Improving the Education of Children Living in Poverty

Richard J. Murnane

Summary

Richard Murnane observes that the American ideal of equality of educational opportunity has for years been more the rhetoric than the reality of the nation's political life. Children living in poverty, he notes, tend to be concentrated in low-performing schools staffed by ill-equipped teachers. They are likely to leave school without the skills needed to earn a decent living in a rapidly changing economy. Murnane describes three initiatives that the federal government could take to improve the education of these children and increase their chances of escaping poverty. All would strengthen the standards-based reforms at the heart of the No Child Left Behind Act of 2001 (NCLB) by bracing the three legs on which the reforms rest: accountability, incentives, and capacity.

Congress, says Murnane, should improve accountability by amending NCLB to make performance goals more attainable. The goals should emphasize growth in children's skills rather than whether children meet specific test score targets. Congress should also amend NCLB to develop meaningful goals for high school graduation rates.

Congress should strengthen states' incentives to improve the education of low-income students. It should also encourage states to develop effective voluntary school choice programs to enable students who attend failing public schools to move to more successful schools in other districts.

Finally, Congress should use competitive matching grants to build the capacity of schools to educate low-income children and the capacity of state departments of education to boost the performance of failing schools and districts. The grants would help develop effective programs to improve teaching and to serve students who do not fare well in conventional high school programs.

Murnane estimates the annual cost of these three initiatives to be approximately $2.5 billion.

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Equality of educational opportunity has been part of the rhetoric of American political life for many years. Reality, however, does not match the rhetoric. Children living in poverty, disproportionately children of color, tend to be concentrated in schools with inadequate resources and poorly skilled teachers. Many of these children are likely to leave school before earning a high school diploma. Even if they graduate, many leave school without the skills needed to earn a decent living.

Equal access to a good education has become especially crucial over the past twenty-five years, as a rapidly changing economy has made skills and education ever more important determinants of labor market outcomes. Figure 1 shows trends in the average hourly wages of Americans with different educational attainments. In 1979 graduates of a four-year college earned 46 percent more than high school graduates earned on average. By 2005 that gap had widened to 74 percent. During that same period the average inflation-adjusted earnings of high school dropouts fell 16 percent.[1]

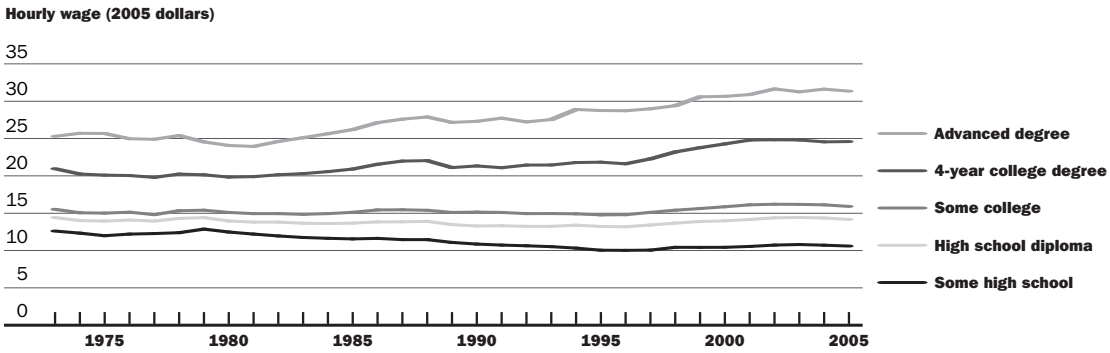
Not surprisingly, the cognitive skills of students, even young students, predict accurately how likely they are to graduate from high school, enroll in college, and get a four-year degree.[2] Inequality in mathematics and reading skills results in inequality in educational attainment and inequality in labor market earnings. The best evidence on the reading and math skills of American children comes from the National Assessment of Educational Progress (NAEP), often called the nation's report card. Math skills are particularly important predictors of subsequent labor market outcomes.[3] On the 2005 assessment of the math skills of eighth graders, only 13 percent of children living in poverty achieved a score of proficient compared with 40 percent of children who were not poor. Almost half—49 percent—of children living in poverty had scores below the threshold for basic competency, compared with just 21 percent of nonpoor children.[4]

