

Teacher Quality Improves Student Achievement



As a reauthorization of the Elementary and Secondary Education Act (ESEA), Congress passed the No Child Left Behind (NCLB) Act. Signed into law by President Bush in January 2002, the NCLB Act has brought many significant changes to schools nationwide. This Quick Key Action Guide was developed to assist educators and administrators in building capacity to implement the NCLB Act with the specific goals of improving teacher quality and eliminating academic achievement gaps.

Teacher knowledge and skill are fundamental elements in improving student achievement—a primary reason the NCLB Act emphasizes teacher quality.

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Improving teacher quality and closing academic achievement gaps are leading national priorities in education. As required by the NCLB Act, schools must ensure that all teachers in core academic areas (English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography) are or will be “highly qualified” by the end of the 2005–06 school year. All teachers newly hired after the first day of the 2002–03 school year already were required to meet the criteria.

In order to be considered highly qualified under the NCLB Act, a teacher must meet three requirements:

- Hold a bachelor’s degree.
- Possess full state certification or pass the state licensure exam.
- Demonstrate competence in subject knowledge and teaching.

Some flexibility has been added to these provisions:

- Teachers in eligible rural districts who are highly qualified in at least one subject will have three years from the date of their employment to become highly qualified in the additional subjects they teach.
- States may decide, based on their current certification requirements, to allow science teachers to demonstrate that they are highly qualified in either “broad field” science or in individual fields of science (such as physics, biology, or chemistry).
- States may develop a method by which teachers who teach multiple subjects demonstrate through one process that they are highly qualified in each of their subjects.

Additional information on flexibility provisions is available through the Fact Sheet on *New No Child Left Behind Flexibility: Highly Qualified Teachers* (www.ed.gov/nclb/methods/teachers/hqtflexibility.pdf).

The NCLB Act also mandates that schools and districts show adequate yearly progress (AYP), meaning that schools must meet yearly performance goals to be on track for 100 percent student proficiency by 2014. Schools should show an improvement in the average test scores of the total student population of a school and in the required demographic subgroups, shown by disaggregated results. One subgroup that must show improvement is students in major ethnic or racial groups. The goal is to eliminate academic achievement gaps among students.

Achievement Gap Growth

Time after time, education research has documented inequalities in student achievement based on race/ethnicity and income. A disparity in student test scores exists between African-American, Hispanic, Native American, and low-income students, and their white, Asian, and economically advantaged peers. Although the disparity shown by test scores is perhaps the most documented achievement gap, disparities also exist in high school graduation rates and the number of students participating in Advanced Placement classes. These student achievement gaps currently pervade the U.S. education system.

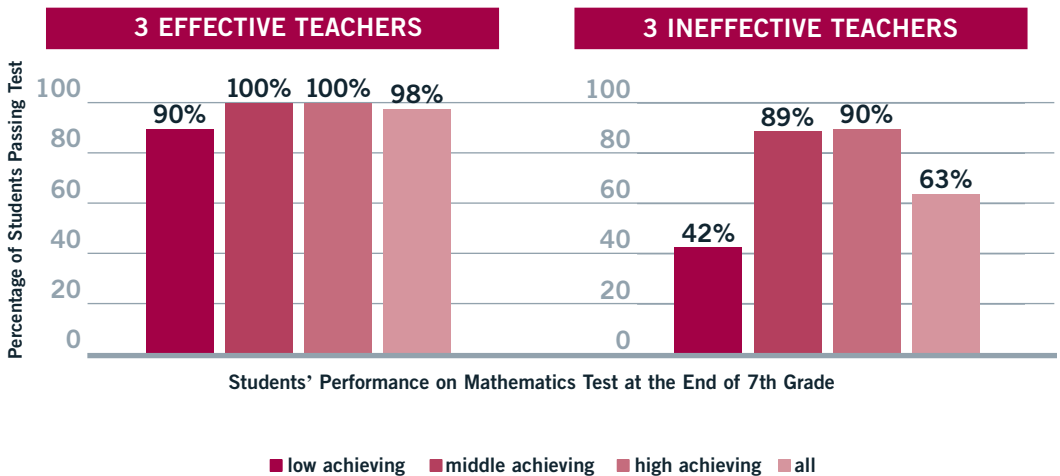
Although results of the 2003 National Assessment of Educational Progress (NAEP) show that the gaps in most mathematics score comparisons have narrowed since 2000, no significant change has occurred in reading score gaps for Grades 4 and 8 during that same time period. Specific results for Grades 4 and 8 from the 2003 NAEP reveal that white and Asian students outperformed their African-American, Hispanic, and Native American peers in reading; the reading scores of students eligible for free and reduced-price lunch were lower than those of students who were not eligible; and mathematics scores for both Asian and white students were higher than scores of their African-American, Hispanic, and Native American peers. Similar to reading, mathematics scores of students eligible for free and reduced-price lunch were lower than students who were not eligible.

