IMPROVING “NO CHILD LEFT BEHIND”:
LINKING WORLD-CLASS EDUCATION STANDARDS TO
AMERICA’S ECONOMIC RECOVERY

VOL. 24, NO. 4
AUGUST 17–22, 2009
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THE ASPEN INSTITUTE
Washington, DC
This project was funded by Carnegie Corporation of New York. The statements made and views expressed are solely the responsibility of the authors.

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The Aspen Institute
One Dupont Circle, NW
Washington, DC 20036-1133
Published in the United States of America
in 2009 by The Aspen Institute

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Printed in the United States of America
ISBN: 0-89843-512-9
1748/CP/BK
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“Improving No Child Left Behind: Linking World-Class Education Standards to America’s Economic Recovery” was the theme of the 2009 conference sponsored by the Aspen Institute Congressional Program, held August 17-22 in Banff, Alberta, Canada. The meeting was the sixteenth in a series that examines policy options for promoting the education and well-being of American youth, and thus the well-being of the nation. A bipartisan group of 16 Members of Congress participated, together with seven invited experts with relevant knowledge and experience. The Congressional Program series is not intended to yield a consensus statement of recommended policy directions. Rather, the aim is to help inform policymakers and facilitate the search for common ground on which effective American legislative policy must rest. The 2009 Congressional Program conference examined a range of issues and policy options related to lifting the quality and effectiveness of U.S. education by improving standards, assessment, education leadership, and instruction.

To succeed in the global economy

In the United States and around the world, demand for skilled and knowledgeable workers continues to rise. American workers and businesses now compete with those in many other nations. For the next generation, workplace demands stemming from globalization and technology will increase even more dramatically. Yet American educational progress has been slow and, in many respects, stagnant. High school graduation rates are alarmingly low, and students who do graduate often lack even the rudimentary skills and knowledge necessary to cope with the demands of postsecondary education. On virtually every academic proficiency indicator on which they compete with students in the other 29 developed nations in the Organisation for Economic Co-operation and Development (OECD), American high school students’ performance varies from mediocre to poor. The achievement of minority, high-poverty, and immigrant youth lags even more, and our public schools largely fail to mitigate the barriers that these groups face. In fact, many other countries do a significantly better job of educating immigrant and high-poverty populations that are proportionately larger than those in the United States.

Trailing a host of nations in student achievement imposes on the U.S. economy a huge and recurring economic loss, estimated in the range of $1 to $2 trillion annually. The gap between black and Latino student performance and white student performance is also costly. Had this gap been narrowed, the gross domestic product (GDP) in 2008 would have been at least $300 billion higher than it was. If such a performance gap persists, the economic impact will continue to mount as demographic trends result in blacks and Latinos becoming a larger proportion of the population and workforce. In short, now that human capital has become vital
for success in the global economy, American economic competitiveness is unsustainable with a workforce that has large numbers of poorly-prepared students.

This crisis of low student performance and group disparities was the major impetus for state and federal policymakers to take a standards-based approach to improving education outcomes, a movement that began several decades ago. Then, to hold schools accountable for enabling all students to reach proficiency standards, Congress enacted the No Child Left Behind Act (NCLB) in 2002. These reform efforts have met with mixed results.

On the positive side, NCLB has given public schools the clear message that business as usual will not suffice and that proficiency for all students is the new expectation. NCLB allows states to use their own standards and tests to determine proficiency, but it requires them to report achievement data broken out by subgroups within the school population (racial/ethnic, low income, students with disabilities, and English language learners). Congress took a major policy step in requiring this accountability for all students and disaggregation of data; the legislation has changed the education landscape. However, the impact is constrained by significant problems yet to be adequately addressed. Foremost among these are the tough issues of building capacity and increasing the coherence of the education system. All the countries that perform well in international comparisons have far more coherence in key elements of their education systems than the U.S. system has. Even the nations that have considerable decentralization in the actual delivery of education have consistent and coherent standards and assessment as the foundation of their system.

By contrast, the states largely lack well organized and integrated systems of standards and assessments. Consequently, in the United States inconsistency and inefficiency abound in curriculum, instructional materials, data systems, teacher and principal development, and student support.

Towards a shared set of standards: Fewer, clearer, higher

The states have too many standards—both individually and collectively. This excess of standards impedes development of effective curriculum and instruction and results in students acquiring only partial and superficial knowledge rather than solid understanding and mastery. Particularly in highly sequential subjects such as math and science, student learning suffers when the curriculum fails to follow a logical sequence in which each topic builds on those previously learned. Adding further complication to the chaotic picture is the fact that a great many American students move from one locale to another. For all these reasons, curriculum and instruction in the United States are in disarray, and the nation is far from achieving the desired outcomes of NCLB and the standards movement.

At the crux of what high-performing countries do differently from the United States is their adoption of fewer, clearer, and higher standards. A promising route to achieve this goal in the U.S. is the Common Core Standards initiative, a state-led effort coordinated by the National Governors Association and the Council of Chief State School Officers. Reaching a shared set of standards would enable participating states to learn from one another and achieve significant cost savings in the design of the next generation of curriculum, textbooks, and assessments. It would also allow for better-focused teacher preparation and professional development. Finally, the states would benefit from economies of scale as they shared resources in the development of curriculum, assessment, instructional materials, and teaching strategies.

As one or several coalitions of states seek to create a common core of standards, it is important that they consider the kinds of thinking and learning needed by knowledge workers in the present and even more so in the future. In this regard, current state standards come up short. All states rely on multiple choice questions that assess low-level knowledge and skills
rather than the higher order thinking needed in the 21st century, as discussed in the next section. Further, under the pressure of meeting NCLB’s requirements for Adequate Yearly Progress (AYP) in student proficiency, many states have set low standards for what constitutes proficiency. On the National Assessment of Educational Progress, the only nationally representative and continuing assessment of what America’s students know and can do in various subjects, results show persistent gaps between the percent of students rated as proficient on state tests and the percent scoring as proficient on the more trustworthy yardstick of the NAEP.

In reauthorizing NCLB, Congress could take a more expansive view of student performance measures. For example, the outcomes for which states are held accountable might include goals such as 90 percent four-year high school graduation rates within cohorts, college enrollment rates, and Advanced Placement and International Baccalaureate enrollment rates. Holding schools accountable for these kinds of outcomes as well as test performance is arguably important if we want students to meet high levels of college and career readiness. This is especially true because state assessments at present do not reflect the work young people will do when they complete K-12 education and the knowledge and skills essential for postsecondary success. In fact, many students meet state standards, pass state tests, and complete state-required courses, only to require remedial courses once they enroll in college. They may have met their state’s definition of proficiency, but many are not well prepared for college or the workplace. Vital to changing this state of affairs is transforming assessment.

**Transforming assessment and data systems**

Among the key issues facing the United States at this juncture in school improvement efforts are the need to assess higher-order thinking; strengthen formative assessment; make strategic use of technology; and improve data systems.

**Assessing higher-order thinking.** In 2007 U.S. elementary and middle school students made gains on the Trends in International Mathematics and Science Study (TIMSS), a good measure of conventional classroom learning in math and science. The improving performance of American students on this assessment is encouraging, but the learning that enables students to perform well on tests of this kind is not sufficient for them to meet the demands of the 21st century economy.

An example from Japan’s experience is instructive. A decade ago, Japanese students showed a pattern similar to that of U.S. students today. They did well on TIMSS-like assessment items but did less well on items that called for more application and problem solving. Recognizing that what gets tested is what gets taught, the Japanese government responded by enhancing the nation’s assessment system to emphasize these broader goals and assess the extent to which students reach them. This policy response, along with necessary supports, brought dramatic change in Japanese classrooms, and students began doing well on more complex, application-oriented assessments. Although for the U.S. the process for transforming our student assessment will necessarily be different, there is much to learn from the Japanese experience. Our nation too needs to do a much better job of educating students in complex learning, extended tasks, and the ability to apply knowledge and skills to new problems, and thus we need to assess these things as part of our accountability system.

As with the ongoing coalition working on a common core of standards, state collaboration may help in moving towards more ambitious, higher-quality assessment, more consistency across states, and alignment with the goal of college and workplace readiness. Preliminary efforts of this kind are underway. Such state collaboration can also help to overcome the cost of high-quality assessments, but federal investment in research and development for such assessment will be necessary as well.
Formative assessment. Besides needing better assessment for accountability, schools and teachers in the U.S. are in great need of assessments to inform instruction. Tests for accountability purposes, along with the hours of test preparation that many schools employ, take up a great deal of student time that could be used for instruction. Since these tests yield only numerical scores and are delivered late in the year, they provide no helpful information for teachers to use in advancing student learning. Formative assessment, by contrast, gives teachers (and students themselves) information about what each individual understands and what he or she still needs to learn. In order to plan formative assessment tasks and use the results in instruction, teachers need to have a working map of the progression students follow in learning key concepts and skills. In both preservice preparation and professional development, they need to get the knowledge and experience that will equip them to create, or select and adapt, assessments of this learning and to use the results productively. Such professional development enables teachers to promote student learning and thus should be incentivized through Title II and other federal funds.

Putting technology to use in assessment. America’s strength in technological expertise and innovation can and should be leveraged to improve tests and the teaching and learning directed to them. Technology can be valuable and cost-effective in addressing the substantial problems that must be solved if reform is to move forward. These challenges include designing assessments that focus on key content and essential 21st century skills, adaptation of assessments to serve the needs of different subgroups of students, automated scoring of student responses to ease the burden on teachers, and development of faster feedback and help. Helping to fund research and development to meet these challenges is a role the federal government could take on.

Data systems. NCLB compelled schools, districts, and states to begin to strategize around the use of data to meet the goals set forth by the law. Education data, formerly consigned to back offices in school districts and states, is increasingly recognized as indispensable to education improvement efforts. And it is now apparent that states and districts urgently need greater capacity to collect and use high-quality data to track student progress, teacher effectiveness, and other key aspects of education improvement. Given the mobility of American families, an argument can be made that a student’s education data should be easily transferable. For instance, only two states, Florida and North Carolina, presently have data systems that keep track of a student’s education from childhood through college. To begin using data extensively and well for school improvement, states will need strong infrastructure, high-quality student assessment systems, and rigorous teacher evaluation systems. Principals, teachers, counselors, and other staff will need to learn to use data to identify the specific help students need to succeed, adjust classroom instruction to better address student strengths and weaknesses, and target professional development and other resources on student and teacher needs. To put these prerequisites into place, significant federal investment is needed.

Teachers and principals—beyond “qualified” to effective

Teachers have a greater influence on student achievement than any other factor in schools. In recognition of this fact, NCLB mandated a highly qualified teacher in every classroom and provided criteria for what constitutes “highly qualified.” However, research shows that the specified qualifications only weakly predict whether teachers will succeed in the classroom. In fact, many adequately credentialed teachers lack the skills to teach the requisite content to a diverse class of learners, especially students who have considerable academic ground to make up. Putting greater emphasis on teacher effec-
tiveness in NCLB and other school improvement efforts is more likely to improve student outcomes than is the heavy focus on credentials, according to available evidence.

**Evaluating and promoting teacher effectiveness.** There are two major ways to determine teacher effectiveness: “value-added” measures that estimate a teacher’s contribution to learning on the basis of gains in students’ standardized test score results; and practice-based approaches, which typically involve directly observing and rating teachers’ classroom practice. Some combination of these approaches is likely to be the best strategy for developing assessment that both identifies effective teachers and provides information about how teachers might improve their practice. If professional teacher organizations and other constituencies can participate in efforts to develop assessments of effectiveness, their buy-in is more likely. Such assessments of effectiveness should also be a key component of next-generation teacher compensation systems.

How can federal policy encourage and assist movement from a teacher qualifications focus to an effectiveness focus? States and districts currently lack the knowledge and tools to make this shift, but federal funding can provide incentives for creation and use of these tools. The federal government currently invests heavily in teacher recruitment and development through Title II of the Higher Education Act pertaining to teacher quality and other funding programs related to quality improvement. Instead of allowing districts to use those monies on class size reduction and one-shot training programs, which many experts argue have limited effect, the federal government can direct funding to efforts that measure and improve teaching effectiveness.

**Capacity and distribution of effective teachers.** In the nation’s need for effective teachers, both capacity and distribution problems exist. Schools serving large numbers of low-income and minority students still have far fewer effective teachers; they have more novice teachers, many of whom move on as soon as they get some experience under their belts.

The supply of effective teachers can also be increased by creating high-quality alternative routes to certification. The U.S. education system needs different pathways into teaching and certification that are organized around improving student achievement. Teach For America and other emerging programs, such as those that include urban teacher residency, are examples of school-based models of teacher preparation that put student achievement growth at the center of professional training. Federal policy makers can play a role in deregulation of certification and permitting schools and districts to select teachers from any source, provided that program graduates are consistently judged effective by multiple measures, including growth in student achievement, as well as observations and peer evaluations.