The differences in the mathematics and reading skills of eighth graders of different groups translate into striking differences in high school graduation rates. Although about three-quarters of white youth earn high school diplomas on schedule, the corresponding figure for black and Hispanic youth—who are especially likely to be living in poverty—is roughly half.[5] These numbers provide striking evidence both that the United States is far from providing equality of educational opportunity and that improving the education of children living in poverty is critical to improving their life outcomes. In this article I propose and defend a set of actions that the federal government could take to improve the education of children living in poverty.

Recommendations

The federal government could improve the education of poor children and increase their chances to escape poverty by taking three steps. First, it could strengthen educational accountability by amending the No Child Left Behind Act of 2001 (NCLB) to make test score goals attainable and to develop meaningful goals for increasing the share of students who graduate from high school. Second, it could address the problems of low-income students by encouraging states to strengthen high school graduation requirements so that they better reflect the skills needed for success after graduation and by also encouraging states to develop voluntary interdistrict school choice programs. Third, it

Figure 1. Real Hourly Wage for U.S. Workers, by Educational Attainment, 1973–2005



Source: Based on Current Population Survey data from the Economic Policy Institute Data Zone (www.epi.org/datazone/05/wagebyed_a.xls).

could build the instructional capacity of schools to educate low-income children.

To readers familiar with the structure of American education, it may seem odd to suggest that actions by the federal government would improve the education of disadvantaged children. After all, this country has historically left the governance of public education to the states, which in turn have delegated a great deal of responsibility and power to local school districts. Washington has traditionally been relatively powerless to affect what happens in American public school classrooms. In recent years, however, things have begun to change. In the next section I describe these changes and explain why federal actions can now influence the quality of education provided to children living in poverty. I then turn to the recommendations.

The Federal Role

From one perspective, improving the education of children living in poverty is straightforward. Policymakers should define clearly the skills and knowledge students should master at each grade level. Schools should be run by school principals who know how to recruit and support effective teachers and provide them the tools to do this work. Schools should attract and support experienced, skilled teachers committed to working together over an extended period to continuously improve instruction. School staff should monitor the learning of every student, intervene rapidly at the first sign that a student is not making good progress toward mastering critical skills, and provide alternatives when conventional pedagogies are not effective. And the school day and school year should be long enough that students can have extra time to acquire critical skills if they need it.

But few children living in poverty attend such schools. Instead, they typically attend schools where leadership is weak, many teachers lack critical skills, instruction is inconsistent, and learning problems are left unattended. A great many disadvantaged children thus leave school without the skills they need to earn a decent living and to provide for their own children.

The reasons why disadvantaged children typically receive a poor education are numerous and interrelated. Housing patterns leave poor children, who have especially great learning needs, concentrated in particular schools and school districts.[6] Precarious and uncertain city budgets prevent urban districts from hir-

ing skilled teachers in a timely manner. Difficult working conditions, combined with seniority provisions of collectively bargained labor agreements, leave low-performing schools with the least teaching talent.

During the past fifteen years virtually every state in the country has adopted standards-based educational reforms, often called test-based accountability, as its primary strategy for improving public education. Although details vary greatly from state to state, all standards-based educational reforms include three components. The first is the standards themselves: content standards that specify what students should know and be able to do, performance standards that describe how students should demonstrate their knowledge and skills, and assessments that measure the extent to which students meet performance standards. The second component is incentives to encourage educators and students to devote the time and energy needed to meet the performance standards.[7] The final component is teachers who have the knowledge, skills, and resources to prepare all students to meet the performance standards.

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The third component—building capacity to deliver consistently high-quality instruction to all children—has been the most neglected part of standards-based reforms in most states. By themselves, the first two components—standards and incentives—will not improve student performance. Teachers must know how to achieve the mandated outcomes. But in most schools serving high concentrations of poor children teachers lack the requisite skills and knowledge and have few opportunities to acquire them. Building teaching capacity is thus as critical to improving student outcomes as appropriate standards and incentives are.