The Influence of Teacher Quality on Achievement Gaps

The NCLB teacher-quality provisions are driven by research that documents the importance of teacher quality on student achievement and in closing achievement gaps. Indeed, based on findings such as those indicating that (1) minority and low-income students are disproportionately taught by underqualified school teachers, and (2) disadvantaged students who have effective teachers for consecutive years are able to close the achievement gap between disadvantaged and nondisadvantaged students (see Figure 1), there is no question that improving teacher quality must be a vital component of any school improvement plan.

Figure 1. Effect of Teachers on Student Performance

The effect of teachers accumulates: 4th graders of all abilities who have 3 years of effective teachers in a row for the 5th, 6th, and 7th grade will pass a 7th-grade math test.



Graph adapted from page 9 of “The Real Value of Teachers: Using New Information About Teacher Effectiveness to Close the Achievement Gap” by Kevin Carey, in *Thinking K-16*, 3(2). Copyright © 2004 The Education Trust.

What is not so clear, however, is exactly what actions schools and districts should take to meet the NCLB teacher-quality requirements, and which teacher qualities subsequently raise student achievement and close achievement gaps. The process of finding and keeping quality teachers is especially difficult for high-poverty and low-performing schools. These schools often have the most weakly trained teachers and the highest turnover rates. Despite the intent of these requirements, there is some debate among education researchers as to whether the NCLB “highly qualified” definition is sufficient assurance that a teacher will be successful in the classroom. Although some research links certified or licensed teachers to competency in improving student performance, other research challenges this claim.

Therefore, in addition to working toward meeting NCLB teacher-quality mandates, schools and districts should think and plan beyond those mandates—emphasizing quality teaching rather than focusing primarily on credentials to make significant and long-term improvements. The literature suggests that state and local-level policymakers dedicated to improving teacher quality should do the following:

- Experiment with innovative methods of recruitment and retention.
- Support ongoing and sustained professional development for teachers.
- Provide advancement opportunities for teachers.
- Hold teachers accountable.

State Action Options

The following action options are designed to assist educators, administrators, policymakers, and education leaders in building capacity to close achievement gaps by focusing on teacher-quality issues at the state level.

Identify achievement gaps in your state. One of the first steps in working to eliminate achievement gaps is to identify and publicize the extent to which the gaps exist beyond simply the disaggregated AYP reports required by the NCLB Act. States should plan to conduct a clear, rigorous review of school or district performance and should place emphasis on identifying those schools and districts with the greatest achievement gaps in the state. For example, Ohio and Kentucky have published reports identifying specific issues around the achievement gaps in their states.

