



COMMISSION ON
NO CHILD LEFT BEHIND
THE ASPEN INSTITUTE
www.nclbcommission.org

**Focus on Teacher Effectiveness to Improve Student Achievement
And Enhance Teacher Support:
The Commission's Recommendations in Practice**

The Commission will release occasional briefs to illustrate the impact of its No Child Left Behind Act (NCLB) recommendations on schools and communities if they were put into practice.

Across the political spectrum, there is growing support for the use of “growth models” to improve the way we measure whether schools are making adequate yearly progress (AYP) toward the goal of proficiency for all students under NCLB. In contrast to the current system, in which AYP determinations are based on a snapshot of the number of students (and student subgroups) that have attained proficiency, growth models also allow schools to receive credit for significant progress toward proficiency with students who begin further behind.

The use of growth models has gained wide appeal because they are a more precise and fair way of determining school progress and they are more useful in informing instructional decisions and priorities. Importantly, this enhanced data enables teachers, principals and administrators to direct resources to better support teachers in the classroom and improve student learning. The U.S. Department of Education (U.S. DOE), through a pilot program, has approved the use of growth models in five states and has conditionally approved them in two others.

The data systems necessary to measure individual student growth from year-to-year also yield data on teacher effectiveness in the classroom. This creates an unprecedented opportunity to measure the effectiveness of individual teachers in improving student achievement in a way that is fair to teachers, because progress measures are based on student growth over the course of the school year rather than on reaching an absolute proficiency standard. This data can also provide a basis for better targeting of professional development dollars to support teachers in improving student performance.

NCLB attempted to ensure that all students were taught by highly qualified teachers. But to attain the goals of the law—providing all students with access to capable teachers who can produce substantial learning gains—we need a new approach. We must take advantage of the opportunity to use more sophisticated data systems to focus on teacher

effectiveness in improving student achievement rather than qualifications for entering the profession. Though these measures need to be a substantial part of determining teacher effectiveness, they should *not* be the sole measure. It is important to include evaluations conducted by principals or teacher peer review panels as part of the equation. The combination of student progress measures and principal/peer evaluation would represent a substantial improvement over the existing system for several reasons:

- Research has demonstrated that qualifications alone tell very little about a teacher's ability to improve student achievement in the classroom.
- Teachers would be allowed to demonstrate their abilities in the classroom where it is most important, rather than jumping through bureaucratic hoops.
- The federal government, states and districts could target professional development resources more efficiently and in a way that supports teachers more effectively.
- The combination would provide a more useful basis for assuring the equitable distribution of effective teachers.

The methods used for measuring teacher effectiveness are practical and feasible, and are currently being used by more than 300 school districts in 21 states. Of course, implementing this approach requires a sophisticated longitudinal data system, and not all states have such a system at this time. But the Commission recommends that the federal government invest \$400 million over four years to help states build the longitudinal data systems necessary to measure individual student growth, and advises that systems for using growth models to measure student progress and for determining teacher effectiveness not go into effect until states have adequate data capabilities in place.

From Qualifications to Effectiveness

NCLB placed an unprecedented emphasis on teacher quality. The law required states to ensure that all teachers were "highly qualified," meaning that they possessed state certification, held a bachelor's degree or higher, and demonstrated knowledge of the subjects they teach. In addition, the law attempted to ensure that teacher quality was fairly distributed, and that all students, particularly low-income and minority students, had access to highly qualified teachers. The intent of these provisions was based on a substantial body of research that showed clearly that teacher quality is the most important school-related variable associated with student achievement (Carey 2004).

Perhaps more than any other provision in the complex NCLB statute, the highly qualified teacher provision has proven challenging for states and the federal government. By the 2005-06 school year, the law's deadline for compliance, no state reported that all teachers were highly qualified. In response, the U.S. DOE allowed a one-year extension to states, provided that they showed that they were making good-faith efforts to comply.