Since the passage of the Elementary and Secondary Education Act of 1965 (ESEA), the federal government has provided funding to improve the education of economically disadvantaged children. Title I of this law has been the nation's primary compensatory education program, distributing funds to school districts on the basis of a formula that weights heavily the number of children living in poverty.[8] The most recent reauthorization of ESEA, the No Child Left Behind Act of 2001, marked a significant change in the federal role in public K–12 education. The new law requires states to test annually the reading and mathematics skills of all public school students in grades three through eight. It also specifies that all schools are expected to make adequate yearly progress (AYP) toward ensuring that all groups of students, including groups defined by race or ethnicity and poverty, reach proficiency within twelve years (by 2014). School districts and schools that fail to demonstrate adequate yearly progress for all groups of students are subject to corrective actions that can ultimately include the replacement of staff and school reconstitution.

One strength of NCLB is that it draws attention to the academic skills of children from low-income families, children of color, chil-

dren whose first language is not English, and children with disabilities—groups that historically have not been well served by American schools. The importance of creating incentives for schools to pay attention to these often forgotten groups cannot be overestimated. It is the primary reason that some civil rights groups have supported NCLB.

At the same time, several provisions of the new law create perverse incentives for states and for educators. One source of perverse incentives is the fact that the adequate yearly progress requirements are well beyond the reach of even the states that have made the most progress in improving students' reading and math skills. North Carolina, for example, made the greatest gain between 1990 and 2000 in the share of students who score proficient or above on the eighth-grade NAEP mathematics test. If North Carolina were able to sustain this top-ranking rate of progress, almost 60 percent of its eighth graders would earn scores of proficient or above by 2014—a remarkable accomplishment, but well short of the required 100 percent.[9]

A related problem is that the accountability system has only two categories: schools that make adequate yearly progress and those that do not. Thus a school in which a few students in one ethnic group in a single grade fail to make adequate yearly progress is not distinguished from a school in which all ethnic groups at every grade level fail to do so.

It makes sense to have ambitious performance goals. But an accountability system with unrealistically high goals will not improve public education. As educators become increasingly aware that even consistently good teaching will not allow their schools to satisfy adequate yearly progress requirements, their behavior will become increasingly dysfunctional and contrary to the interests of children. Skilled teachers, for example, will be likely to leave schools serving high concentrations of poor children. And some teachers will focus instruction unduly on test preparation.[10] In addition, in a system in which a great many schools, even those that have made real progress, are labeled "underperforming," it may be difficult to identify the schools most in need of intervention.

A second source of perverse incentives in NCLB is the fact that states are allowed to choose their own tests and their own minimum scores for achieving proficiency. This latitude, combined with the pressure of having to meet adequate yearly progress requirements, encourages states to make their tests relatively undemanding and to set low minimum scores. A look at how students perform on state-mandated tests and on the National Assessment of Educational Progress highlights this problem. In 2003, 77 percent of fourth graders in Alabama scored "proficient" on the state Reading-Language Arts exam, but only 22 percent scored "proficient" on the NAEP fourth-grade examination.[11]

A third weakness of NCLB concerns high school graduation rates. Although the law requires states to include graduation rates in setting adequate yearly progress goals for high schools, it does not specify how they must do this. In interpreting the law, the U.S. Department of Education has allowed states to measure graduation rates in a variety of ways and to set their own goals for improving those rates. Moreover, there is no requirement that goals be met for subgroups of students, defined by race and poverty. As a result, high school graduation rates, one of the most important indicators of school districts' success in serving students, play almost no

role in the NCLB accountability system. One indication of the need to improve graduation rates is that among twenty-two industrialized democracies for which on-time high school graduation rates are available, the United States now ranks nineteenth.[12]

In summary, test-based accountability systems introduced by states and the federal government have had an impact on what happens in American schools, especially those that serve high concentrations of poor children. The challenge now is to revise NCLB and state accountability systems so that children living in poverty make greater gains. The federal government can help make standards-based reforms a success by strengthening the foundation on which they rest, namely, accountability, incentives to serve poor children, and the teaching capacity to serve poor children.