The federal government recently has taken a role in encouraging individuals to take positions at schools serving disadvantaged students, establishing a grant program for districts implementing compensation alternatives to the single salary schedule. Congress also created the Teacher Education Assistance for College and Higher Education (TEACH) program in which a yearly grant goes directly to college students if they plan to teach in a high-need field at a school that serves students from low-income families. Besides financial incentives, evidence suggests that teachers value professional working conditions. But the most powerful motivator of all for teachers is the ability to help children learn. It is for this reason that supporting new teachers through induction and mentoring continues to be critical to improving the quantity of effective teachers in hard-to-staff schools. Teacher support and guidance increase teacher retention, accelerate the professional learning of new teachers, and create communities of experienced and novice teachers. Principals are best positioned to ensure that such mentoring and support occur.
**Principals.** Effective principals recruit and select teachers who are aligned with a vision of school improvement; provide instructional leadership; challenge and support teachers to strive toward higher levels of effectiveness based on student outcomes; develop systems and structures that allow teachers to learn from each other and from examining data; and create a safe, stable school climate. For schools that have been identified as needing improvement, principals who can do these things are even more critical, although such leaders may be difficult to recruit and retain. Recent innovative efforts to recruit and develop school leaders for “turnaround” schools show that it is possible to attract promising principals and train them to do what it takes to help schools dramatically improve. Policy options include providing incentives to induce effective principals to commit themselves to three to five years in hard-to-staff schools. Another approach that is meeting with considerable success is to have a group comprised of a principal and several master teachers go as a team to a low-performing school for at least several years, thus forming a critical mass to bring about change. Incentive bonuses and leadership development for such approaches may be a cost-effective way of leveraging school progress.

While NCLB has helped to place greater focus on our nation’s lowest performing schools, much remains to be done to make robust improvements in turnaround schools. To impact student learning, especially in these schools, the U.S. needs to do a better job of recruiting people into teaching and school leadership; producing more high-quality teachers and principals; tapping into pools of individuals willing to be educators; and then promoting their equitable distribution.

In reauthorizing NCLB, an expanded focus on principal effectiveness as well as that of teachers is well worth considering. Promoting better use of Title II funds is another option. For example, policy makers could designate a portion, such as 10 percent, of Title II (Part A) funds for improving principal quality and effectiveness. Title I of the Elementary and Secondary Education Act (known as No Child Left Behind), which provides funding to schools and school districts with a high percentage of students from low-income families, could require districts and schools to have a plan for attracting, retaining and developing high quality teachers and leaders where they are most needed.

**Partnering with parents and communities.** When principals and teachers reach out to parents and others in the community to maintain and increase the sense of ownership and engagement, the school community is strengthened. Research on successful school reform highlights the value of this engagement in making all students successful learners. Everyone who comes into contact with a student is a partner in ensuring that student’s academic success, and parents are foremost in this impact.

As teachers and principals are trained, they should learn ways of partnering with families to improve student learning, including clearly communicating about school programs and individual student progress and fostering involvement in school activities and decision making. School leaders should support home visits, family nights, and parent workshops that help families make informed decisions about their children’s academic program, request needed services, assist with homework, and support students’ learning in other ways.

At this point in time, the United States urgently needs changes in the education system, and some of these are very broad in scope. Yet, this is also a moment of great opportunity. There is growing state interest in collaborating to address problems and moving to fewer, clearer, higher standards. Since the passage of NCLB, important lessons have been learned. Finally, from numerous instances of excellent schools the nation has seen that all students can achieve at a high level.
The Future of Inequality
The Other Reason Education Matters So Much

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As almost every economic policy maker is aware, the gap between the wages of educated and less-educated workers has been growing since the early 1980s—and that change has been both large and pervasive even when the measurement is narrowed by gender, industry or occupation. What’s not widely known, though, is that expanding wage inequality is a relatively new phenomenon. In fact, inequality actually narrowed from around 1910 to the 1950s, and then remained fairly stable until the 1980s.

Most surprising, perhaps, there is solid evidence that the ups and downs in wage inequality across the century can be explained almost entirely by what amounts to a race between technological change and educational attainment. Technological change has increased the relative demand for skilled and educated workers, while access to education has increased the relative supply of skilled and educated individuals. And here’s the kicker: the big variable appears to be changes in the pace of educational attainment rather than changes in technological progress.

The rise and decline of unions plays a supporting role in the story, as do immigration and outsourcing. But not much of a role. Stripped to essentials, the ebb and flow of wage inequality is all about education and technology.

Inequality and Growth in Postwar America

The American economy grew rapidly in the quarter century after World War II. Average family income in real (inflation-adjusted) terms rose by a remarkable 2.6 percent annually from 1947 to 1973. Equally impressive, the rising tide lifted all boats and even slightly favored the have-nots: Incomes for those in the bottom one-fifth of the income distribution rose by around 3 percent annually, compared with about 2.5 percent for those in the top one-fifth. (See Figure 1.)

But during the subsequent three decades, incomes diverged. From 1973 to 2005, the bottom fifth of families realized almost no growth in real income, whereas the top fifth enjoyed an average annual gain of 1.6 percent. What’s more, the top 5 percent of families experienced an even-higher 2 percent annual growth in real income.

Measured over the 25 years from 1980 to 2005, the impact of these diverging fortunes was quite impressive. Income for families at the 20th percentile of the distribution grew by a total of just 10 percent, while those at the 50th percentile managed an increase of 22 percent. Meanwhile, those at the 95th percentile averaged a total gain of 50 percent. To paraphrase

¹ Claudia Goldin and Lawrence Katz are Henry Lee Professor of Economics and Elisabeth Allison Professor of Economics, respectively, at Harvard University. A more detailed exposition of their analysis can be found in their book, The Race between Education and Technology (Belknap Press, 2008). This article was published in the Milken Institute Review (3rd Q 2009).
Billie Holiday, the economy blessed the child that got his own. (See Figure 2.)

However one views widening economic inequality in terms of right and wrong, it tests the social and political stability of a country already rent by deep economic and cultural divisions. Today’s anxieties about inequality may not be as extreme as those at the end of the Gilded Age of the 19th century, when Associate Justice Stephen Field of the Supreme Court asserted that an income tax would begin “a war of the poor against the rich.” But parallel concerns today are well-grounded, nonetheless.

To understand what has happened over the decades, it is important to recognize that wage inequality is closely linked to differences among individuals in the level and type of education. Increases in the economic returns to investments in education from 1973 to 2005, for example, account for about 60 percent of the rise in wage inequality. That is, much of the rising wage inequality in recent history can be traced to rising differences between the wages of the highly educated and the less educated.

Education, we would emphasize, affects far more than wage inequality. An educated populace is a key source of economic growth both directly, through improved labor productivity, and indirectly, by spurring innovation and speeding the diffusion of advanced technologies. Broad access to education was, by and large, a major factor in United States economic dominance in the 20th century and in the creation of a broad middle class. Indeed, the American dream of upward mobility both within and across generations has been tied to access to education.

Long-term Trends in Inequality and the Returns from Education

Economic inequality, we noted above, changed little from the 1950s through the 1970s, then increased sharply. Figuring out what happened to wage inequality in earlier decades is less straightforward because the federal government surveyed for information on individual incomes only beginning with the 1940 federal population census. Using a variety of sources, though, including a relatively obscure state census for 1915 so detailed that no federal census has come close to the information it includes, we have pieced together a full century of inequality trends.

The new evidence demonstrates that, rather than rising for much of the century, the returns from education and the wage premium for skills actually fell significantly from 1915 to 1950. The premiums linked to added years of high school and college were exceptionally high around 1915—and they were substantial even within broad occupational groupings. Educated workers appear to have been in high demand at the beginning of the 20th century, even among blue-collar workers.

We have noted that wage inequality rose from 1980 to the present, yet declined rapidly before 1950. But the previous cycle was equally striking: The returns from years of college and high school around 1915 were as high as the returns from college have been in recent years. Indeed, if the wage premium garnered by those attending college is our benchmark, economic inequality appears to have come full circle across the century. Is there a single explanation for the long decline in inequality followed by the long growth of inequality?

One common-sense explanation is that “computers did it”—more broadly, technological change that increased the demand for workers with skills greatly accelerated in the past several decades, but had been sluggish before. The problem here is that technological change, measured in a variety of ways, was just as rapid and just as likely to increase the demand for high-skilled workers at the start of the 20th century as it has been in the recent past.

Electricity replaced far less efficient sources of light and power in factories and offices. The radio and automobile rapidly diffused and airplanes took to the sky. Factories were transformed by continuous production machinery.
As a consequence, more-educated workers were in great demand in clerical work, managerial positions and even in blue-collar positions that required sophisticated knowledge of how to assemble, use and maintain complex machinery. Indeed, in the early 20th century, employers often stated that they wanted operatives familiar with formulas, algebra, blueprints, chemistry and electricity. “Skill-biased” technological change is thus not new, and it did not greatly accelerate toward the end of the 20th century.

The Race

If computers are not to blame, what can account for the decline followed by the sharp rise in wage inequality?

The title of our book, The Race between Education and Technology, was taken from a remark by Jan Tinbergen, the first Nobel laureate in economics. Inequality, he said, is the outcome of a race between education and technology. When technological advance vaults ahead of educational change, inequality generally rises. By the same token, when increases in educational attainment speed up, economic inequality often declines.

Technology, probably skilled-biased technology, proceeded apace and fairly continuously during the last century. Educational attainment also increased rapidly for much of the century but slowed toward its end.

Average years of schooling increased rapidly and continuously for Americans born from 1875 to 1950 (and educated in the United States). Indeed, America led the world in universal education in the first half of the 20th century, beginning with the movement in 1910 to 1940 to expand free compulsory education to the high school years and continuing with the transition to mass college attendance.

No other nation in the world enjoyed so complete a shift to mass secondary school education before 1940, and in the United States the average educational attainment of the work force sharply increased. The high school movement was so swift that by 1940 more than half of all 18-year-olds completed secondary school—a gain from less than 10 percent a mere 30 years earlier.

On average, educational attainment increased by almost one year per decade for cohorts born from 1875 to 1950. The increase in educated Americans was so great that the relative supply of educated workers outran or kept pace with demand, and continued to do so until fairly recently.

But something happened in the 1970s. A sharp slowdown in the increase in educational attainment and high-school graduation rates occurred for those born after 1950. College graduation rates began to slow and high school graduation rates reached a plateau. The United States, once the world leader in the proportion of people graduating from high school, has fallen to near the bottom of the (rich and relatively rich) nations that belong to the Organization for Economic Cooperation and Development. And while the United States is still a leader in college attendance, its college-completion rates for recent cohorts are lagging other nations.

To understand the evolution of economic inequality over time, we must measure the “educational stock,” or the educational attainment of all workers in the United States, over time. To do this, we combined our measures of educational attainment across age cohorts and then folded in the education of foreign-born (and educated) residents. Our estimates nicely capture the rapid increase in educational attainment during the first eight decades of the 20th century, as well as the slowdown after 1980.

The changes in the educational attainment of the work force are stark. From 1915 to 1960, the relative supply of college educated workers increased by an average annual rate of 3 percent, and by a whopping 3.8 percent from 1960 to 1980. But from 1980 to 2005, the increase was just 2 percent per year.

The slowdown in relative skill supplies in the latter period largely explains the increase in the rate of return from education from those
who did get a lot of it, and much of the rising wage inequality in the post-1980s. Similarly, the large increase in educational attainment from 1900 to the 1970s was largely responsible for the decrease in the return from education and the reduction in inequality for so much of the century. Putting it another way, the 20th century’s two inequality tales are largely the result of changes in the supply of educated workers rather than changes in the demand.

The impact of education on the relative supply of skilled workers is not a simple function of years of school. A more-educated person today (one who is college-educated) is different from a more-educated person in the past (one who had a high school diploma). Both the high school and college wage premiums are important. Here we examine changes in the college wage premium.

The framework we employ has a demand curve for skills moving outward through time (to reflect skilled-biased technological change) at a constant rate and a supply-of-skills function shifting out at a changing rate. We found that the relative earnings of college to non-college workers accurately tracks shifts in the relative supply of educated workers over the 90 years from 1915 to 2005. Indeed, as shown in Figure 3, the wage gap predicted by the relative supply of skills fits almost perfectly once we make allowances for the distortion caused by World War II.

The big changes, both up and down, in the returns from education were due to shifts in the relative supply of educated workers. The relative supply of college workers increased at an average annual rate of 3.8 percent from 1960 to 1980, but at just 2 percent annually from 1980 to 2005. The most important factor accounting for the soaring college wage premium of the post-1980 period was the slowdown in the growth of educational attainment. (See Figure 4.)

Our analysis has thus far brushed aside two potentially important factors: labor unions and immigration. A closer look suggests that they have both played roles, but not nearly as large as many policy advocates have thought.

Most estimates of the impact of declining unionization on wage inequality show that about 10 to 20 percent of increased wage inequality for men (and almost none for women) can be explained by the ebbing strength of unions. The union wage premium—that is, the extra wages going to union members doing the same work as non-union members—is about 15 percent. But over the period examined, union membership declined from a peak of 33 percent of the nonagricultural labor force to just 12 percent. Therefore, declining union representation of less-skilled workers could not have had a large effect on the college wage premium; simply plugging in the numbers suggests that this factor accounts for just three percentage points out of the total increase in the college wage premium of 23 percentage points.