Acknowledge schools and districts in your state that are beating the odds. Many states already have implemented programs and initiatives aimed at recognizing and rewarding school and district successes in closing achievement gaps. State and local education agencies should identify, visit, query, and learn from these schools so that successful programs and initiatives may then become models for best practices across the state. Examples are The Education Trust's *Dispelling the Myth Online* database (www2.edtrust.org/edtrust/dtm/), as well as data that are available from Indiana's *Accountability System for Academic Progress* Web site (www.asap.state.in.us) and Wisconsin's *Information Network for Successful Schools* Web site (www.dpi.state.wi.us/sig/index.html).

Identify and act on the link between achievement gaps and teacher quality in your state. There are many aspects of teacher quality (including instructional skill, content knowledge, certification, and professional development), and each one affects student achievement in different ways and to varying degrees. States should work to understand the issues of teacher quality that are specific to their own state. One option is to conduct a comparison of schools with the greatest achievement gaps to schools with the greatest number of teachers who are not highly qualified. Quality data systems are becoming more available, and these data may be used to develop knowledge about what works state by state.

Place the increase in teacher quality to close achievement gaps at the forefront of your state's educational policy agendas. The following effective strategies have been adopted by states:

- Create a state-level action committee with higher education and K–12 stakeholders in order to address teaching-quality gaps.
- Offer financial incentives for the recruitment and retention of teachers in hard-to-staff schools.
- Ensure that state license reciprocity agreements are based on rigorous teacher-quality criteria.
- Through school code and school policy, support time for professional development that is data-driven and relevant to disparities in student achievement.

Learn what other states are doing. An ideal method for tackling any education issue is to learn about what other states are doing and why. States can convene a task force to study what strategies other states are using to close achievement gaps through teacher quality. For instance, statewide comparisons of salary schedules may be useful to see how competitive a state's minimum or average salaries are in recruiting and retaining highly qualified teachers. Some of these data currently exist and can be found on Web sites of organizations such as the American Federation of Teachers (www.aft.org), the National Education Association (www.nea.org), and the National Center for Education Statistics (nces.ed.gov).

District Action Options

The following action options are designed to assist educators, administrators, policymakers, and education leaders in building capacity to close achievement gaps by focusing on teacher-quality issues at the district level.

Evaluate current hiring and placement practices. Education research shows that the hiring systems of many schools and districts lack a defined application process. In addition, hiring decisions are shown to lack input from teachers and are frequently delayed. Because of the inefficiency of these processes, many teacher candidates withdraw their applications and are lost to districts that track applicants more effectively and hire earlier.

To improve its hiring and placement process, the New Haven Unified School District in the San Francisco Bay Area created a computerized applicant-tracking system that can be searched based on multiple criteria. For example, a principal may search for a teacher with special education credentials and 10 years of experience who also can coach a girls' basketball team. The district also uses video technology to expand its interviewing capabilities, holding interactive videoconferences with applicants from around the world.

Promote teaching as a career and expand the teaching pool. In addition to shortages of teachers in certain subject areas and in urban and rural school districts, there also is a shortage of male and minority teachers. Research suggests that increasing the diversity of teachers is connected to closing the achievement gaps. Therefore, school districts should widen the net of prospective applicants to include college graduates and nontraditional candidates, such as paraprofessionals and other individuals who live and work in the community, to fill available positions.

In order to understand the need for greater collaboration among school districts and postsecondary institutions in addressing the teacher shortage in rural areas, the Grayson County Public Schools, Wytheville Community College, and Radford University formed a partnership in Virginia to promote the Community Learning Model. The three institutions identify and mentor future teachers, foster their development from high school to community college or to a four-year college or university, and encourage them to return to their home community as full-time teachers.

Develop and implement coordinated induction and mentoring programs. Research shows that new teachers who benefit from extensive programs of support are less likely to leave their jobs at the end of their first year, as compared with new teachers who have no formal measures of support. Teacher induction typically includes orientation, mentoring, training, and feedback. The mentoring component should include formal training for mentor teachers so that they can be successful in

helping new teachers achieve specific and measurable outcomes. Two of the most frequently cited high-quality induction and mentoring models being implemented statewide in Arkansas and districtwide in New York City are, respectively, the Pathwise model by ETS and the New Teacher Center model by the University of California, Santa Cruz.