Before turning to my specific recommendations, I want to make clear that they are based on the presumption that the United States will retain its basic governance structure for education. Local communities, operating within boundaries set by states, will make most of the decisions that determine the day-to-day school experiences of children. They will hire teachers and administrators, choose curricula, set the length of the school day and year, and invest in improving the quality of instruction. Individual communities are responsible for educating all students living within their geographic boundaries; they have no responsibility to educate students in neighboring communities. States, in their evolving role, will create content standards, choose tests to measure students' mastery of these standards, determine what requirements college graduates must meet to obtain a teaching license, and fund a significant share of local school spending.

The assumption about governance structure is important because the current structure limits the ability of federal policies to improve the education of poor children. If the governance of American public K–12 education were more centralized, the options for federal policy would be quite different and closer to those that some other industrialized countries have adopted. They might include national content standards and national assessments, a single set of training and licensing requirements for all teachers, assignment of teachers to particular schools in geographic areas encompassing many communities, opportunities for students to attend a wide variety of schools located in nearby communities, and a common strategy for identifying students who are not making good academic progress and for consistently applying intensive intervention strategies.

In an important sense, the governance structure of American public education is evolving. States play larger roles in determining curricular and testing requirements than they did thirty years ago. NCLB marks a larger federal role. Nonetheless, local control remains a central tenet of the educational governance structure.

Improve Accountability

Congress could improve educational accountability by amending NCLB to make test score goals attainable and to develop goals for increasing high school graduation rate requirements.

Make Test Score Goals Ambitious, but Attainable

Robert Linn, one of the nation's foremost experts on educational accountability systems, suggests several constructive changes in the adequate yearly progress provisions of NCLB.[13] One, aimed at reducing the varia-

tion across states in the proficiency standard, is to define the minimum score for proficiency (often called the cut score) on a state assessment to be equal to the median score of students in the state who took the test in 2002. Although in some ways an arbitrary choice, 2002 is the first year after passage of NCLB. Linn also recommends requiring that the share of students scoring above that cut score increase by something like 3 percentage points a year—so that the target for 2006 would be 62 percent and that for 2014, 86 percent, rather than 100 percent. Judged against the fastest rates of improvement observed on NAEP tests, these targets would be ambitious but, unlike the current targets, not unrealistic.

Linn also makes a suggestion in response to the problem that schools serving a greater number of the subgroups specified in the law (including poor children, black children, Hispanic children, and children with disabilities) are more likely to fall short of adequate yearly progress than schools serving a more homogeneous group of students.[14] He would amend the so-called safe harbor provision of NCLB—an alternative way for a school to satisfy AYP—so that when a subgroup of students in a school falls short of adequate yearly progress, the school as a whole can still meet the target if the share of students in the subgroup who score in the below-proficient category declines by at least 3 percentage points each year. This change could reduce the disincentives for skilled teachers to work in racially and ethnically diverse schools.

Linn also suggests modifying the safe harbor provision to allow schools to make adequate yearly progress if their students make specified gains in achievement over a school year rather than reaching specific achievement levels, as under current law. Allowing schools to meet targets by demonstrating growth in students' skills could also reduce the disincentive for skilled teachers to work in schools serving high concentrations of poor children.[15] The Department of Education has shown itself open to such a change. In 2006 it approved applications from five states to participate in a pilot program in which schools could make adequate yearly progress by demonstrating gains in the achievement of students scoring below the proficiency cut score.[16]

Add Serious High School Graduation Rate Requirements

Individual states now estimate high school graduation rates in many different, noncomparable ways. Given the importance of high school graduation in determining the economic future of the country's youth, it makes sense to require that states, districts, and schools measure graduation rates in the same way and that they meet common requirements for improving these graduation rates.