Preliminary reports from states showed that most teachers, though not all, met the definition of “highly qualified.” However, there is growing evidence that the criteria established by the law does not equate with effectiveness in the classroom. Teachers might meet the definition of “highly qualified” under NCLB, but that does not mean that they are fully capable of producing significant learning gains.

For one thing, the law included a number of loopholes that allowed states to claim that veteran teachers were highly qualified using a wide variety of criteria that might not be associated with quality. For example, in Minnesota, all elementary teachers licensed before 2001 were deemed highly qualified, regardless of whether they demonstrated subject-matter competency (McClure, Piché and Taylor 2006). Similarly, Wisconsin considered teachers highly qualified if they had completed an approved program at any college or university in the United States (Education Trust 2003).

Worse, research suggests that the statute’s definition of “highly qualified” might be inadequate, and that teachers who do meet that designation might not be truly knowledgeable, skillful and prepared to substantially improve the academic achievement of our nation’s students. Raising the quality of the teaching force is essential if we are serious about ensuring that every child, particularly those who have been traditionally underserved, has the opportunity to achieve to high expectations.

For example, a study examining the impact of certification on student performance of 150,000 Los Angeles 3rd, 4th and 5th grade teachers from 2000 to 2003 found little difference between the achievement of students taught by certified teachers and that of students taught by uncertified teachers. Many non-certified teachers—those deemed not highly qualified under NCLB—taught students who exhibited substantial gains in achievement, while many certified teachers, who earned highly qualified status, taught students who showed small learning gains (Gordon, Kane and Staiger 2006).

A study of teachers in New York City produced parallel findings. Comparing the student achievement results of teachers who were traditionally certified, those who came through alternate certification programs like the city’s Teaching Fellows program and Teach for America, and those who were uncertified, found that the learning gains produced by each group of teachers was similar—even though some would be rated highly qualified under NCLB and some would not (Kane, Rockoff and Staiger 2006).

A study of teachers in North Carolina also found similar results (Goldhaber 2007). Although teachers who passed licensure tests—those who met the criteria for “highly qualified” status—produced, on average, larger learning gains than teachers who did not pass, the study found, the difference between the two groups was small. In addition, some teachers who passed the test were not effective, while some teachers who did not pass were effective in the classroom.

While all of these studies cast doubt on the NCLB method of determining whether teachers are highly qualified, they also show that there is a better way of gauging whether teachers are effective: by measuring their performance in the classroom.

In his testimony before the Commission, Thomas Kane, the co-author of the Los Angeles and New York studies, said it is possible to identify effective and ineffective teachers after only two years of teaching. In fact, he found, students assigned to teachers who were in the top 25 percent of effectiveness had mean scores that were 10 percentile points higher than students assigned to teachers in the bottom quartile. “Ten percentile points is just huge,” Kane told the Commission. “In three years, that’s enough to close the black-white achievement gap.”

The method that Kane and his colleagues used examined the *value added* that teachers provide to student learning. At its core, the value-added method attempts to determine a teacher’s effects on student achievement by examining how much a student improves academically during his or her time with the teacher and comparing it to his or her previous learning trajectory. It controls both for students’ prior achievement levels and for student demographic characteristics, so teachers are judged only by students’ learning gains.

In addition to helping identify truly effective teachers, this approach is also useful in assuring that the distribution of effective teachers is more equitable. Currently, students with the greatest needs tend to have access to least effective teachers (Peske and Haycock 2006). Using this data to determine who the most effective teachers are will enable districts to better target incentives to encourage them to teach in high-need schools. Schools in Hamilton County, Tennessee did this, and as a result, achievement in nine previously low-performing schools skyrocketed (Carey 2004).