The other factor is immigration. As noted earlier, the ratio of college- to high-school-educated workers increased at just a two percent rate from 1980 to 2005—hardly one-half the pace of earlier decades. And since immigration increased greatly after 1970, and a large fraction of the newly arrived came with little education, it is certainly plausible that the recent sluggishness in educational gains could be due to changes in the numbers and educational attainment of immigrants.

Could be—but it is not. Most of the slowdown in college attainment has been due to a slowdown in attendance by the native-born population. In the absence of immigration, the college-high school wage premium would have increased by 20 percent after 1980, as opposed to the 23 percent actually recorded. Strikingly, even the slowdown in the change in the high-school-graduate-to-dropout ratio is still largely due to the native-born population and not to immigrants (including both the legal and illegal populations).

The Future of Inequality

The bottom line here is that labor-market-based efforts to reduce inequality depend on increasing the supply of educated workers.
The big questions, then, are why the rise in educational attainment has slowed and what policies could reverse the trend. This is not the place to find detailed answers. But clearly, one important factor in the slowdown has been the rapid increase in tuition in both public and private colleges. Another is the stagnation of secondary-school graduation rates and the fact that too many high school graduates are inadequately prepared to pass college courses.

Not so long ago, the American economy grew rapidly and wages grew in tandem, with education playing a large, positive role in both. The United States led the way in mass education and was, until fairly recently, many decades ahead of even the rich nations of Europe. The challenge now is to revitalize education-based mobility. For without it, it appears that the technological advances that largely drive economic growth will increasingly divide the nation.

**Figure 1: Which Households Have the Fastest Growing Incomes?**


Figure 2: Low, Middle and High Family-Incomes, 1947 to 2005

Figure 3: College Wage Premium, 1915 to 2005

Source: The actual values for the college wage premium are from chapter 8, *The Race between Education and Technology*. The predicted college wage premium comes from the statistical regression analysis found in table 2, chapter 8 of the book.
Figure 4: Ratio of College to High School Workers, 1915 to 2005

Source: The Race between Education and Technology, chapter 8, table 1.

Note: Growth rates for various segments (1915 to 1960, 1960 to 1980, and 1980 to 2005) are given.
Introduction

In the global economy, the yardstick for educational success is no longer merely improvement by national standards, but the best performing education systems internationally. International educational benchmarks have therefore become an important lever to assess and drive educational change:

- By showing what is possible in education, they can help to optimize existing policies but also to reflect on a more fundamental transformation of underlying existing policies, which become apparent when contrasted with policy alternatives.

- They can help setting policy targets in terms of measurable goals achieved by other systems and help to identify policy levers and to establish trajectories for reform.

- They can assist with gauging the pace of educational progress and help reviewing the reality of educational delivery at the frontline.

- Last but not least, they can support the political economy of educational reform, which is a major issue in education where any pay-off to reform almost inevitably accrues to successive governments if not generations.

This paper provides an analysis of where the U.S. stands, compared with the principal industrialized countries internationally, and identifies some policy levers for educational improvement that emerge from international benchmarking.

The U.S. is Losing its Educational Advantage

Among the 30 Organisation for Economic Co-operation and Development countries with the largest expansion of college education over the last decades, most still see rising earnings differentials for college graduates, suggesting that an increase in knowledge workers does not necessarily lead to a decrease in their pay as is the case for low-skilled workers. The other player in the globalization process is technological development, but this too depends on education, not just because tomorrow’s knowledge workers and innovators require high levels of education, but also because a highly-educated workforce is a pre-requisite for adopting and absorbing new technologies and increasing productivity. Together, skills and technology have flattened the world such that all work that can be digitized, automated and outsourced can now be done by the most effective and competitive individuals, enterprises or countries, wherever they are.

No country has been able to capitalize on the opportunities this “flat world” provides more than the U.S, which can draw on the most highly educated labor force among the principal...
industrialized nations, at least when measured in terms of formal qualifications. However, this advantage is largely a result of the “first-mover advantage” which the U.S. gained after World War II by massively increasing enrollments. That advantage is now eroding quickly as more and more countries reach and surpass U.S. qualification levels. In fact, many countries are now close to ensuring that virtually all young adults leave schools with at least a high school degree, which the OECD indicators highlight as the baseline qualification for reasonable earnings and employment prospects. Over time, this will translate into better workforce qualifications in these countries. In contrast, the U.S. stood still on this measure and among OECD countries only New Zealand, Spain, Turkey, and Mexico now have lower high school completion rates than the U.S. Even when including qualifications such as the GED (Graduate Equivalent Degree) that people can acquire later in life to make up for unsuccessful school completion, the U.S. has slipped from rank 1 among OECD countries for adults born in the 1940s to rank 12 among those born in the 1970s. Again, that is not because completion rates in the U.S. declined, but because they have risen so much faster in many other countries. Two generations ago, South Korea had the economic output of Afghanistan today and was at rank 24 in terms of educational output among today’s OECD countries. Today it is the top performer in terms of the proportion of successful school leavers, with 96% of an age cohort obtaining a high school degree, compared with 75% in the U.S. Similar trends are visible in college education, where the U.S. slipped between 1995 and 2005 from rank 2 to rank 14, again, not because U.S. college graduation rates declined, but because they rose so much faster in many OECD countries. Graduate output is particularly low in science, where the number of people with a college degree per 100,000 employed 25-to-34-year-olds was 1,100 compared with 1,295 on average across OECD countries and more than 2,000 in Australia, Finland, France, and Korea (OECD, 2007a).

These developments are just the beginning. The first, and easy phase of globalisation, the time that countries like the U.S. only had to compete against countries that offered a low skilled work force at a fraction of its own labor costs is long gone. What we now see is, that we no longer compete with low skills at low costs, but that countries like China or India are starting to deliver high skills at low costs at an ever increasing pace. It is quite realistic to assume that within less than a decade China will be putting out twice as many university graduates each year than Europe and the U.S. together.

**Quality of Educational Outcomes in the U.S.**

Quantity matters, but quality is even more important. The OECD Program for International Student Assessment (PISA) extends the picture that emerges from comparing national degrees with the most comprehensive and rigorous international assessment of student knowledge and skills. PISA 2006 represents a commitment by the 57 participating countries to monitor the outcomes of education systems in terms of student achievement on a regular basis, within an internationally agreed common framework, and in innovative ways that reflect judgments about the skills that are relevant to adult life. PISA 2006 seeks to assess not merely whether students can reproduce what they have learned in science, mathematics, and reading—which is easy to teach and test—but also how well they can extrapolate from what they have learned and apply their knowledge in novel situations.

On the 2006 PISA science assessment, the U.S. ranked 21st among the 30 OECD countries, with a confidence interval that extends from the 18th to the 25th rank (OECD, 2007b). Moreover, while the proportion of top performers in the U.S. was similar to the OECD average, the U.S. had a comparatively large proportion of poor performers: 24.4% of U.S. 15-year-olds did not reach Level 2, the baseline level of achievement on the PISA scale at which students begin to demonstrate the science competencies that
will enable them to participate actively in life situations related to science and technology. To reach Level 2 requires competencies such as identifying key features of a scientific investigation, recalling single scientific concepts and information relating to a situation, and using results of a scientific experiment represented in a data table as they support a personal decision. In contrast, students not reaching Level 2 often confuse key features of an investigation, apply incorrect scientific information, and mix personal beliefs with scientific facts in support of a decision. A longitudinal follow-up of PISA students in Canada suggests that the absence of foundation skills often signals serious risks for students in their initial transition from education to work and of failing to benefit fully from further education and learning opportunities throughout life (Knighton and Bussière 2006).

Students who did not surpass the most basic performance level on PISA were not a random group. The results show that socio-economic disadvantage has a strong impact on student performance in the U.S. Indeed, 18% of the variation in student performance in the U.S. is explained by students’ socio-economic background—this is significantly more than at the OECD average level (14.4%). The U.S. is among the participating countries where two students of different socio-economic background had the largest difference in expected science scores (steepest socio-economic gradients). Other countries with similar levels of disparities included only France, New Zealand, the Czech Republic, the United Kingdom, Belgium and Germany. It would perhaps be tempting to attribute the performance lag of U.S. students to the challenges which socio-economic disparities and ongoing immigrant inflows pose to the education system. However, while the integration of students with an immigrant background poses significant challenges in many countries, among the countries that took part in the latest PISA assessment there are several with a larger immigrant intake than the U.S. which, nevertheless, scored better.

The Cost of the Achievement Gap

The international achievement gap is imposing on the U.S economy an invisible yet recurring economic loss that is greater than the output shortfall in what has been called the worst economic crisis since the Great Depression. A recent analysis of McKinsey (2009) shows that if the U.S. had in recent years closed the gap to better-performing nations such as Finland and Korea, GDP in 2008 could have been $1.3 trillion to $2.3 trillion higher (equivalent to 9 – 16% of GDP). Similarly, if the gap between black and Latino student performance and white student performance had been similarly narrowed, GDP in 2008 would have been between $310 billion and $525 billion higher. The magnitude of this impact will rise in the years ahead as demographic shifts result in blacks and Latinos becoming a larger proportion of the population and workforce.

Lessons from High Achieving Countries

Perhaps the most important lesson to be learned from PISA is that strong performance, and indeed improvement, is possible. Whether in Asia (e.g., Japan and Korea), in Europe (e.g., Finland) or in North America (Canada), many countries display strong overall performance and, equally important, show that poor performance in school does not automatically follow from a disadvantaged socio-economic background. Furthermore, some countries show that success can become a consistent and predictable educational outcome: In Finland, the country with the strongest overall results in PISA, the performance variation between schools amounts to only 5% of students’ overall performance variation, so that parents can rely on high and consistent performance standards in whatever school they choose to enroll their children. Last but not least, Poland demonstrated that it is possible to achieve performance gains equivalent to three-quarters of a school year within less than a decade.

Performance on international comparisons cannot simply be tied to money, since only
Luxembourg spends more per primary student than the U.S. and only Luxembourg, Switzerland, and Norway spend more per middle and high school student. The results for the U.S. reflect rather a lack of productivity. That point is reinforced by the fact that in international comparisons of primary grade school children the U.S. does relatively well which, given the country’s wealth, is what would be expected. The issue is that as they get older, children make less progress each year than children in the best performing countries. This is not just about poor kids in poor neighborhoods, it is about most kids in most neighborhoods. It is noteworthy that spending patterns in many of the world’s successful education systems are often markedly different than the U.S. These countries invest the money where the challenges are greatest, and they put in place incentives and support systems that get the most talented school teachers into the most difficult classrooms. That requires reforming inherited, traditional and bureaucratic systems of recruiting and training teachers and leaders, of paying and rewarding them and of shaping their incentives, both short-term and long-term. They often also devote a higher share of spending to classroom education than is the case in the U.S., and favor better teachers over smaller class sizes.

Looking beyond financial resources, PISA suggests that schools and countries where students work in a climate characterized by high performance expectations and the readiness to invest effort, good teacher-student relations, and high teacher morale tend to achieve better results. Interestingly, U.S. 15-year-olds usually rate themselves comparatively highly in academic performance in PISA, even if they did not do well comparatively. In part that may be due to culture, but one interpretation is also that students are being commended for work that would not be acceptable in high performing education systems. Many countries have pursued a shift in public and governmental concern away from the mere control over the resources and content of education towards a focus on outcomes. This has driven efforts to articulate the expectations that societies have in relation to learning outcomes and to translate these expectations into the establishment of educational goals and standards. Educational standards have influenced many of the top performing education systems in various ways, helping them to: establish challenging content at all grade levels; reduce overlap in curricula across grades; reduce variation in implemented curricula across classrooms; facilitate coordination of various policy drivers ranging from curricula to teacher training; and reduce inequity in curricula across socio-economic groups.

Coupled with this have been efforts to devolve responsibility to the frontline, encouraging responsiveness to local needs, and strengthening intelligent accountability. Of course, the U.S. is a decentralized education system too, but while many systems have decentralized decisions concerning the delivery of educational services while keeping tight control over the definition of outcomes, the design of curricula, standards and testing, the U.S. is different in that it has decentralized both inputs and control over outcomes. Moreover, while the U.S. has devolved responsibilities to local authorities, schools themselves have less discretion in decision-making. In a sense, the question for the U.S. is not just how many charter schools it wants but how to build the capacity for all schools to assume charter-like autonomy, as happens in some of the best performing education systems.

What further distinguishes the approaches to professional accountability developed in Finland, the use of pupil performance data and value added analyses in England, and the approaches to school self evaluation in Denmark, is that these strike a different balance between using accountability tools to maintain public confidence, on the one hand, and to support remediation in the classroom aimed at higher levels of student learning and achievement on the other. These countries have gone beyond systems of external accountability towards building capacity and confidence for
professional accountability in ways that emphasize the importance of formative assessment and the pivotal role of school self-evaluation. In Finland, for example, strategic thinking and planning takes place at every level of the system. Every school discusses what the national standards might mean for them, and decisions are made at the level of those most able to implement them in practice. Where school performance is systematically assessed, the primary purpose is often not to support contestability of public services or market-mechanisms in the allocation of resources. Rather it is to provide instruments to reveal best practices and identify shared problems in order to encourage teachers and schools to develop more supportive and productive learning environments.