Design and implement research-based professional development. One- or two-day conferences or workshops are not effective in improving teacher practice. Rather, in order for improvement to occur, professional development must be embedded in the daily work and routines of the school. Also, teachers must have multiple opportunities for practice, feedback, and support. Professional development needs to target subject matter relevant to school improvement needs and student learning needs as well as include research-based instructional strategies. In Texas, the El Paso Collaborative for Academic Excellence is an example of an initiative that offers focused professional development aimed at increasing the achievement of all students.

Develop an effective system to evaluate, compensate, and advance teachers. Defining what makes a teacher effective is complex and has been the subject of many studies over the years. In order to evaluate teachers, school districts should adopt or adapt standards that define good teaching, establish the procedures for a teacher evaluation process, and determine the role that student achievement should play in the evaluation. Although much dissension exists among theorists and researchers on employee motivation (both intrinsic and extrinsic), sufficient research exists to show that salary levels are important to teachers. In developing compensation systems that encourage appropriate use of effective practice, school districts should review models that award teachers both individually and as a group. In addition, school districts should provide both formal and informal leadership opportunities for teachers who wish to remain in the classroom but also desire to expand their influence on improving upon the quality of the school.

One of the most comprehensive plans to address teacher evaluation, compensation, and ongoing professional development is the Teacher Quality Program passed by the Iowa Legislature in 2001. This law mandates the following integrated components for improving teacher quality: mentoring and induction programs for beginning teachers, professional development and teacher evaluation tied to career paths and compensation levels, and a team-based variable pay program that provides additional compensation when student performance improves.

Funding Options

Funding sources and additional guidance can help schools and districts implement the various action options described in this *Quick Key Action Guide*. For detailed budget tables and state-specific funding information, refer to the Web site of U.S. Department of Education's Budget Office (www.ed.gov/about/overview/budget/index.html).

State education agencies can use Title II, Part A, funds for the following purposes:

- Reform teacher and principal certification.
- Build support for new teachers and principals.
- Streamline certification through alternative models.
- Develop recruitment and retention systems.
- Build instructional leadership capacity in principals.
- Develop or assist local education agencies in developing teacher advancement initiatives.

Local education agencies can use Title II, Part A, funds for the following purposes:

- Provide high-quality professional development.
- Develop programs designed to improve the quality of teaching.
- Provide training on how to use data and assessments to improve classroom instruction and student learning.
- Provide training in effective methods to teach and address the needs of students with various learning styles and abilities.

Additional Funding Guidance

- The NCLB Act allows for flexibility of non-Title I federal funds on teacher quality, technology, afterschool learning, and safe and drug-free schools.
- The U.S. Department of Education encourages the states to use the flexibility available under the new Title II regulations to assist experienced teachers in meeting the standards required.
- Each district must use at least 5 percent of its Title I, Part A, grant for professional development aimed at helping teachers become highly qualified.
- A school that has been identified as in need of improvement must reserve 10 percent of its Title I, Part A, funds to use for professional development activities.

Spending Bill of Fiscal Year (FY) 2005

On December 8, 2004, President Bush signed into law P.L. 108-477, an omnibus appropriations bill providing FY 2005 funding for 13 federal departments, including the U.S. Department of Education. Improving Teacher Quality, a component of the Department's FY 2005 allocation, provides \$2.94 billion for professional development programs to provide states and school districts with tools to improve teacher quality. This amount represents \$10 million above the budget request and the 2004 funding level. In addition, Mathematics and Science Partnerships are funded at \$180 million, an increase of \$31 million over 2004, to expand the number of teachers trained in the fields of mathematics and science.

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Key Resources From Learning Point Associates

All Students Reaching the Top: Strategies for Closing Academic Achievement Gaps

www.ncrel.org/gap/studies/thetop.htm

This report, written by members of the National Study Group for the Affirmative Development of Academic Ability, provides practical recommendations to help all students—particularly minority and low-income students—reach high levels of academic achievement.