In 2005 the nation's governors signed a "Graduation Counts Compact" that committed their states to implementing a common method for calculating their high school graduation rates.[17] By 2010 thirty-nine states plan to report graduation rates based on this formula. The Department of Education is providing competitive grants to state education departments to develop data systems to track students over time and has already awarded grants totaling more than $52 million to fourteen states. It may thus soon be possible to put in place meaningful accountability provisions to increase high school graduation rates.

Create Incentives for States to Act

Congress could create incentives for states to strengthen high school graduation requirements to reflect the skills that students need

for success after graduation and to promote voluntary interdistrict school choice programs.

Strengthen High School Graduation Requirements

Today twenty-two states require high school students to pass exit exams in mathematics and English language arts to earn a high school diploma.[18] But passing these exams does not mean that students are ready either for college or for the demands of jobs with promising futures. Although more than 70 percent of high school graduates enter two- and four-year colleges, more than a quarter must take remedial courses in English and mathematics before registering for courses that provide college credit, and the share is much higher for disadvantaged students. More than 60 percent of employers rate high school graduates' skills in writing and basic math as only "fair" or "poor."[19]

To give educators and students clear signals about the adequacy of the work they do together in high schools, states should align high school standards, assessments, and graduation requirements with the knowledge and skills needed for postsecondary education and work. Public colleges and universities could create incentives for high school students to master the more demanding skills required for high school graduation by committing to base college course placement on students' scores on recalibrated state exams. Knowing that scoring well on high school exit exams would guarantee acceptance into college courses that count toward a degree (as opposed to being funneled into "developmental courses," which do not) would encourage students to do the hard work needed to master important skills.

States that strengthen high school graduation requirements would be likely to strengthen content standards in the earlier grades to prepare students to do more demanding high school work. The variation across states in standards and assessments would likely diminish. Moving toward a common set of national standards and assessments makes sense in a country with a mobile population and an increasingly integrated economy.

Care must be taken in determining precisely which skills are important for success after high school graduation. The tendency is to ratchet up standards in areas such as mathematics, where skills are relatively easy to measure, and to neglect skills such as oral communication, teamwork, and job search and interviewing that are critical to success in postsecondary education and work but are hard to measure.[20]

A ten-year study of career academies illustrates the importance of skills other than reading and math to success after high school. Career academies are small learning communities embedded within a larger high school, whose students take classes together for at least three years from a team of teachers drawn from different disciplines. The academies offer a college preparatory curriculum with a career theme, which enables students to identify relationships among academic subjects and understand how they are applied in a broad field of work. The academies generally include partnerships with local employers, who provide work-based learning opportunities for their students.

In 1993 MDRC, one of the nation's leading contract research firms, undertook an experimental study of the effect of nine career academies serving large shares of students living in poverty. Because there was excess student demand for all nine academies, lotteries determined which interested students were offered

places. Both the students who were offered places (the treatment group) and those who lost out in the lottery and enrolled in other school programs (the control group) were followed through high school and for four years after graduation. A variety of indicators of success (reading and math scores, course grades, on-time graduation, college enrollment and completion, labor market earnings) were measured for all participants.

The findings of the evaluation are striking. In both treatment and control groups, academic skills, high school graduation rates, and college enrollment rates were higher, on average, than the national average for students with similar demographic characteristics. (These credentials reflect the greater than average motivation of students who wanted to enroll in career academies.) However, at the end of high school the math and reading skills of students in the treatment group were no higher, on average, than those in the control group. Nonetheless, young men who had been offered places in a career academy earned $10,000 (18 percent) more than men in the control group during the four-year follow-up period after high school. The labor market benefits were especially large for male students who were at risk of dropping out of high school as the experiment began. The explanation for this striking pattern is that enrollment in career academies and the associated opportunities for workplace internships and jobs enabled students to acquire skills that were important to labor market success even though they were not captured by scores on standardized reading and math tests.[21]

Congress could provide funding to help states strengthen high school graduation requirements when it reauthorizes the Higher Education Act or NCLB. Some states have already begun work. Through the auspices of the American Diploma Project (ADP), a project of the organization Achieve, five states worked together in 2003–04 to develop benchmarks describing the specific English and mathematics skills needed for success in postsecondary education or in jobs with growth potential. Thirty states are now working to align high school standards with the demands of postsecondary education and work, and a dozen are also upgrading their high school graduation requirements.[22]