Second, in most of the countries that performed well in PISA, it is the responsibility of schools and teachers to engage constructively with the diversity of student interests, capacities, and socio-economic contexts, without having the option of making students repeat the school year, or transferring them to educational tracks or school types with lower performance requirements. To achieve this, some education systems seek to establish bridges from prescribed forms of teaching, curriculum and assessment towards an approach predicated on enabling every student to reach their potential. They develop good support systems so that individual teachers become aware of specific weaknesses in their own practices, and that often means not just creating awareness of what they do but changing the underlying mindset. They also seek to provide their teachers with an understanding of specific best practices and they motivate teachers to make the necessary changes—and that is something that goes well beyond material incentives. Of course, many schools and teachers in the U.S. have tailored curriculum and teaching methods to meet the needs of children and young people with great success for many years. However, what distinguishes the education systems of, for example, Victoria in Australia, Alberta in Canada, or Finland is the drive to make such practices systemic, through the establishment of clear learning pathways through the education system and fostering the motivation of students to become independent and lifelong learners. Obviously such ‘personalized learning’ demands both curriculum entitlement and choice that delivers a breadth of study and personal relevance. But the personalization in these countries is in terms of flexible learning pathways through the education system rather than individualized goals or institutional tracking, which have often been shown to lower performance expectations for students and to provide easy ways out for teachers and schools to defer problems rather than solving them.

Third, the countries studied share a commitment to professionalized teaching, in ways that imply that teachers are on a par with other professions in terms of diagnosis, the application of evidence-based practices, and professional pride. To achieve this, they often do three things well (McKinsey, 2007): First, they attract the best graduates to become teachers, realizing that the quality of an education system cannot exceed the quality of its teachers. For example, countries like Finland or Korea recruit their teachers from the top 10 percent of graduates. Second, they develop these teachers into effective instructors, through, for example, coaching classroom practice, moving teacher training to the classroom, developing strong school leaders and enabling teachers to share their knowledge and spread innovation. Singaporean teachers, for example, get 100 hours of fully paid professional development training each year. Third, they put in place incentives and differentiated support systems to ensure that every child is able to benefit from excellent instruction. The image here is of teachers who use data to evaluate the learning needs of their students, and are consistently expanding their repertoire of pedagogic strategies to address the diversity in students’ interests and abilities. It also implies schools that adopt innovative approaches to timetabling and the deployment of increasingly differentiated staffing models. Examples include teacher selection processes as seen in
Finland, highly specified professional development programmes as with the National Literacy Strategy in England, and teacher promotion based on professional competence as in Canada or Sweden.

These efforts move away from traditional educational models that often still operate like a heavy bureaucratic production chain, where year after year new reform ideas are placed on top, where in the middle layers unfinished and incoherent reforms pile up, and where at the bottom schools and teachers are confronted with a mix of regulation and prescription that they cannot make sense of and for which they feel no responsibility. Their aim is to create a “knowledge rich” education system, in which teachers and school principals act as partners and have the authority to act, the necessary information to do so, and access to effective support systems to assist them in implementing change. Of course, everywhere education is a knowledge industry in the sense that it is concerned with the transmission of knowledge; but it is far from becoming a knowledge industry in the sense that its own practices are being transformed by knowledge about the efficacy of its own practices. In many other fields, people enter their professional lives expecting their practice to be transformed by research, not so in education. There is, of course, a large body of research about learning but much of it is unrelated to the kind of real-life learning that is the focus of formal education. Even that which is, has an insufficient impact when practitioners work in isolation and build their practice on folk wisdom about what works. Central prescription of what teachers should do, which still dominate today’s schools, will not transform teachers’ practices in the way that professional engagement, in the search for evidence of what makes a difference, can transform them.

External accountability systems are an essential part of this, but they are not enough. Among OECD countries, we find countless tests and reforms that have resulted in giving schools more money or taking money away from them, developing greater prescription on school standards or less prescription, making classes larger or smaller, often without measurable effects. What distinguishes the top-performer Finland is that it places the emphasis on building various ways in which networks of schools stimulate and spread innovation as well as collaborate to provide curriculum diversity, extended services and professional support. It fosters strong approaches to leadership and a variety of system leadership roles that help to reduce between-school variation through system-wide networking and to build lateral accountability. It has moved from “hit and miss” policies to establishing universal high standards, from uniformity to embracing diversity, from a focus on provision to a focus on outcomes, from managing inputs and a bureaucratic approach to education towards devolving responsibilities and enabling outcomes, from talking about equity to delivering equity. It is a system where schools no longer receive prefabricated wisdom but take initiatives on the basis of data and best practice.

In Conclusion

In one way, international educational benchmarks make disappointing reading for the U.S. But they also indicate a way forward. At the same time, PISA also shows that strong performance, and indeed improvement, is possible. Whether in Asia (e.g., Japan and Korea), in Europe (e.g., Finland) or in North America (Canada), many countries display strong overall performance and, equally important, show that poor performance in school does not automatically follow from a disadvantaged socio-economic background. Furthermore, some countries show that success can become a consistent and predictable educational outcome, with very little performance variation across schools. Last but not least, Poland demonstrated that it is possible to achieve performance gains equivalent to three-quarters of a school year within less than a decade. This paper has identified some of the policy levers that are prevalent in high performing education systems.

The international achievement gap is imposing on the U.S. economy an invisible yet recur-
ring economic loss that is greater than the output shortfall in what has been called the worst economic crisis since the Great Depression. If the U.S. had in recent years closed the gap to better-performing nations such as Finland and Korea, GDP in 2008 could have been $1.3 trillion to $2.3 trillion higher (equivalent to 9 – 16% of GDP). Similarly, if the gap between black and Latino student performance and white student performance had been similarly narrowed, GDP in 2008 would have been between $310 billion and $525 billion higher. The magnitude of this impact will rise in the years ahead as demographic shifts result in blacks and Latinos becoming a larger proportion of the population and workforce.

Addressing these challenges will become ever-more important as the best education systems, not simply improvement by national standards, will increasingly become the yardstick to success. Moreover, countries such as the U.S. will not simply need to match the performance of these countries but do better if their citizens want to justify higher wages. The world has become indifferent to tradition and past reputations, unforgiving to frailty and ignorant to custom or practice. Success will go to those individuals and nations which are swift to adapt, slow to complain and open to change. The task for public policy is to ensure that countries rise to this challenge.

References


The Federal Role in Encouraging States to Raise Standards and Teacher Quality: Implications for Accountability and College Readiness

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The next opening for accelerating the pace of educational improvement in the United States is the common core standards movement. The effort by 47 states and three territories to develop a common set of “fewer, clearer, and higher” curriculum standards anchored in the requirements for postsecondary and early career success marks a sea change in expectation setting in American education. It creates the promise of a more coherent system in which states can learn more from one another and achieve significant cost savings in the design of the next generation of educational affordances—among them, textbooks, assessments, and educator preparation and support systems.

That we can even think about the development of common expectations for our children’s education is a measure of how far our country has advanced over the past few years. The common core standards movement—a state-led initiative coordinated by the National Governors Association and the Council of Chief State School Officers—builds on a vibrant base of grassroots collaborative efforts. The largest and most important of these is Achieve’s American Diploma Project (ADP). Thirty-five ADP states collectively responsible for educating nearly 85 per cent of the nation’s public school students are working collaboratively to redefine the meaning of a high school diploma so that it certifies graduates as both college- and career-ready. Thirteen ADP states have codeveloped a common Algebra II end-of-course examination. Four New England states—Vermont, New Hampshire, Rhode Island, and Maine—have developed common examinations to meet No Child Left Behind Act requirements for assessing reading and mathematics once each year from grade 3 through grade 8. The common core movement has legs: it is growing and is fed by a wellspring of desire for higher standards and greater efficiency.

International comparisons of educational performance show clearly that, despite substantial differences in the detail of the approaches they use, the highest performing countries all have educational systems that are far more coherent than our own. Coherence makes it easier for teachers and school leaders to take up their craft, assess and improve their practice, become effective in their professional roles, and support the learning of others. Coherence helps educators reap the benefits of experience, zero in on the most important problems, make connections, and scale up innovations. Without coherence, American education falls prey to collective amnesia: people and institutions fail to learn from their own or one another’s work, mistakes rather than advances are recycled, and promising solutions stay trapped in individual classrooms, schools, and districts. Coherence also compels a healthier and more competitive educational services industry by creating a larger, more transparent, common market for services tied to agreed-upon common goals.

As we embark on the next stage of educa-
tional improvement, we owe it to ourselves to take stock of the important recent successes, knowing at the same time how much farther we must journey. Critics of American education—and many of its impatient supporters—have focused almost exclusively on our national and state failures, wrapping their rhetoric in apocalyptic threats of our country being buried by its economic competitors. It is perhaps natural to think that fear will compel positive action; in the long term, however, as social psychologists have found, fear is more likely to result in denial. We need a balanced view of recent educational progress: If we ignore the positive effects of state and federal policies, we may forget the problems they solved, which in turn will lead to a recrudescence of those very problems. As a matter of leadership, we need to do what we can to give educators and their potential collaborators the courage they’ll need to take the next steps to achieving a fundamental democratization of access to knowledge and the development of citizens who can thrive in an increasingly complex global economy.

The leaders of the common core movement have been emboldened by real gains in student achievement—some quite modest, but some more substantial. As the National Assessment of Educational Progress (NAEP) shows, for example, low-income eighth graders now know two more years of mathematics than their counterparts of 20 years ago, and, in several states, the gap between their performance and that of their more advantaged peers has declined markedly. Before the current era of standards-based reform and accountability, there was little external pressure to ensure that schools were organized to teach all students essential content. Now, many states and school districts are ready for new strategies—and policy-generated pressures—to take their students to the next level of achievement.

Even as states begin aligning their high school graduation requirements to college and career readiness expectations, they are wrestling with the practical and political implications of their existing academic requirements for high-school graduation. A dozen years ago, only about half of all high school graduates in some of these states completed Algebra I; now most states are requiring three or four years of substantive mathematics and science for all students. This change represents a dramatic expansion in access to learning, but it is not uncontroversial. Policy appears to be ahead of public sentiment, and some states are experiencing a backlash. The challenge will be to build, in real time, the capacity of schools to offer these more rigorous and relevant mathematics and science courses to all students; otherwise, the backlash will roll back expectations for American students, and our international competitors will benefit.

As common standards and assessments take hold, and states continue to raise their mathematics and science graduation requirements, a new generation of more rigorous and motivating math and science courses must be developed—courses that are more keenly attuned to the diverse learning needs of the totality of American students, not just a select group seeking entry to a narrow set of mathematics- and science-intensive careers. In short, it’s time to modernize! Past efforts to create new course structures and standards have led to complex, highly politicized debates. The happy fact is that those debates have been constructively resolved in enough state settings to feed the hunger of many former combatants for a resolution on a much larger field of play to benefit our whole country—another possibility arising from the common core standards movement. The federal government could ask the National Academy of Sciences to take the lead in creating the specifications for these new mathematics and science courses. Then, Congress could fund a National Science Foundation initiative to develop and test new courses that meet those specifications.

As important as mathematics and science are, they are not the only subject areas that need more attention. As our country becomes more diverse, our public school system must again play a role it has excelled at before in our history: to produce a citizenry with shared American
values and deep commitments to democracy. If we are to benefit from our diversity, students must learn not merely to tolerate others but to take principled stands in the face of difference. In an increasingly globalized world, students will need to prepare themselves both to compete and to collaborate with individuals who may see problems differently than they do. To achieve these objectives, we must pay increased attention to subjects largely ignored in current school accountability systems: the arts and civics. Well taught, the arts help students to see through the eyes of others and to view the world on others’ terms. Well taught, civics can nurture a grounded love of country and a commitment to its best principles. We are in a time of protracted and persistent war. Our military is increasingly insular, with a growing share of new service members made up of the children of parents with military experience—a concern of our Joint Chiefs. If we continue to be defended by a volunteer military, we must work diligently to ensure that a broader, more representative cross-section of Americans are willing to put themselves in harm’s way for the security of our country. After families, schools are the most robust agents of society’s socialization. They have a key role to play in ensuring our country’s safe and productive future.

As the states move to adopt common standards and a more coherent system takes hold, the federal government can play an essential role by subsidizing the creation of a new generation of instructional tools and assessments that are closely linked to the new common standards and by incentivizing their adoption by states. The next generation of assessments should build on advances in the learning sciences so that they can tell us much more about students’ progress toward meeting standards and the barriers that are holding them back. Moreover, because the most important role of these assessments will be to inform instructional improvement, we need to attend carefully to how key constituencies—including parents, community members, employers, education entrepreneurs, private companies, and higher education—can join teachers in using the knowledge the assessments generate to nurture students’ academic success. To meet our next set of ambitious educational goals, all these constituencies will need to play more active, more responsible, roles in public education.