New York City Public Schools are also seeing the benefit of measuring student growth and using more sophisticated data systems. Chancellor Joel Klein recently testified before the U.S. House Committee on Education and the Workforce that measuring year-to-year gains of individual students in New York City more precisely gauges student learning gains and provides data that teachers and principals can use to improve achievement (2007). The City’s Data Management System will allow teachers to understand where student improvement is needed, and help identify where teachers need additional support. Klein said, “We need to use data not only to evaluate how schools are performing, but also to enable principals and teachers to identify their strengths and weaknesses, to share the practices that work and improve the ones that don’t.”

Effectiveness Measures Will Result in More Efficient Staffing and Targeting of Professional Development

Some of the most persistent concerns about the implementation of the teacher quality provisions of NCLB are the effects on teachers in small schools, particularly those in rural areas, and on special-education teachers. Such teachers were more likely than other teachers to fail to earn highly qualified status, largely because they teach multiple subjects and they are unlikely to hold certification in all the subjects they teach.

A system that is focused on effectiveness in improving student achievement would more efficiently address those concerns because it would allow teachers to show that they are successful in the classroom, rather than simply able to jump through bureaucratic hoops and meet paper requirements that say little about their ability to improve student achievement. It is also more agile, making it easier for teachers who come into the profession through alternative routes to be judged on their ability in the classroom.

This approach would also lead to better support for teachers who might not yet be able to demonstrate effectiveness. Under the Commission's Highly Qualified Effective Teacher (HQET) recommendation, once states implement data systems capable of tracking effectiveness, teachers will have *seven years* to demonstrate that they are producing learning gains and receive a positive evaluation from their principal or fellow teachers before any sanctions apply. Teachers that initially struggle to reach the effectiveness standard receive additional support through targeted professional development to help them succeed. When teachers meet the HQET standard, they do not have to go through this process again.

Importantly, even after teachers have achieved HQET status, effectiveness data would continue to be available to guide principals and administrators in their decisions about professional development needs. The ongoing availability and use of this data is also critical for students because research has shown that the effects of teacher quality are cumulative. Studies in Tennessee, Dallas and elsewhere have shown that good teachers can improve student achievement by as much as a grade level more than less effective teachers over the course of a year. Researchers in Dallas found that students assigned to effective teachers for three years in a row went from the 59th percentile in the 4th grade to the 76th percentile in the 6th grade. But a group of students with similar characteristics, including prior achievement and racial and income backgrounds, who were assigned to less effective teachers, actually lost ground over that period: they went from the 60th percentile to the 42nd percentile (Jordan, Mendro and Weerasinghe 1997). In other words, the two similar groups of students started the 4th grade at about the same level of achievement, but by the end of sixth grade, one group was three grade levels below the other because of the effectiveness of their teachers.

Currently, professional development is not efficiently targeted and is spread too thinly to produce results. Under Title II of NCLB, the U.S. DOE provides \$2.9 billion annually in grants to states and districts to improve teacher quality. However, in a study of how eleven districts used their Title II funds, the Government Accountability Office (GAO) found that many districts did not target their resources on any group of teachers, such as those who were not highly qualified (GAO 2005). In each district, the GAO found, any teacher, highly qualified or not, could participate in professional development programs supported by Title II. A stronger policy in NCLB could help ensure that professional development funds are better targeted and more efficiently reach those teachers who are most in need of additional help to improve instruction. Over time, collecting data on teacher effectiveness can also be very useful in determining the value of various approaches to professional development in helping teachers enhance their ability to improve student achievement.

The federal funds provided under Title II represent about a 50 percent increase over previous levels of support for teacher quality. However, the evidence suggests that these funds are not always used in the most effective ways and there is often little connection between professional development delivery and student learning gains. Using measures of teacher effectiveness would help assure that federal funds are spent more efficiently and better address the needs of teachers.

In its study of how districts spent Title II funds, the GAO found that all districts examined used funds for professional development in core academic areas. However, most of the districts used the funds for other purposes as well. Ten of the eleven districts used funds for general teaching strategies or for professional development for non-teaching staff. In seven of the districts, officials used the funds to hire additional teachers to reduce class sizes. And six of the districts took advantage of the law's provision allowing districts to transfer Title II funds to other programs, such as school improvement.