Policy Issues No. 12: The Impact of Alternative Certification in the Midwest

www.ncrel.org/policy/pubs/pdfs/pivol12.pdf

Focusing on alternative teacher certification in the Midwest, this publication includes a brief literature review, the results of an analysis of the latest *Schools and Staffing Survey*, and a review of alternative certification programs in the region.

Teacher Quality Web Site

www.ncrel.org/quality/

The resources on this Web site address some of the most critical issues related to teacher quality: supply and demand, teacher preparation, recruitment and retention, and professional development.

Teacher to Teacher: Reshaping Instruction Through Lesson Study

Lesson Study is the core of Japanese teachers' professional learning. This multimedia package, consisting of a video and facilitator's guide, is designed for teacher facilitators and professional developers to help support effective professional development opportunities for teachers. Available through the Learning Point Associates Product Catalog (www2.learningpt.org/catalog/cart/item.asp?productID=84).

Teaching Quality (TQ) Source Web Site

www.tqsource.org

This Web site, created by Learning Point Associates and the Education Commission of the States, is designed to help policymakers and educators make informed decisions on teaching quality by identifying policies and initiatives relating to teacher preparation, recruitment, and retention.

Understanding the No Child Left Behind Act of 2001: Teacher Quality

www.ncrel.org/quality/qkey6/index.html

This *Quick Key* discusses the qualifications and characteristics that define highly qualified teachers and paraprofessionals. It also describes alternative routes to certification.

Viewpoints Vol. 11: Improving Student Achievement and Teacher Effectiveness Through Scientifically Based Practices

www.ncrel.org/policy/pubs/pdfs/vp11.pdf

This publication outlines the elements of scientifically based research as they relate to teacher effectiveness and student outcomes, including an overview of the challenges and opportunities for implementing scientifically based initiatives.

Additional Resources

Dispelling the Myth Online Database

www2.edtrust.org/edtrust/dtm/

This online database, developed by The Education Trust, provides a quick and easy tool for identifying schools that are making significant improvements for low-income and minority students.

El Paso Collaborative for Academic Excellence

www.epcae.org

The collaborative works with teachers, schools, parents, universities, and community members to offer innovative and effective strategies for high-quality education.

Iowa Department of Education's Teacher Quality Initiatives

www.state.ia.us/educate/ecese/tqt/tc/index.html

This portion of the department's Web site includes links to all of Iowa's current teacher-quality programs as well as details of the 2001 teacher-quality legislation.

Mentoring/Induction, From the ETS Pathwise Framework Induction Program

www.ets.org/pathwise/mentoring.html

This component of ETS's Web site offers training and materials for the beginning teacher and mentor program.

National Staff Development Council

www.nsd.org

This professional association is committed to ensuring success for all students through staff development and school improvement.

National Teacher Recruitment Clearinghouse

www.rnt.org/channels/clearinghouse/

Launched in August 2000 by Recruiting New Teachers Inc., this online clearinghouse provides information for school districts that are seeking teachers and for teachers who are seeking teaching jobs.

The New Teacher Center

www.newteachercenter.org

The New Teacher Center Web site is an online, national resource focused on helping school districts, universities, and other educational organizations build induction programs that support new teachers.

Ohio Department of Education's *Closing Achievement Gaps Across Ohio* Web Site

www.ode.state.oh.us/achievement_gaps/

This Web site describes all of Ohio's achievement gap work, including the State Board of Education's Closing Achievement Gaps Task Force and the State Superintendent's Schools of Promise program.

Learning Point Associates developed the *Quick Key series* to assist educators, policymakers, and other stakeholders in understanding and implementing the No Child Left Behind Act. The *Quick Keys* are available online (www.ncrel.org/policy/curve/resource.htm#resources).



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