We will also need a new generation of assessments that can pinpoint gaps in system capacity, enabling school districts and their partners to systematically improve education programs. Such assessments will be critical elements of new accountability systems and policy. Many local communities perceive the current accountability system to be a blunt instrument wielded from a great distance—from their state capitals and Washington D.C. As Congress considers the next iteration of the Elementary and Secondary Education Act, it will be important to ask: To whom should schools be accountable? The federal government should incentivize constructive participation in public schooling and, when federal money is involved, hold all parties accountable.

A good starting point would be a substantive expansion of federal data collection of NAEP to include comparative state-by-state data on the full range of knowledge and skills that students need for postsecondary and early career success. A new NAEP should preserve our current accountability system’s wisest and most potent innovation: the disaggregation of student data by demographic subgroups as originally recommended by the National Education Goals Panel in 1992.

A new NAEP should also allow states to compare their educational systems and institutions, not only against their own prior performance and against the performance of other states, but against the performance of our economic competitors. Our children’s performance on the Trends in International Mathematics and Science Study (TIMSS) international assessment, a good measure of conventional classroom learning in math and science, is rising; in 2007, two states—Massachusetts and Minnesota—participated independently in the comparisons and scored as well as the
top-performing nations in the world and significantly outperforming countries including Norway and Sweden. U.S. performance on the OECD Programme for International Student Assessment (PISA) examination—considered by experts to provide an accurate measure of students’ ability to apply what they’ve learned in school to real-world problems—is fairly low. A decade ago, Japan’s students were in the same boat as ours—doing well on TIMSS-like assessment items but less well on PISA items. The policy response of the Japanese government was to enhance Japan’s assessment system to communicate what they believed was important. It worked. It’s time for us to follow suit.

It will be a worthwhile challenge to develop a next-generation accountability system that supports and incentivizes action on a broader set of important education goals than does NCLB—and that involves more directly important constituencies in assessing school system outcomes. Thus, the federal government should support systematic experimentation with alternative accountability vehicles, including the use of visiting committees and inspection systems, as has produced achievement gains in the United Kingdom, the Netherlands, and New Zealand. Many communities have a long tradition of voluntary school accreditation agencies. These might serve as models for more formal state and federally sanctioned “at first hand” assessment systems. Such systems are better suited to evaluating complex educational outcomes, and, when well designed, they build deeper public understanding of, and support for, public education.

If we are to ensure that all students leave high school ready for postsecondary success, ready by their mid 20s to earn a two- or four-year degree, certificate, or license that has labor market value—foundational goals of the common core movement—then we need to build in every community the capacity to teach all students educational content that was once the province of a privileged few. Teachers will need to deepen both their subject matter knowledge and their knowledge of how to teach their subjects to students with widely varying interests and aspirations. This will require a transformation in how we prepare teachers and support their continuing learning.

There are important developments on the ground that should give us hope that we can build a teaching force able to meet the challenges implicit in the common core standards. Many of our most successful college students and young professionals are now being drawn to service in teaching careers in our country’s lowest performing schools. In 2008, Teach for America and The New Teacher Project (TNTP) together brought more than 10,000 new teachers into high poverty urban and rural schools. Innovative programs like UTeach at the University of Texas at Austin are drawing many of the campus’ strongest students to teaching careers. The TNTP advertisement in the New York City subways “You remember your first grade teacher’s name. Who will remember your name?” generated more than 7,000 teaching applications, many from individuals in the financial industry, even before the current economic downturn caused many of these professionals to make alternative career plans. These high status programs are now accommodating an avalanche of applications from individuals asking hard and important questions about the best use of their lives.

A newer non-profit initiative, EnCorps, is bringing retirees to work in schools. A growing number of large school districts have created urban teacher residency programs, which provide a well-scaffolded introduction to real teaching through apprenticeships to senior teachers—a benefit not only to novice teachers but to their students, addressing the need revealed by research that indicates that undersupervised first-year teachers add little to student learning.

The challenge now is to redesign the teaching profession so that it speaks to the best motivations and aspirations of these exceptional young people and to the professional commitments of our best teachers prepared in more traditional ways. At present, our public school systems operate in a policy environment that assumes
that all teachers are essentially identical—as The New Teacher Project documented in *The Widget Effect: Our National Failure to Acknowledge and Act on Differences in Teacher Effectiveness*. In a careful review of 15,000 teacher evaluations in 12 districts in four states, a process overseen by school management and unions, fewer than 1% of teachers were found to be rated unsatisfactory over the period. This result was commonplace in chronically low-performing schools. In districts with more than two rating categories, 94% of teachers received one of the top two ratings, neutralizing any possibility of identifying truly exceptional performance.

The federal government currently invests heavily in teacher recruitment and development through Title II of the No Child Left Behind Act and related funding programs. It’s time to reevaluate and repoint these expensive federal programs. Instead of allowing districts to use those monies on class size reduction and one-size-fits-all sporadic training programs, the federal government should invest only in efforts that measure with rigor teaching effectiveness as indicated by growth in student learning. A bold route would be to create a federal certification that states are required to accept if they want to receive Title I money, one that would require robust evidence of effectiveness for teachers to continue beyond the first few years in the classroom. Further, states should be incentivized to create policies that make performance evaluation matter for all major teacher advancement decisions, not just dismissals. District recipients of federal education aid could be required to report each year the distribution of ratings that teachers in each school receive. This would be a natural extension of the policies that require disaggregation of student test scores and would constitute a major advance in education system transparency.

The federal government should support the creation of new and better tools for assessing teacher quality as measured by contributions to student learning in all curriculum areas—a pivotally important need for supporting a performance management culture in public education. As of today, high-profile efforts to use econometric tools to produce “value-added” measures of teacher effectiveness have not lived up to their promise. In addition to their technical limitations and dependence on a narrow set of test data of uncertain quality, their measurements reveal little about how teachers might improve their practice. Good teacher assessment will necessarily involve professional judgment, but the challenge is to create validated protocols that can drive instructional improvement and render fair and consequential measures of current practice. Such assessments, validated by researchers and sanctioned by professional teacher organizations, should be a key component of next-generation teacher compensation systems.

Building a strengthened education system able to prepare all students for success in post-secondary education and the workplace will require hard work on many fronts. It cannot be the sole responsibility of K-12 education. Indeed, freshman mathematics and science courses have long been a burial ground for the aspirations of myriad college students—not only for those seeking careers in mathematics-intensive professions like engineering, but for prospective nurses, emergency medical technicians, firemen, policemen, and members of new professions that require quantitative reasoning skills. In our community colleges, for example, where, in a growing number of states, the majority of students start their postsecondary education, 65% of all new students (and almost 90% of African-American and Hispanic students) are referred to a non-college credit developmental math course sequence. Fewer than one in three complete the sequence, and, of those who do, only about half pass the credit-bearing college algebra course to which the developmental courses are prerequisite. Each year, 1.2 million two- and four-year college students take a college algebra course, and half fail it—including many students who scored well on widely used placement tests. Most students will not see the content they just worked hard to master in their subsequent coursework.
It’s time to rebuild the onramp courses to postsecondary degree, certification, and licensure programs and to anchor those courses in the real needs of today’s academic disciplines and professions. As with high-school mathematics and science courses, Congress should seek advice from the National Academies on the quality and efficacy of today’s introductory mathematics and science college course sequences and should invite the Academies to lead the development of an agenda for their modernization. The National Science Foundation should then be funded to support action on the agenda by higher education. We must ensure that our new college- and career-ready K-12 common core standards are aligned to tomorrow’s, not yesterday’s, postsecondary programs.
Assessment is an important component of reform, but it must be integrated with goals (content standards), sequences of instruction, and methods to support student and teacher learning. This paper will first summarize the status and needs for valid and useful educational assessments in the current reform cycle. Recommendations for investment by the federal government will follow, emphasizing the role of technology in assessment development and use.

Background

Over the decades, school use of tests moved dramatically from the prerogative of the individual classroom teacher to the large-scale, big business, one-size-fits-all indicators of learning in place today. These external, formal measures have many purposes: to monitor the system and report to the public, to guide instruction and learning, and to serve as core data for various forms of accountability. There is disagreement whether any single measure employed in reform can adequately serve all stated purposes. A test designed for one purpose is unlikely to be able to be retrofitted to serve additional purposes. To date, there is little evidence to support the validity of many of the potential purposes. It may be possible to design assessments to serve multiple purposes, but in this case, each test must have clear evidence of its technical quality, including validity and fairness for claimed purposes, before it should be regularly used in schools.

Accountability has shifted the focus of instructional guidance from challenging content standards to the content of the tests used to measure effectiveness. If content standards are numerous, sometimes vague, and not always strongly represented on the test, it is more rational to use the test itself—with limited and specific content and formats—to guide instruction, particularly when test results may yield sanctions. However, many tests do not measure content standards in sufficient depth, because of time and cost constraints. Instead tests may be made up of disconnected tasks. Teaching to tests like these can limit learning and give the appearance of growth where true understanding is substantially lagging.

An obvious alternative is to have fewer, more challenging content standards combined with assessments that required deep understanding and application of knowledge, sometimes displayed in extended student performance or a coherent product. Such student work requires scoring by trained raters. Twenty years ago there was growing momentum for performance-based assessment, but the enterprise faltered after a few years for a number of reasons: (1) the sheer number of content standards to be measured, (2) the cost of training raters and the rating process, and (3) concerns for “subjectivity” of ratings and the sense...
that more familiar, multiple choice tests were more rigorous. Thus, in current practice, the majority of assessments used for accountability survey content standards and use formats such as multiple choice that are inexpensively scored and reported.

In addition to annual state assessments, schools have introduced tests to be given during the year (interim, formative, benchmark). Their results are used to help students and to predict performance on the state test. Students who test just below the boundaries between performance categories (e.g., basic), may get special attention. Are students tested too much? Do tests interfere with optimal learning? Using the tests at hand, the answers are probably—yes.

In the R&D (research and development) context, federal investment in assessment to states has focused on short-run requirements. R&D by nongovernmental organizations has typically focused on immediate application. In recent years, however, federal investment in long-term R&D has also flagged.

**New Aspirations, New Approaches**

There is now recognition of the need to reduce the number of state content standards to a more manageable, coherent set both to promote significant learning as well as to allow in-depth assessment. New designs are being developed to make transparent key ideas and relationships in any particular domain (e.g., probability). Furthermore, the national conversation on 21st century skills for college, workforce, or military pushes the discussion of test formats well beyond the usual dichotomy of multiple choice and open-ended answers. Such 21st century or essential skills include problem-solving, teamwork, communication, learning-to-learn, situation awareness, reasoning, and decision making. The rate of change and innovation suggests that students should be able to adapt these skills to previously unseen situations, to combine them as necessary, and to do so in order to be able to anticipate, react, or adapt to rapidly changing futures. Teaching students static knowledge is necessary but not close to sufficient if they are to succeed as adults.

Measuring 21st century skills involves combining them with either academic or practical content, and clearly goes beyond traditional multiple choice or "open-ended" formats. For some skills, there are partial models of how to design measures, conduct validity studies, and assure their usability. For instance, the term "problem solving" should not conjure up pages of multiplication problems, but rather complex tasks with a series of steps, framed in a situation that requires the student to figure out: (1) what the problem is, (2) how to represent it in a way that can be solved, (3) how to select or use appropriate methods, and (4) to get the right answer as well. Such a task could take 20 minutes or more. Teaching to the skill set in problem solving—as it is used in mathematics topics, in history, in conducting or interpreting scientific research—is legitimate. In each subject matter, it will play out somewhat differently. Yet, in each content area, students will have to "transfer their learning," that is, apply prior learning to new situations, using key facts, principles, and strategies they have been taught. An additional consideration in measuring 21st century skills is that even though different individuals have experiences and propensities that make them better at teamwork or communication, for instance, the focus on measurement here is not on individual, stable talents, but rather on skills in content domains or topics that can be taught and learned. If tests only measure the individual talents that students bring to school, they should not be used as measures of change.

Newer forms of assessment design emphasize accurate answers, but supplement these answers by asking students to explain why they used a procedure or approach. While teachers often use such a process in their classrooms, it has been rare in large-scale assessment. Along these lines, recent research has documented the use of findings from cognitive psychology.
regarding learning and retention in test design. When assessment designs embed approaches from learning psychology, the choice between testing and learning is less stark.

**What Is Needed**

The last time ambitious, performance-oriented assessments were advocated, they lost traction because of their cost, and because of suspicions that they were not rigorous. Tasks that require teacher ratings appear to be subjective. However, there is ample evidence that teachers can be trained to rate high- and low-stakes examinations (in other countries and in the U.S.) with high levels of agreement and accuracy. What remains to be solved are time and cost, and increasing complexity of future assessments.

It makes sense that complex learning should be measured by appropriate means. R&D in the use of simulation and games in the military has suggested the need for change and innovation from the traditional forms of psychometrics employed in test development (i.e., technical methods to investigate the properties and validity of tests). Typical technical approaches assume the student will complete many items during a test. In simulations, or in performance assessments, the student may only have one or possibly two opportunities to demonstrate learning during the testing period. Therefore, efforts must be redoubled to assure that different scenarios in a simulation or problems in a performance assessment are comparable. Comparability is needed so that it is clear that different students use similar tasks. How else can it be known whether students didn’t learn a task well, or that one task was inherently harder than another? Comparability is also needed to assure the fairness of judgments about student learning. The new approaches to reliability and validity will need significant research as well.