The GAO's findings are consistent with those of prior research that looked at how professional development dollars are spent. A study of how districts spend professional development dollars in four urban districts, found that the districts spent considerably more than previously known on professional development—as much as 4 percent of their budgets, and up to \$5,000 per teacher. However, the study found that, in three of the four districts examined, professional development on academic content areas represented less than a fourth of all spending for teacher learning. In many cases, districts provided professional development on general areas like planning, or on generic instructional strategies, such as cooperative learning (Miles and Guiney 2000).

Requiring professional development for teachers for up to three years would also represent a substantial improvement over current practice. Research suggests that professional development is effective if it is sustained and intensive, but few teachers have access to that type of professional development (American Educational Research Association 2005). In a comprehensive survey of teachers, the National Center on Education Statistics found that a majority of teachers reported that they received a day or less of professional development on most topics that year, the same amount teachers had reported two years earlier (Parsad, Lewis, Farris and Greene 2001).

Teacher Effectiveness Measures Widely Used

Although measuring teacher effectiveness based on improvements in student achievement might seem new, the approach has a long track record that demonstrates that it is both feasible and productive. Tennessee has been using value-added methodology statewide since the early 1990s. Originally developed by William L. Sanders, a statistician formerly at the University of Tennessee, the Tennessee Value-Added Assessment System (TVAAS) measures teacher effectiveness by analyzing the learning growth of students. The system has been used effectively by schools and districts to inform decisions about teacher assignments and professional development.

Other examples of value-added models have been used throughout the country and show that it is possible to clearly demonstrate that teacher effects can be measured fairly and that information gathered from these practices benefits students in the short- and long-term. For instance, earlier in this decade, Pennsylvania and Ohio mandated the use of value-added methodology statewide, and the method has been used in some 300 districts in 21 states (Hershberg 2005). Other examples include:

- In Dallas, the district analyzed value-added data to determine the most effective teachers, and then studied their practices to identify the teaching characteristics that made them effective.
- In Guilford County, North Carolina, district officials used value-added data in making teaching assignments, ensuring that the most effective teachers were assigned to students more equitably.
- Schools participating in the Teacher Advancement Program (TAP), an initiative created by the Milken Family Foundation, use value-added data, along with observations of teaching practice, in evaluating teachers and awarding pay increases and career advancement opportunities. Evaluations have found that students of teachers rated highly under TAP exhibit larger learning gains than do students taught by other teachers (Carey 2004).

While these examples and others demonstrate that effectiveness measures can be used productively by school leaders to improve teaching and student achievement, states must first meet the challenge of building data systems that are sufficient to the task.

No Child Left Behind solved part of the problem for states seeking to use these measures by requiring states to assess every student in reading and mathematics in grades three through eight; now all states test students in each of those grades. The momentum for incorporating the use of growth models in determining whether students are achieving AYP will be a catalyst for moving states to complete the work necessary to implement the longitudinal data systems needed to measure individual student progress and for matching that data with teachers. According to the Data Quality Campaign, a national effort to promote the development of longitudinal data systems to improve student achievement, forty two states report having a unique student identifier—an integral part of a longitudinal data system. Additionally, fifteen states have a teacher identifier that gives them the ability to match teachers to students (Data Quality Campaign 2006).

The evidence from research and the experience of states and districts that have put such systems in place clearly shows that measuring teacher effectiveness through value-added approaches is feasible and useful in improving teaching and student achievement. We must seize the opportunity created by the coming reauthorization of NCLB to adopt this approach to ensure that all children, especially those who have been underserved in the past, have access to genuinely effective teachers.

Ensuring Effective Teachers for *All* Students

The goal of the Commission’s HJET recommendation is to ensure that the intent of the original NCLB statute—that all students have access to capable teachers—is realized. The evidence shows clearly that the measures called for in the statute are inadequate, and that it is feasible to employ more precise and richer measures that would more accurately and fairly determine whether teachers are in fact improving student performance.

