete an induction or mentoring program, and such programs were much more common in large districts (60 percent) than in small districts (19 percent). Seventeen percent of districts assigned teachers who were not highly qualified to an instructional coach or master teacher; this approach also was more common in large districts (43 percent) than in small districts (11 percent). About one-third of districts reported providing increased amounts of professional development to teachers who were not highly qualified; there was little variation by poverty or minority level or district size. Very few districts (4 percent) transferred teachers who were not highly qualified to other schools in the district upon review of their qualifications.

PROFESSIONAL DEVELOPMENT

To what extent are teachers participating in high-quality professional development (e.g., professional development that is sustained, intensive and content-focused)?

NCLB required states to report on the percentage of teachers who participated in "high-quality" professional development, but the validity of these data was unclear.

Despite the *NCLB* requirement for states to report on the percentage of teachers who participated in "high-quality" professional development, 14 states could not report on the percentage of teachers who participated in high-quality professional development in their September 2003 Consolidated Performance Reports.

Nearly all teachers reported that they participated in content-focused professional development in reading or mathematics, but few participated for more than 24 hours.

More than half of districts placed major emphasis on professional development initiatives in reading (58 percent) and mathematics (54 percent)—rather than other academic content areas (18 percent)—and also emphasized alignment of curriculum with state standards (61 percent). Nearly all teachers at all levels reported that they participated in content-focused professional development focused on instructional strategies for teaching reading or mathematics. However, few teachers participated for an extended period of time. Even though 90 percent of elementary teachers reported that they participated in at least one hour of professional development focused on instructional strategies for teaching reading, only 20 percent participated for more than 24 hours over the 2003–04 school year and summer. Fewer teachers of mathematics (9 percent for elementary and 16 percent for secondary mathematics) reported that they participated in extended professional development on instructional strategies for teaching mathematics. Teachers were unlikely to participate in extended professional development focused on "in-depth study" of reading and mathematics topics.

Teachers in high-poverty, high-minority and urban schools and Title I schools identified for improvement reported that they participated in more hours of professional development than teachers in other schools in 2003–04. Likewise, new teachers participated in more professional development than did existing teachers.

While the number of hours varied widely from several hundred to none at all, teachers reported an average of 66 hours of professional development during the 2003–04 school year, including the summer of 2004. Teachers in Title I schools identified for improvement averaged 87 hours of professional development during 2003–04, compared with 64 hours for teachers in schools that were not identified for improvement. Among Title I elementary schools, teachers in schools identified for improvement were more likely to receive extended content-focused professional development in reading and mathematics than in nonidentified schools (39 percent compared with 19 percent). Higher proportions of teachers in high-poverty and high-minority schools as well as teachers in schools in large urban districts reported that they received 24 hours or more of professional development in instructional strategies for teaching reading and mathematics than teachers in other schools. Teachers with fewer than three years of experience generally took part in more hours of professional development than did teachers with three or more years of experience (77 and 64 hours, respectively).

Special education teachers were less likely than general education teachers to report that their professional development was focused on instructional strategies for teaching reading and mathematics, involved active learning, or was designed to support state or district standards or assessments.

Special education teachers reported that they participated in a similar total number of professional development hours as other teachers; however, special education teachers were less likely than general education teachers to participate in professional development focused on reading and mathematics. For example, while 71 percent of general elementary teachers reported that they participated in at least some training on instructional strategies for teaching mathematics, only 48 percent of special educators reported that they participated in training in this area. The focus of special education teachers' professional development experiences was more likely to be on instructional strategies for teaching students with disabilities. Special education teachers, particularly those at the high school level, also described their professional development as having fewer features measured in this study. For example, special education teachers were less likely to have had professional development activities that were aligned with standards and assessments than were general education teachers.

IMPLEMENTATION OF *NCLB* REQUIREMENTS FOR PARAPROFESSIONALS

How many Title I instructional paraprofessionals meet *NCLB* requirements? What are states, districts and schools doing to help paraprofessionals meet these requirements?

Nearly two-thirds of Title I instructional paraprofessionals were reported as being qualified as of the 2004–05 school year, but nearly a third of paraprofessionals reported that they did not know or did not report their status.