What about the testing industry and its role in R&D? The testing industry is a low-margin endeavor, where commercial publishers compete for awards from states and local districts. Only one or two have resources for research and development and these are directed, for the most part, to the next release or product. On the demand side, most states and districts want inexpensive, easy to implement tests that they can use as soon as needed. They rarely challenge commercial companies to develop new approaches to meet their requirements. With a few notable exceptions, testing companies have given the public what it has wanted rather than exploring the potential for significant improvements. And it is obvious that using existing methods, item banks, and procedures allows the commercial vendors to compete at lower cost. So the market has not yet demanded and been willing to pay for innovative assessments, and the testing companies have often been stretched simply to meet existing demands on the required scale and schedule.

Although most of the discussion has focused on measuring student learning, there are additional complications of measuring teaching. If standard value-added approaches are desired and linked to teachers, they are far easier to implement with standard student tests with many items than with performance assessments. So the desire to link teacher performance to student learning may very well have a limiting effect on the use of complex tests. Beyond that, the broader question of how to best measure teaching remains open. Other major initiatives are thus needed to measure teachers (their knowledge and impact) and teaching. An important area for investment is the measurement of classroom practice in comprehensive, credible, and scalable ways. Without adequate measures of classroom practice, it is difficult to explain or promulgate positive differences among teachers.

**Invest in Technology**

The U.S. still has an edge in innovation, and it can be leveraged to improve tests and the teaching and learning directed to them. Technology can help to solve many of the problems enumerated above so that the entire
system of reform can proceed with more confidence. These problems that need to be solved involve the design of assessments that focus on key content and essential 21st century skills, the development of comparable assessments of sufficient depth and challenge to assess learning, the adaptation of assessments to serve the needs of different sub-groups of students, the automated scoring of student responses to soften the burden of the teacher, and the development of faster feedback and help. Improvements in the presentation of results are needed so they can be more fully explored by students, teachers, parents, and policymakers.

Researchers and private companies have engaged in enterprises related to these problems, but separate, proprietary efforts have not led to major changes in practice. Furthermore, the level of technology available in many schools is sub-optimal, particularly for administering simulations, for addressing feedback and remediation, for accessing net-based scoring systems, and for interpretation by and support for teachers. Although State websites have vastly improved in the last few years, they still focus on fairly routine comparisons about schools. For students to get the help they need, requires a local or dedicated system, but one that maintains student privacy. Therefore, the majority of technology used involves aspects that may occur outside of the school or without the availability of up-to-the-minute speed and memory of the newest platforms.

**Investment Strategy**

Given the considerations and existing limitations discussed, the following investment strategy for the future of assessment development is proposed:

- A mixed portfolio, emphasizing both mid-term (3-5 years) and long-term (5+ years) development, with a significant percentage in high-risk, high-payoff activities.
- A consistent allocation for R&D on assessment issues in general.
- Multiple recipients taking divergent approaches to solve problems.
- Cross-agency collaborations where feasible and where the education sector can benefit from prior investments.
- Investments should span the test design to interpretation spectrum and consider multiple uses of tests and multiple users of information.
- All enterprises should provide state-of-the-art evidence of the quality of the assessments, validity, fairness, and other technical attributes of measures, as well as usability tests to determine whether teachers and parents can draw appropriate inferences and take desired actions from the findings.
- Investments should include use of non-traditional media (e.g., phones, sensors), in addition to computers and web-delivered services.
- Efficiency and effectiveness should be key exit criteria for R&D, as well as the degree of innovation and widespread use (i.e., for technology-bereft settings).
- Return on investment, maintenance, and renewal costs should be calculated as the R&D progresses.
- DARPA-like (Defense Advanced Research Projects Agency) procurement policies where cautious peer review is traded for clear programmatic vision.

**Specific Assessment Topics for Consideration**

- Substantial investment in the automated design and development of assessments, including “on-the-fly” or instantly composed tasks created out of computerized modules or objects.
- Investment in developing valid, transparent approaches to linking assessments,
standards, instruction, performance, and requisite student and teacher expertise.

- Substantial investment in new approaches to automated scoring of student-work products.
- Investment in improving optical or other character reading so that handwritten products can be computer evaluated.
- New initiatives supporting changes in technical methods to establish validity, reliability, fairness, comparability, and utility of performance-based or scenario-based measures used by the teacher or technology.
- Interactive systems where instruction and assessment seamlessly support learning for students, teachers, and parents. Models should be developed that can be proliferated widely and adapted locally.

- Demonstrations of utility with different age ranges—young children, school age, college students, English-language learners, adults—in formal, workplace, and informal educational settings.

**Summary**

Assessment will always be imperfect, but to meet the growing challenges facing students, investment is needed now in new approaches that more directly relate to complex learning, extended tasks, and future applications of knowledge. This investment must have a longer timeline than most efforts in assessment on the drawing board or in practice. The full range of actions from design to interpretation should be considered, and quality and return on investment should be dual criteria for award and use.
The importance of reauthorizing and improving the Elementary and Secondary Education Act (ESEA) to drive high achievement for every student could not be more timely and urgent, representing both a moral imperative and an economic necessity. The nation’s economic recovery depends on providing an education that prepares all children with the skills they will need so that our nation can be competitive in the global economy. If the gap between black and Latino student performance and white student performance had been bridged by 1998, Gross Domestic Product (GDP) in 2008 would have been up to $525 billion higher, or 4 percent of GDP.\(^1\) Dropouts from the Class of 2008 alone will cost the nation more than $319 billion in lost wages over the course of their lifetimes.\(^2\) In fact, for each additional high school graduate, there is an estimated public savings of $209,000 in increased tax revenue and saved social spending, even taking into account costs of interventions to promote graduation.\(^3\) Failure to adequately educate our children also has grave personal consequences: high school dropouts are three times as likely as college graduates to be unemployed, twice as likely to slip into poverty, and more than eight times as likely to become incarcerated.\(^4\)

Yet in the midst of this crisis, America is at an intersection of remarkable possibility: Since the 2002 reauthorization of ESEA called the No Child Left Behind Act (NCLB), the nation has collected many lessons on what has worked and what has not. There are pockets of excellence that prove beyond a doubt that all children, irrespective of their social and economic status, can excel. An opportunity now exists to scale these pockets of excellence into systems of excellence. To do this, ESEA reauthorization must include a strong focus on the two primary in-school drivers of student achievement: teacher and principal quality. New Leaders for New Schools has focused on the principalship as both a critical lever to drive student achievement as well as an indispensable lever to drive teacher effectiveness, and has found that strong school leadership is inextricably intertwined with developing and sustaining effective teaching.

### Focusing on School Leadership and Teachers

Research has affirmed that the two most important in-school factors affecting student achievement are the quality of teaching in a student’s classroom and the quality and effectiveness of the principal.\(^5,6\) Studies have shown a difference of 50 percentile points among students who have had more effective teachers compared to those with less effective teachers over the course of three years; in other words, the achievement gap can be closed with three consecutive years of excellent teaching. Research also proves that principal quality and effectiveness accounts for a quarter of student...
learning gains, making school leaders the second most important in-school factor related to student achievement. New Leaders for New Schools has found that principals’ strong impact on student achievement comes through their school-level efforts: creating a vision of college readiness for every student; recruiting and selecting teachers that are aligned to a vision; challenging and supporting teachers to continually strive toward higher levels of effectiveness based on student outcomes; developing systems and structures that allow teachers to learn from each other and the data; and observing and monitoring teacher performance and using these and other measures for rigorous evaluation that measures effectiveness. By focusing on the principalship, this key lever for change can be used to help ensure that all children receive an excellent education year after year. The importance of school leadership is demonstrated by an example from Charlotte, North Carolina, where the District tried to encourage strong teachers to move into low-performing schools by offering increased compensation; many refused to go or to stay due to poor leadership at the schools. The District later implemented a Strategic Staffing Initiative to bring in strong principals and aligned teams of teachers to low-performing schools, resulting in significant achievement gains for the 2008-2009 school year. Given the clear connection between effective teaching and quality leadership, any reform strategy that only focuses on teacher quality may be short-lived at best.

As these kinds of principal actions play a crucial role for teacher effectiveness, there must also be a definition of principal effectiveness. A key component of this would be the principal’s impact on student achievement gains at the school level. Other factors would include the beliefs and orientations of the principal toward driving achievement for all students, and the principal’s demonstrated ability to take the actions listed above in improving teacher effectiveness at the school level.

New Leaders for New Schools’ perspective on principal and teacher effectiveness and NCLB is grounded in our current work with over 370 public schools and more than 640 school leaders serving some 200,000 mostly low-income students in more than 10 urban school districts across the United States, including: Baltimore, Charlotte, Chicago, Memphis, Milwaukee, Newark, New Orleans, New York City, Oakland, Prince George’s County, Sacramento and Washington, D.C. Founded in 2000, New Leaders for New Schools has focused on recruiting, selecting and training the highest caliber individuals to serve in our nation’s urban schools—only 7% of applicants have been admitted, from over 10,000 applications. New Leaders’ principal program has a few key components: intensive recruitment and selection of outstanding educators and leaders; intensive training and development including a year-long full-time paid school leadership residency to prepare those individuals to become effective new principals; on-the-job support to promote the success of those principals and their schools; and the development of systems of continuous improvement that help identify schools making breakthrough gains and use that data to refine the work.

Although New Leaders generally serve in districts’ most challenged schools and have had comparatively little time to turn their schools around, they are having positive impacts. Preliminary RAND data from a long-term longitudinal study indicate that students in schools led by New Leader principals for at least three years are making gains in academic achievement faster than comparable students within their district by statistically significant margins. In addition, nearly a third of schools led by New Leaders for at least two years are making dramatic gains in closing the proficiency gap, and have their students ready for college, careers and citizenship. These transformative gains outpace the districts’ gains, and New Leaders is focused on learning how to scale up what these principals do that is working.

Based on these results, New Leaders is building an understanding of what effective prin-
cipals are doing to reach these gains in the nation’s most challenged schools. While much research is focused on the practices of excellent schools, New Leaders found a need for research that documents what actions principals take to turn low-performing schools into fast-improving schools. New Leaders’ Urban Excellence Framework (UEFTM) research documents the work of principals and staff in the highest-gaining schools across New Leaders and the Effective Practices Incentive Community (EPIC) and captures the key school practices and leadership actions within each of these categories that lead to dramatic student gains along the school improvement trajectory. The UEF™ research is one example of how New Leaders is generating groundbreaking, research-based evidence for the field about what it takes to recruit, select, train and support highly effective urban principals through an Action Tank. An Action Tank works differently than a think tank; instead of merely developing theory, it gathers data directly from principals generating successful practices within New Leaders led schools, and then re-implements these actions in different contexts to test their effectiveness in a constant cycle of improvement. As one example, New Leaders has used the examples of the UEF™ to make significant changes to the program and inform policy recommendations.

**Progress Made Under NCLB**

Given the experience and learning from New Leaders’ highest-gaining schools, as well as school district partners, there are some key takeaways on some positive impacts of NCLB. The law took needed steps to set high expectations for all kids, forced districts to build and assess core sets of standards that all students should know, regardless of background, and required states to build data systems that force transparency around student achievement among different subgroups.

It was critical that NCLB set nationwide goals for grade-level proficiency for virtually every student in reading and math, though defining proficiency has created significant challenges. By requiring districts to disaggregate data, NCLB shined a long-needed spotlight on schools that are low-achieving, in particular schools and school systems serving large percentages of children in poverty, of color and with disabilities. These goals have provided an initial starting point for districts and educators to strategize around use of data and other critical levers to help meet the goals set forth in the law. New Leaders has embraced the goals, and has taken on the challenge of reaching 100% proficiency, and calls on the individuals who come to the program to adopt these goals for the schools they lead through a contractual obligation. In states with high standards for proficiency, NCLB’s goals help organizations like New Leaders reinforce the importance of expecting high levels of achievement for all students with tangible results.

Despite some vocal outcries around the testing requirements that resulted from NCLB, even if testing has not always been well-executed, the results of the requirements revealed a number of gross achievement gaps that exist among states, within school districts and sometimes adjoining neighborhoods. Efforts to improve testing provisions in ESEA must not backslide from the fundamental goal that all children can reach grade level in reading and math. In addition, while growth and improvement within student subpopulations remain critical, concrete targets with absolute levels of achievement for all children should not be compromised. Individual success stories and pockets of excellence around the country confirm that such levels are possible, and high expectations for schools and school systems to scale those kinds of results for all children must be supported. In order to reach these goals, the increased use and creation of sophisticated, high quality assessments will be needed to help drive the kind of teaching and instruction needed to raise achievement and help close the achievement gap.