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In most states realigning high school graduation requirements will entail redesigning exit examinations. As is almost always the case when new exams are introduced, scores will initially be poor but will improve as educators learn to prepare students for them. The question will inevitably arise whether improved exit exam scores reflect better preparation of students for postsecondary education and work or simply score inflation resulting from narrowly focused test preparation. To answer this question, it is necessary also to align the twelfth-grade NAEP English language arts and mathematics examinations with the skills needed for postsecondary education and work and require all states to administer these examinations.

Today the federal government requires states to participate in the NAEP assessment of the

English language arts and mathematical skills of students in grades four and eight. As noted, comparisons of the performance of students on the NAEP tests and on mandatory state tests have revealed how undemanding many state tests are and how low many states have set their thresholds for proficiency. It is important to have similar nationally comparable benchmarks against which to judge states' high school graduation requirements, including their exit examinations. Requiring all states to administer twelfth-grade NAEP tests could provide these benchmarks if two challenges can be overcome. The first is to redesign the NAEP tests to be sure they reflect the skills needed for postsecondary education and work. Progress on this front is under way. In August 2006 the National Assessment Governing Board, the group that sets policy for the NAEP, voted to redesign the NAEP twelfth-grade mathematics examination in accord with skills necessary for postsecondary education and jobs with growth potential.[23] In taking this action the board accepted advice requested from Achieve, sponsor of the American Diploma Project (ADP). The revised NAEP twelfth-grade math examination will thus likely be informed by the work of the ADP.

The second challenge is to convince twelfth-grade students to make their best efforts in answering questions on the NAEP examinations when their scores not only have no consequences for them but are never even known to them. Only if the students give their best effort will the scores serve as a useful audit of the consequences of revising high school graduation requirements. Whether it is possible to elicit the full attention and effort of twelfth-grade students under those circumstances remains to be seen, though several recent experiments show some promise.[24]

Some readers may wonder why states do not simply require that students score above predetermined cut-offs on redesigned twelfth-grade NAEP tests in order to receive a high school diploma. In other words, why not get high school students to take the NAEP tests seriously by making the scores count? There are two complementary answers. First, the NAEP uses a matrix sampling design under which different students are asked to answer different questions. The design permits reliable estimation of the extent to which groups of students have mastered a much broader range of skills than would be the case if all students answered the same questions. But as a consequence, scores are not computed for individual students. Second, critics of test-based accountability often complain that test score gains on high-stakes tests stem from extensive drilling and do not reflect increases in students' mastery of the relevant subject domains.[25] The only way to assess the extent to which this is true is to compare score trends on the high-stakes test with those on a different, broad-based examination. The NAEP tests are designed to serve this audit function.

Promote Interdistrict School Choice

No Child Left Behind requires school districts to give students the option of transferring to a more successful public school if their own school fails to make adequate yearly progress for two years in a row. And the law gives low-achieving children from low-income families priority in requesting transfers. To date, however, this school choice option has been little used, for several reasons. Successful public schools, especially in urban areas, rarely have empty seats and often have long waiting lists.[26] And many school superintendents give parents little or no information about the school choice option. Finally, scores on state tests taken in the

spring of one school year are often not available until after the next school year has begun. (A solution to this problem is to base the NCLB choice option on the most recent accountability data available when families are choosing schools for the next school year.)

Because NCLB as written gives neighboring school districts no real reason to accept students from failing urban schools, the next round of legislation should create strong incentives for states to develop voluntary interdistrict choice programs. Several promising precedents exist. METCO, a grant program funded by the Commonwealth of Massachusetts with the voluntary participation of thirty-four suburban districts near Boston and four near Springfield, has been in operation since 1966 (when it was funded in part by a grant from the U.S. Department of Education). Today it enables 3,300 low-income Boston and Springfield students to attend public schools in other communities. St. Louis also has a voluntary program, under which 12,000 African American children, 75 percent of whom are from low-income families, attend public schools in sixteen suburban districts.[27] Significant state funding provides an incentive for suburban districts to participate in these interdistrict choice programs.