According to principals' reports, 63 percent of paraprofessionals were qualified as of the 2004–05 school year. Data from paraprofessionals mirrored the principal reports, as 63 percent of paraprofessionals also reported they were qualified. Similarly, state performance reports showed that the percentage of paraprofessionals who were qualified in each state varied but averaged 64 percent among the 44 states reporting. However, both principals and paraprofessionals sometimes appeared to be unsure about paraprofessionals' qualified status. Twenty-eight percent of paraprofessionals either said they did not know their status or did not respond to this survey item; similarly, principals did not know or did not report on the qualifications status for 26 percent of paraprofessionals. Despite this fact, approximately 87 percent of paraprofessionals reported holding a qualification that would appear to fulfill the *NCLB* criteria for qualified status (an associate degree, two years or more of college, or a passing score on an assessment).

Most Title I paraprofessionals reported working closely with a supervising teacher, but some indicated that they worked with students on their own without a teacher present.

NCLB requires that Title I paraprofessionals who support instruction should do so "under the direct supervision" of a teacher who is considered highly qualified. For the most part, this requirement was met, as 83 percent of paraprofessionals reported working closely with their supervising teacher on a daily or nearly daily basis. Additionally, over half of paraprofessionals reported receiving either detailed instructions or prepared lesson plans from their supervisor on a daily or near daily basis. However, nearly 10 percent of paraprofessionals reported rarely working closely with their supervising teacher and

19 percent reported not receiving prepared lessons or detailed instructions. Further, only half of paraprofessionals indicated that "all or nearly all" of the time they worked with students was with a teacher present.

Paraprofessionals in high-poverty and low-poverty schools were about equally likely to report being qualified. However, paraprofessionals in medium and high-poverty schools were notably less likely to have completed two years of college or an associate degree than were paraprofessionals in low-poverty schools.

Paraprofessionals in high-poverty and low-poverty schools were about equally likely to report being qualified, after accounting for the unusually high percentage of paraprofessionals in low-poverty schools who did not report their qualification status (40 percent). However, when looking at specific qualifications criteria, paraprofessionals in medium- and high-poverty areas were less likely to have completed two years of college or an associate degree than were paraprofessionals in low-poverty areas. Paraprofessionals in rural schools were also less likely than paraprofessionals in urban schools to have completed two years of college or an associate degree.

Title I districts and schools have decreased their reliance on Title I paraprofessionals in recent years, both in terms of absolute numbers and as a proportion of the Title I workforce.

The share of Title I–funded district and school staff who were paraprofessionals declined from 47 percent in 1997–98 to 32 percent in 2004–05, while teachers rose from 45 percent in 55 percent of Title I staff during the same period. The total number of Title I aides declined from about 68,700 in 1997–98 to 62,000 in 2004–05, while the number of Title I teachers rose from 66,000 to 98,200 and the total number of Title I staff rose from 145,600 to 179,500. The percentage increase in the number of teachers (49 percent) is similar to the inflation-adjusted increase in Title I appropriations during this period (46 percent); the increase in the total number of Title I staff was 23 percent.

CONCLUSION

In general, the findings of this study indicate that states and districts are working to implement and comply with the *NCLB* requirements for teacher qualifications: states have set guidelines for highly qualified teachers under *NCLB* and have been updating their data systems, most teachers have been designated as highly qualified under *NCLB*, over half of paraprofessionals have been designated as qualified, and teachers report participating in many hours of professional development activities, both formal and informal.

If the goal of having an improved teaching workforce and thus better-served students is to be fully realized, several issues warrant attention. First, the variation across states in their policies concerning highly qualified teachers raises questions about whether some states have set high enough standards for teacher qualifications under *NCLB* to ensure that teachers have a solid understanding of the subjects they teach. Second, variation in teachers' highly qualified status across types of teachers and schools highlights enduring inequities in access to highly qualified teachers. Third, because many teachers were not aware or notified of their *NCLB* status, they may not have taken necessary steps to become highly qualified. Finally, the low proportion of teachers participating in content-focused professional development over an extended period of time suggests that more could be done to deepen teachers' content knowledge. The potential for the *NCLB* provisions to effect positive change in the nation's teaching workforce depends, in part, on addressing these issues.