North Star Academy in Newark, New Jersey led by New Leader Paul Bambrick-Santoyo, became one of the highest performing non-
selective schools in the state with an overwhelmingly low-income student body as the result of the intense instructional leadership focus on data, including the use of high quality interim assessments. Four years after Bambrick-Santoyo took over, the school had the highest college matriculation rate of any non-selective high school in the state of New Jersey regardless of family income, and tracks students past graduation to gauge their success in college. North Star also is consistently a 90-90-90 school: with 90 percent of students eligible for free and reduced-price lunch, 90 percent minority and 90 percent achieving proficiency. Similarly, at Monarch Academy in Oakland, California, New Leader Tatiana Epanchin has led the school with a relentless focus on high academic achievement for every student; in her school, this means high expectations from students who are virtually all from low-income families, more than 90 percent of whom are English language learners. Principal Epanchin emphasizes her expectations with students and families by holding bilingual weekly parent meetings to reinforce her messages around high expectations. In the 2007-2008 school year, Monarch became the most improved Title I school in California according to the State’s API index. Both of these schools underscore that while continually seeking gains is important, high expectations and standards must be demanded of all students.

A crucial element in helping schools and districts realize the goals set by NCLB has been the transparency created through improved data systems, particularly the use of disaggregated data by student subgroups. Through greater usage of disaggregated data, schools and school systems have a much deeper and detailed understanding of their actual achievement gap areas, creating a sense of urgency to improve performance around schools or subgroups that are failing to make the kind of progress that is needed to reach the law’s goals. This has in turn increased the need for more and better school-level data and an improved ability for school leaders to understand and use data to measurably improve their school’s overall performance as well as within specific student subgroups that are lagging behind. New Leader principals are trained on how to use and regularly analyze data and work with teachers and students to ensure that instruction is modified regularly based on data, and it often serves as the key lever to increased student achievement in New Leaders’ highest gaining schools. For example, at Fort Worthington Elementary School in Baltimore which has doubled its achievement in two years, moving from 45% to nearly 90%, New Leaders Principal Shaylin Todd has created an open culture around the public sharing of data to help teachers, students and families identify areas of student mastery and recognize growth areas. “Assessment walls” hang in every hallway to show grade-level performance. In grade-level meetings held every 6-8 weeks, data is used to recognize struggling students and identify alternate strategies and interventions to support learning.

Areas Where ESEA Should Be Strengthened

Moving ahead, there are a few core areas for improvement that could have significant impact in making the progress needed to fully realize the goals of ESEA: principal and teacher effectiveness, school turnarounds and standards and assessments.

Principal and Teacher Effectiveness

In reauthorizing ESEA, an expanded focus into the crucial area of human capital in driving school success may be among the most important improvements that can be made to the law, particularly in the areas of principal and teacher quality and effectiveness.

Moving to a performance-based approach: Evidence indicates that long term success can only be attained by building dynamic systems of continuous improvement. To do this, schools making breakthrough gains must be identified and their data used to inform policy and prac-
This approach should be performance-based with sufficient flexibility and opportunity for innovation in how to reach the targets or goals. This performance-based approach should be taken in the creation of high quality standards for principals. By using data from successful schools and principals, principal standards can be created and continually improved.

There has been an overall sense by many states and districts that NCLB exacerbated a culture of compliance rather than performance and innovation. For example, NCLB provisions on Annual Yearly Progress encouraged some schools to focus efforts on the “bubble kids” who, with a few more points on a test, will make it into the next proficiency category, instead of encouraging a focus on academic improvement for all. Similarly, the provisions on highly qualified teachers created barriers to entry for career changers and others seeking to become educators. By moving from a culture focused on qualifications to one focused on effectiveness, transformative change can be made by ensuring that efforts focused on recruiting, retaining, rewarding and non-renewal of teachers and principals is based on their demonstrated effectiveness.

Ensuring a sufficient focus on leadership resources to drive teacher effectiveness: Conversely, in some instances, too much flexibility without targets or goals can result in diluted focus with little result. For example, NCLB’s Title II Part A provisions were so flexible that there was no significant focus on school leadership, with approximately 2-3% of funds being spent on this important purpose. While New Leaders agrees that the vast majority of these funds should be directed to teachers and teacher quality, a significant but modest percentage, such as 10%, would be appropriate given the size of the administrator pool coupled with the need to improve principal quality and its direct link to improving and reinforcing investments in teacher quality. In addition, a significant portion of Title II funds should be awarded on a competitive, instead of formula, basis for comprehensive state and local strategies to ensure effective teachers and school leaders.

Beyond the research citing the impact that principals have on student achievement, the principalship itself has undergone a significant transformation that requires investment in, and focus on, their success. What started off as a position that for many, was about keeping order in the schools, managing building operations, implementing district rules and interacting with involved parents and interested community members, is now the instrumental role in driving student achievement success certainly at the school-wide level. If we view the school as the unit of change, the principal serves as the “Instructional CEO” who is responsible for ensuring student achievement success.

What New Leaders discovered in the work around creating the UEF™, is that the leadership qualities necessary for individuals to move schools into higher levels of achievement—belief, instructional quality, human capital and operations manager to improve instructional qualities—are not the types of qualities and experiences that school systems tend to look for in their principals. As a result, New Leaders believes there needs to be a shift in what underlies the principalship in America today.

Improving quality through performance-based certification: One way to increase the quality of the principal and teacher candidate pool would be to create a process for institutions, including nonprofits, school districts and charter management organizations (CMOs), to be accredited to recommend candidates directly to the state for teacher and principal certification. This would be based on meeting program requirements informed by evidence on what principals and teachers are doing in breakthrough gains schools. Program review would necessarily include placement and student performance results of graduates of the programs. For both newly accredited and existing programs, there would need to be statewide data systems that link the student identifier to the teacher, principal, principal manager, and the pre-service
institutions that recommended them for certification. States could gather the data and share it with pre-service institutions to facilitate continuous improvement—supporting higher quality programs and increasing accountability for program impact.

Models for these policies are already in practice; New Leaders has successfully effected changes in state law in three states and the District of Columbia. For example, by increasing the focus on an individual’s knowledge of instruction instead of number of years in the classroom, it is possible to cast a wider net when seeking talented leaders who are driven to take on the challenge of turning around under-performing schools. Their measurement of success is based on student achievement outcomes.

School Turnarounds

While NCLB helped to place greater focus on and resources in our nation’s lowest performing schools, much remains to be done to make dramatic improvements in the nation’s “turnaround” schools. Any strategy to drive Title I school turnarounds must include attracting outstanding school leaders and empowering them to lead dramatic change, as well as attracting, developing and training high quality teachers. Putting in place the right kind of leader to move a school out of extremely low student performance is a linchpin to most turnaround efforts. A number of New Leaders have had success in turning around low performing schools and there are significant lessons learned. Successful turnaround principals tend to be hands-on and directive in their approach. Often, it is among the principal’s first and most challenging priorities to change the adult culture in the building from one of low expectations to high student expectations.

At Tyler Elementary in Washington DC, when New Leader Michelle Pierre-Farid arrived in 2004, the school ranked 110th out of 115 schools in student achievement. District administrators acknowledged that the biggest issue was not the student behavior or the physical condition of the building but the staff itself. Pierre-Farid had to create a better professional culture and get into classrooms to work directly with teachers to model behavior and provide informed feedback. She had the support of the district to make other school decisions to ensure the school’s success including setting and implementing expectations for her staff, and was not judged by the number of teacher turnovers or the number of grievances filed. From 2006-2007, Tyler was one of the most improved elementary schools in the DC system, with math proficiency jumping from 23 to 44 percent and reading proficiency increasing from 36 to 63 percent. Successful turnaround principals often see significant changes in their staff in the process: Pierre-Farid saw a majority of her original staff depart by her third year as principal, with the remaining staff having transformed the professional climate.

One of the key findings from the UEF™ work, is that it is important for principals to be able to select their staff and particularly to identify aligned staff to serve on the leadership team. Similarly, where districts have implemented strategies to address failing schools by closing them and replacing them with new schools—a strategy aggressively pursued by New York City where many New Leader principals lead new high schools—there are important opportunities to recruit strong school leaders and teacher teams to push and show dramatic gains which should be incentivized in ESEA reauthorization.

Standards and Assessments

The lack of commonly embraced and understood high standards for students has resulted in some states failing to fully appreciate the inadequacy of their learning standards, detracting from a sense of urgency to change them to enable their students to fairly compete in the global economy. The high “proficiency” demands of NCLB resulted in some states establishing lower standards of proficiency and focusing simply on NCLB compliance instead of using the law as an incentive to innovate for greater performance. In reauthorizing ESEA,
a 3rd grader’s reading achievement should be measured using high quality assessments for the same high standard of proficiency, regardless of where they happen to live.

Moreover, while it was important that NCLB set reading and math performance goals as a cornerstone, these outcomes were too narrow. In reauthorizing ESEA, Congress should take a more expansive view of student performance measures, and include goals such as 90% 4-year high school graduation rates within cohorts, college enrollment rates, and Advanced Placement (AP) and International Baccalaureate (IB) enrollment rates. Given the need for students to meet high levels of college and career readiness, robust and high quality measures in the secondary and high school levels including post-secondary success must be captured. Additionally, there should be measures set for science and a renewed focus on other areas such as technology, engineering and math, to help ensure that students are being prepared to compete globally in the sectors which will be essential for the future of our nation’s economy.

Specific Policy Recommendations

Based on the above, New Leaders recommends specific ESEA improvements to: teacher and principal effectiveness, data systems, turnaround schools and standards and assessments. These key leverage areas are aligned to Congress’ education investment through the American Recovery and Reinvestment Act.

Teacher and Principal Effectiveness

- Create high quality standards for principals based on demonstrated effectiveness
- Allow a variety of entities to certify teachers and principals through performance-based requirements
- Create rigorous evaluations of teacher, principal, and principal manager effectiveness
- Target funds for districts to use data to drive teacher and principal evaluation, licensure, promotion and distribution
- Designate 10% of Title II Part A for improving principal quality and effectiveness
- Shift significant amount of Title II formula funds to a competitive basis for comprehensive state and local strategies, to ensure effective teachers and school leaders

Data Systems

- Link student achievement to principals and their pre-service institution
- Create state scorecards that disseminate data measuring licensure programs
- Use data from successful schools/principals to continually improve standards, training and evaluation

School Turnarounds

- Attract the best principals and leadership teams to turnarounds and give autonomy needed to succeed
- Provide additional slots for leadership team members and instructional coaches to transform instruction
- Recruit and train principal managers or CMO leaders who are philosophically aligned with principals
- Require Title I school improvement strategies for districts and schools to have a plan for attracting, retaining and developing high quality teachers and leaders where they are most needed

Standards and Assessments

- Provide training for principals, principal managers and superintendents on new standards and assessments
- Use common standards and assessments to identify and share best practices across states
• Expand student performance measures to include high school graduation rates, college enrollment, AP and IB enrollment and other measures geared to post-secondary school success

References


A prominent designer recently commented that Thomas Edison’s genius “lay in his ability to conceive of a fully developed marketplace, not simply a discrete device. Edison understood that the light bulb was little more than a parlor trick without a system of electric power generation and transmission to make it truly useful. So he created that too.” In subsequent years, this insight—that products, services and systems must be imagined and constantly reinvented to foster innovation and produce transformative change—has driven improvement in fields as diverse as manufacturing and health care.

Education has largely avoided this trend. In the debates that have swirled around No Child Left Behind (NCLB), for example, partisans inevitably gravitate toward single issues or answers to improve schooling: standards, teacher quality, incentives, charter schools, and the like. Each strategy appears, at least superficially, aligned with the others. In communities and schools, however, parents, teachers and the students themselves rarely experience these strategies as an intentional or coherent system. Educators are left largely alone to interpret and translate policies into classroom practice. Like prior reform efforts, NCLB’s strategies are variously “welcomed, improved, deflected, co-opted, modified, and sabotaged.”

Over the past five years, a few school districts, school networks and entrepreneurs have embraced systems thinking to drive design and innovation and improve performance. In New York City, for example, high school reformers, working with the Department of Education (NYCDOE), the United Federation of Teachers, the Council of Supervisors and Administrators, and more than 200 community groups, closed failing schools and set clear accountability targets and goals. These reformers set an 80 percent graduation target for new small schools to ensure that students are career and college ready. They used student-focused data and accountability systems to define a pathway and critical benchmarks to meet this goal over four years for teachers and students, created new strategies to invest in human capacity, and designed new school models and redesigned districts’ systems to meet these accountability targets. Through focusing on clear outcomes and systems-thinking, the result is stronger individual schools and better cross-school collaborations that are increasing test scores and graduation rates in some of the most impoverished City schools.