As the METCO and St. Louis programs show, with appropriate incentives, suburban school districts serving primarily middle-class children are willing to educate a nontrivial number of low-income urban students. A recent evaluation found METCO a promising approach to improving the education of some children living in poverty. It increased the reading achievement of participating urban children attending suburban elementary schools and had no lasting negative effects on the achievement of their suburban classmates.[28] Evidence from the St. Louis choice program is also encouraging.[29] Competitive grants to states for the design and implementation of interdistrict choice programs could make school choice under NCLB a real option for many children from low-income families.

Congress should also amend adequate yearly progress regulations to ensure that suburban districts are not penalized for accepting urban students from low-performing schools. The option of satisfying adequate yearly progress requirements by demonstrating gains in the achievement of initially low-achieving children could be important in this regard.

Although creating interdistrict choice options for low-income children who attend poorly performing schools is important, such programs are likely to serve only a minority of urban children. The reason is that the willingness of suburban communities to voluntarily accept low-income students from urban school districts would diminish as the share of these students in their schools grew. Improving teaching and learning in schools serving high concentrations of poor children must thus be a central part of federal education policy.

Build the Capacity of Schools to Educate Low-Income Students

Setting appropriate goals for student achievement and designing incentives for educators to help all students to meet these goals will improve education for disadvantaged children only if the teachers and administrators doing the work know how to meet the goals. But few schools serving high concentrations of poor children are blessed with many such teachers and administrators. Improving education for children in poverty thus depends on increasing the capacity of educators to deliver consistently high-quality instruction.

The federal role is to catalyze capacity building and to ensure that state and local initiatives are carefully evaluated to learn how they affect student achievement.

Improving Teaching

One consistent finding from three decades of research into what makes schools effective is that some teachers are much better than others in helping children to acquire critical math and reading skills.[30] A second consistent finding is that disadvantaged American children, those who most need the nation's best teachers because their parents lack the resources to compensate for poor schooling, are least likely to get them.

Among the most striking recent evidence is a 2004 study of Teach for America (TFA), a program that recruits academically talented graduates from the nation's best colleges and universities to work for two years in urban and rural schools that face teacher shortages, virtually all of which serve high concentrations of poor children.[31] The study found that a large share of the non-TFA teachers in these schools was remarkably ill prepared to educate children, especially children needing the nation's best teachers. Less than 4 percent had graduated from a college or university classified as at least very competitive, compared with 22 percent of the national teaching force and 70 percent of TFA participants. Almost 30 percent of non-TFA teachers had no student teaching experience. The poor preparation of these teachers helps explain why the average reading score of the students in these schools was in the 13th percentile of the national distribution.

This poor preparation comes as no surprise to anyone who follows American public education. Teaching in schools that serve large shares of disadvantaged children is taxing. Very few school districts provide extra pay or other inducements to attract talented teachers. As a result, all too often these schools are left with the teachers other schools don't want. Those teachers who can, exercise seniority rights to move on as soon as possible, leaving the schools to search yet again for new teachers.

One response to the poor skills of teachers in high-poverty schools has been professional development aimed at improving these skills and at creating a coherent instructional program. But high teacher turnover rates often thwart such efforts.

Some state departments of education have responded to the consistently poor performance of some schools and school districts by taking them over and appointing new staff to replace incumbent administrators and teachers. Results have varied across settings, but clearly the strategy is no panacea.[32] Creating effective schools is more difficult than changing the leadership. One thing that states have come to understand, however, is that they must increase their capacity to bring about constructive change in troubled schools and school districts.