But it is important to underscore that the purpose is not to point fingers at teachers or to label teachers as “failing”—far from it. The comprehensive set of provisions, including access to better targeted and more relevant professional development for teachers who cannot yet demonstrate effectiveness, and time for teachers to be able to demonstrate that they are effective, makes clear that the aim is to ensure that effective teachers receive recognition and credit—based on what matters most—and that those who need additional help and support to achieve that standard are able to get it.

Of course, as important as these provisions are, identifying effective teachers and providing support for teachers to become effective are only two steps toward ensuring high quality in the classroom. Higher education institutions need to do their part to increase the supply of effective teachers by setting goals for increasing the number of graduates qualified to teach, particularly in shortage areas. And schools should be encouraged to recruit effective teachers, regardless of whether they come to the profession through traditional or alternative routes.

School districts with high rates of teacher turnover should develop plans to recruit and retain effective teachers. The plans should address mentoring for new teachers, bonus pay to attract successful teachers, improvements in working conditions and multiple career paths.

Education ultimately comes down to the interaction between a teacher and a student. With *effective* teachers in every classroom, every child will have a better opportunity to learn what he or she needs to know and be able to do to graduate prepared for success after high school.

References

American Educational Research Association. (2005). "Teaching Teachers: Professional Development to Improve Student Achievement." *Research Points* 3(1), Summer 2005. Washington, DC: American Educational Research Association.

Carey, K. (2004). *The Real Value of Teachers*. Thinking K-16, 8(1), Winter 2004. Washington, DC: The Education Trust.

Data Quality Campaign. (2006). *The Data Quality Campaign at Year One: Progress Report 2006*. Austin, TX: National Center for Educational Accountability.

Education Trust, The. (2003). *Telling the Whole Truth (or Not) About Highly Qualified Teachers*. Washington, DC: The Education Trust.

Goldhaber, D. (2006). *Everybody's Doing it, but What Does Teacher Testing Tell Us About Teacher Effectiveness?* Washington, DC: Urban Institute.

Gordon, R., Kane, T.J. and Staiger, D.O. (2006). *Identifying Effective Teachers Using Performance on the Job*. Washington, DC: The Hamilton Project and the Brookings Institution.

Government Accountability Office. (2005). *Improved Accessibility to Education's Information Could Help States Further Implement Teacher Qualification Requirements*. GAO-06-25. Washington, DC: Government Printing Office.

Hershberg, T. (2005). *Value-Added Assessment and Systemic Reform: A Response to America's Human Capital Development Challenge*. Phi Delta Kappan, December 2005. Bloomington, IN: Phi Delta Kappan International.

Kane, T.J., Rockoff, J.E. and Staiger, D.O. (2006). *What Does Certification Tell Us About Teacher Effectiveness? Evidence from New York City*. Cambridge, MA: National Bureau of Economic Research.

McCaffery, D.F., Lockwood, J.R., Koretz, D.M. and Hamilton, L.S. (2005). *Evaluating Value-Added Models for Teacher Accountability*. Santa Monica, CA: RAND Corporation.

McClure, P., Piché, D. and Taylor, W.L. (2006). *Days of Reckoning: Are States and the Federal Government Up to the Challenge of Ensuring a Qualified Teacher for Every Student?* Washington, DC: Citizens' Commission on Civil Rights.

Miles, K.H. and Guiney, E.C. (2000). "School Districts' New Role." *Education Week* 19(40), June 14, 2000: 30, 32-33.

Parsad, B. Lewis, L., Farris, E. and Greene, B. (2001). *Teacher Preparation and Professional Development, 2000*. NCES 2001-088. Washington, DC: National Center on Education Statistics.

Peske H.G. and Haycock, K. (2006). *Teaching Inequality: How Poor and Minority Students Are Shortchanged on Teacher Quality*. Washington, DC: The Education Trust.