What are the lessons learned from New York City and other entrepreneurs for federal policy makers? Although it has rarely been articulated in these terms, education reformers around the country are increasingly practicing Toyota or “lean” management to focus on instruction, interventions that reduce student failure and innovations that achieve greater performance. This work builds on management literature, beginning with writers like Edward Deming, Don Berwick, and Everett Rodgers, and has shown how industries and social service pro-
providers can use design and innovation to build systems of continuous improvement. Individual employees understand their role, the impact of their work at a given moment in time and on the overall process and quality of the finished product. Employees have flexibility and serve as key problem-solvers to improve process, increase efficiency and create a better product. Frontline staff, rather than isolated researchers, create hypotheses about problems and rapidly test different solutions in order to create better solutions to a particular problem in the process.8

This set of management strategies is now the norm in fields such as health care and social services improvement. What do these systems look like in education? How do we use them more effectively at the federal policy level to radically alter educational strategy? Transforming education requires a commitment to innovative, systems thinking. This means establishing clear grade-level definitions for student success and establishing school- and district-level systems and strategies that maximize the capacity of teachers and administrators to move students towards these benchmarks.

1. Use National Standards and Assessments to Define the Instructional Pathway for the Typical Student in Grades K-12.

American teachers and students do not have a clear understanding of the knowledge and skills students should learn as they travel from kindergarten through twelfth grade, and beyond to college or a career. Indeed, states and districts have been reluctant to define a pathway or roadmap for the typical student and work to increase the number of students who complete it. Instead, they create vague state standards that provide very little guidance to practitioners about what they should teach or expect of their students.9 In this void, many teachers rely on commercially available materials like textbooks or prepackaged programs to establish their curricula. Still others, the more industrious teachers, evaluate state assessments and ignore the standards to figure out what they should teach and create homegrown materials.10 It is not surprising, then, that there is widespread variation in how teachers interpret and implement these standards, not only across districts but also among classrooms in the same school.11

Many are now calling for national or state-based core common standards that are fewer, clear and higher.12 Federal policy makers, working with the states, should support these efforts and ensure that these standards are based on economic criteria identified by business leaders as well as academic goals identified by educators. Students must graduate with the skills and aptitudes that enable them to be successful in the 21st century economy.13 But the federal government and the states must go even further by pushing for the development of an array of complementary materials, including curricula, anchor assignments, formative and summative assessments, other supporting materials that “define the education pathway,” and establish clear academic knowledge and skills in concrete terms for students by subject and grade. Just as judo has levels represented by belts or Scouts have merit badges for successfully accomplished tasks, so too standards must clearly set out the knowledge and skills students need and make those expectations transparent to teachers, students and parents.

2. Invest in School-Based Strategies to Train and Build the Capacity of Teachers Over Their Entire Careers Around Raising Student Performance.

Most schools of education, as well as state-level teacher and principal licensing requirements, lack alignment with the core challenge confronting urban education—improving student achievement. Elite schools of education are neither using research nor thoughtful practice to train teachers but are “trying to teach an ideology to teachers” that evinces a “profound suspicion” for accountability and content-rich curricula.14 Recent empirical research demonstrates that (1) we cannot predict who effective teachers are prior to their entry into the classroom and must
do so after several years of teaching; and (2) teacher credentialing correlates poorly, if at all, with a teacher’s impact on student achievement. In the face of this compelling evidence, we need to overhaul the way we train and support teachers and principals in several key areas.15

First, we need different pathways into teaching and certification that are organized around improving student achievement. Teach For America, the New York City Teaching Fellows, Teacher U and emerging Urban Teacher Residency programs provide examples of school-based models of teacher preparation that put student achievement growth at the center of professional training.16 Federal policy makers should radically deregulate this area and permit schools and districts to select teachers from any source, or develop their own pathways—so long as graduates of programs are consistently judged effective by multiple measures, including growth in student achievement as measured by national standards and assessments, as well as observations and peer evaluations. They should affirmatively preempt state policies that prevent high-quality, non-university preparation programs from operating within state and district systems as well as laws that prevent new teachers from being evaluated with value-added data.

Second, we need better ways of increasing teacher growth and collaboration in classrooms. In Los Angeles, New York, Oakland and Boston, districts and schools are using an inquiry model of professional collaboration to increase teachers’ capacity over the course of their career.17 Teams of teachers, frequently working with a principal, identify students with poor performance and formulate hypotheses about the barriers to students learning in a particular subject area. They collectively fashion and implement strategies rapidly, in one- or two-week increments, to test the impact of their intervention on students. The impact of this iterative process is multifold—teachers shift from a focus on abstract professional development to more aggressive understandings and strategies to address the concrete needs of individual students in their classrooms; they innovate to accelerate student learning. Of equal importance, these teams begin to see the broader systems that limit student achievement—low standards, lack of coordination between academic or guidance interventions, and others—and take actions to reinvent systems and accelerate all students within the school. Preliminary analysis by researchers at Stanford University and other places is encouraging.18

Federal policy makers should build on this emerging work and provide fiscal support to professional development efforts that encourage collaborative innovation at the school or school-network level. Inquiry strategies require a paradigm shift away from “best practice” replication to an innovative, problem-based strategy by teams of teachers to address specific and intractable problems at the school. Against a framework of national standards and assessments, schools, school networks and districts should be provided with funding to establish themselves as innovation labs and receive further funding if they continue to show improvement in student achievement.

Finally, federal policy makers should use this focus on principal-teacher teams to drive innovation by encouraging new forms of collaboration between educators through technology. In multiple fields, open source platforms and digital curricula are enabling collaboration among professionals to find solutions to difficult social problems. Federal policy should build on this emerging infrastructure and look to the emergence of open source technologies to begin to tap the knowledge of the schools themselves and use this information to drive system reform.19


It is axiomatic in the design literature that systems produce the results they were designed to produce. For the past fifty years, while the
United States’ competitive advantage has eroded, schools and school districts have remained static. We must continue to create new school designs, as reformers have repeatedly called for. But it is equally important to radically rethink district configurations. By design, the district structure mandates compliance, not innovation. Allegiance to a predetermined model reinforces rigidity and prevents schools from responding to the changing needs of students, communities or professionals in the building. It is hardly surprising that, despite numerous reports arguing for structural reform of school districts, these organizations seem impervious to change.20

Over the last few years, charter networks and groups of schools organized around intermediaries have provided a different model of organization from the school district structure.21 These networks have organized to deepen strategies and learn from one another, assume greater budget and hiring authority and forge new relationships with communities. New York City has taken this one step further and applied the “charter swap”—greater autonomy for greater accountability—to 1,500 schools in the City system.22 Organized around clear accountability metrics and an annual site visit modeled on Her Majesty’s Inspectorate in Great Britain, schools can choose among 12 different organizations for support. Five of these organizations are internal to the Department of Education and largely function as increasingly self-selecting networks of approximately 20-25 schools. Interestingly, outside not-for-profits now support approximately 15 percent of the entire New York City system and have adopted substantially different approaches to support schools, using dramatically different mixes of resources and reform approaches.

Federal policy should permit schools to opt out of districts and join management organizations or networks of schools for specific periods of time. For the purposes of state regulatory structures, schools would convert to charter-like status, with the district continuing to be the collective bargaining unit for benefits, pensions and other personnel costs—but not working conditions—and give schools and networks the power to negotiate changes in all aspects of collective bargaining over time. Continued autonomy would be guaranteed so long as schools demonstrate substantial growth on nationally defined student achievement measures. These schools should be exempt from local regulatory structures but would continue to be required to meet basic civil rights standards for its student body, serve a proportionate share of special education and English language learners and meet other equity measures. But they would be explicitly recognized as autonomous and given the maximum freedom from regulatory constraints like seat time and credit requirements, so long as student achievement standards are met.

Perhaps the most critical innovation the federal government could foster is to encourage the development of radically different conceptions of school based on emerging paradigms of how and where students learn. Students learn today from a variety of sources, ranging from mass media to emerging technologies on the Internet. A variety of new youth-serving organizations, including museums, work and trade associations, after-school providers and many others have pioneered different strategies and learning environments to enable students to meet learning objectives. This learning occurs outside the traditional school, away from traditionally certified adults, and without the traditionally mandated seat time requirements that are statutorily enforced in nearly every state.23

Federal policy should encourage and fund outside groups like the Boston Plan for Excellence, the University of Chicago’s Urban Education Institute and New Visions for Public Schools, as well as high performing districts, to radically innovate and permit educators to experiment with a variety of different learning strategies and environments—freed from notions of school as a single place or constricted by personnel and seat time requirements. The federal government should privilege experimentation around electronic learning records, where students receive credit for experiences in nontraditional settings, distance learning environments, or
self-guided courses of study enabled by technology (now available through home schooling support organizations). Further, schools that integrate vocational and academic opportunities for students should be exempted from state regulatory requirements so long as students are able to pass key summative exams in mathematics and reading at the middle school level, and summative exams in required subjects for a high school diploma. We should encourage innovation as long as it can be linked with clear evidence of student achievement aligned with the nation’s education and economic goals.24

In sum, if we are to radically transform public education, we must redesign school systems to make the most of their internal capacity—meaning, first of all, maximizing the creativity, expertise, and hard work of educators—to develop and implement improvements on a continuous basis. We must prepare teachers and principals to meet this challenge and provide ongoing opportunities for professional growth that encourage differentiation to meet student needs against concrete achievement targets. Further, schools and educators should have the opportunity to choose supports that will enable them to reach these achievement goals, build human capacity and spur innovation. The present system gets the results it does by design. To obtain transformative results, we must establish clear expectations in the form of common standards and assessments, and then redesign the systems within and around our schools to improve instruction and opportunity for every student.

Endnotes

1. Apologies to Donald Berwick, President & CEO, Institute for Healthcare Improvement.


12. National Governors Association. (2009). Common core state standards development work group and feedback group announced. Available at http://www.nga.org/portal/site/nga/menuitem.6c9a8a9ebc6ae07eece28aca9501010a0/?vgnextoid=60e20e4d3d132210VgnVCM1000005e00100aRGRD&vgnextchannel=759b8f2005361010VgnVCM1000001a01010aRGRD


Improving “No Child Left Behind”:
Linking World-Class Education Standards to America’s Economic Recovery

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Banff, Alberta, Canada
August 17-22, 2009

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CONFERENCE AGENDA

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Education’s Central Role in America’s Economic Progress
Remarks by Claudia Goldin and Lawrence Katz, Harvard University

At key moments in American history major decisions have been made—such as making public high
school available to all and the GI bill—that have had a lasting impact on America’s education with
commensurate positive economic consequences.

Discussion Questions

• Do the current economic crisis and the president’s emphasis on education in the stimulus and
  budget legislation place the U.S. at a similar turning point?
• What is the connection between government investment in education and economic productivity?
• How does education compete against other national priorities in a time of massive deficit
  spending?

International Educational Benchmarks: Implications for Global Competitiveness
Andreas Schleicher, Organisation for Economic Co-operation and Development

By several measurements, the U.S. is no longer first in the world in high school and college graduation
rates and its K-12 indicators lag.

Discussion Questions

• What does this trend portend for America’s future? Is it inexorable?
• Are international comparisons legitimate, or are there unique features in various countries that
dilute their value?
• What can be learned from other countries to close the achievement gap?
• Does the data provide indicators as to why certain countries excel in these ratings?
• What needs to be done to achieve simpler, yet higher standards for learning in this global context?
The Federal Role in Encouraging States to Raise Standards and Teacher Quality: Implications for Accountability and College Readiness

Uri Treisman, University of Texas

No Child Left Behind allows states to set their own standards, yet a number of states are already working together to establish common higher standards.

Discussion Questions

- Has the state-based approach to standards worked or do alternative approaches have merit?
- How should standards and assessment be aligned to support K-16 pathways for the 21st century?
- How can tests best measure the “value-added” and “growth” models of a student’s educational achievement in a practical way?
- How can we better prepare, recruit, and retain high-quality teachers and leaders?
- Can reinvestment in American education be an opportunity to improve both standards and assessments?
- What should world-class standards be to ensure U.S. students have the necessary skills for the future?
- What does college readiness mean, and to whom should it apply?

The Appropriate Federal Role in Developing Better Tests: The Need to Improve Measurements of Both Learning and Teaching

Eva Baker, University of California at Los Angeles

The testing requirements of NCLB have focused attention on how to best measure student achievement and the adequacy of teachers and schools. Technology can provide a more refined tool for analysis, but practical questions remain as to whether a high-tech approach to testing can be undertaken by every local school district.

Discussion Questions

- How can the U.S. leverage its edge in innovation to ensure that the next stage of assessments will improve?
- Will changes in the design of tests make “teaching to the test” very different from current limitations?
- Are students tested too much, taking away from time devoted to learning?
- How important is it to have public access to data that measures school performance in a form that parents and taxpayers can understand and comparatively analyze?
- Do the costs of tests affect their use and development?
- What role does the testing industry play in developing tests?
Improving “No Child Left Behind”: Practical Steps the Federal Government Can Take to Improve Educational Achievement

Jean Desravines, New Leaders for New Schools
Robert Hughes, New Visions for Public Schools

Federal support of local education with NCLB requirements instituted significant changes at the district level. These changes have not been without controversy.

Discussion Questions

• What policies of NCLB have demonstrably worked well?
• What NCLB policies have not worked well?
• Has NCLB’s emphasis on data proven to be useful and productive?
• Does NCLB allow local districts, principals and teachers flexibility to innovate?
• Have the NCLB provisions been seen as “unfunded mandates” or helpful leverage for positive educational improvements?
• What are some lessons from successful innovations in accountability and turning around schools?