NCLB acknowledges the importance of teacher quality and mandates a qualified teacher in every one of the nation's classrooms, but it provides no new funding to implement the mandate. Nonetheless, many states and school districts have developed a variety of initiatives to improve instruction in high-poverty schools. For example, fourteen states provide some sort of incentive for teachers to work in a hard-to-staff school.[33] Several, including Florida, California, and Texas, provide bonuses to teachers with National Board certification to move to hard-to-staff schools.[34] And some urban school dis-

tricts have introduced initiatives aimed at improving education in schools serving high concentrations of poor children. For example, Miami-Dade County has designated its thirty-nine lowest-performing schools as a School Improvement Zone. It is offering teachers a 20 percent pay premium to take a job in one of these schools, working a longer school day and school year.[35]

The federal government must, for two reasons, take a role in building the instructional capacity in high-poverty schools. First, the number of state and district initiatives, while growing, is modest relative to the magnitude of the problem. Second, almost none of these initiatives will be carefully evaluated, so that researchers and policymakers will not be able to take full advantage of them to learn what works. Thus when Congress reauthorizes No Child Left Behind it should include targeted, competitive matching grants to states and school districts to support initiatives in high-poverty schools to attract and retain skilled teachers and administrators and to create leadership academies to train leaders. Each initiative that receives an award should be rigorously evaluated to learn how it affects instructional quality and, ultimately, children's achievement.

Since my recommendation is quite specific—*targeted*, *competitive matching grants* with a strict *evaluation requirement*—it seems important to defend these design choices. I use the term *targeted grants* to mean grants specifically aimed at improving the quality of teaching in high-poverty schools. I distinguish these from common uses of Title I funds, such as reducing class size and hiring reading specialists to work with students whose reading and math skills are slow to develop. Such uses are common because they do not threaten historic practices in most public school districts, including a common salary scale irrespective of the difficulty of the teaching assignment, seniority in choice of teaching positions, and the right to close the classroom door and teach as one is accustomed to, even if it means that children are exposed to different instructional methods from one year to the next. The targeted grants would create incentives for districts to challenge these historic practices. The focus would be on attracting skilled teachers and administrators to high-poverty schools and inducing them to work together over an extended time to provide consistently high-quality instruction.

One response to the poor skills of teachers in high-poverty schools has been professional development aimed at improving these skills and at creating a coherent instructional program.

The grants should be competitive rather than formula-based, as provided under Title I, to encourage school districts and states to develop innovative proposals. Innovation is crucial because there is little systematic evidence on the effectiveness of alternative policies to attract and retain skilled teachers and administrators in high-poverty schools. Improving instruction in these schools is thus not simply a matter of having the resources to spend in well-understood, proven ways, but of testing a variety of new strategies to find out what works.

There are two complementary reasons to use matching grants rather than categorical grants that do not require matching contributions from recipients. First, the matching provision increases the total resources devoted to initiatives. Second, requiring a matching contribution is likely to induce recipients to think carefully about the design of their proposals.

The requirement for rigorous evaluations is aimed at maximizing the learning that comes from the grants. Because good evaluations must be planned simultaneously with the initiatives themselves, evaluation plans should be part of all grant applications. Some portion of the federal grant money should be set aside to pay for evaluations. Applicants could be encouraged to leverage their targeted grants by soliciting funding from foundations to pay for part of the evaluation costs—a strategy that states have used successfully to fund evaluations of innovative welfare programs.

Helping Students Who Struggle in High School

The extraordinarily high dropout rate among low-income high school students in urban schools is a pressing national problem.[36] State efforts to strengthen high school graduation requirements are likely to exacerbate this problem unless policymakers do something to improve prospects for students who do not thrive in traditional high schools. If improving high school graduation rates is to become a requirement for making adequate yearly progress, as I have recommended, there is a pressing need for strategies to help students who struggle in high school.

Fifteen years ago, when states began standards-based education reforms, many analysts expected that the problem of struggling high school students would be short-lived. They thought that the poor reading and math skills of a great many ninth graders stemmed from low-quality elementary school education, and that improving elementary schools would help students succeed in high school. That logic turned out to be faulty. Although many states have improved the reading and math scores of elementary school students, the number of ninth graders who lack the reading and math skills necessary for high school work has not declined. Improving secondary school education itself, both middle school and high school, is perhaps the nation's most pressing education challenge.

Recent research has clarified the challenge of secondary school reform. Among the critical dimensions are creating a personalized and orderly learning environment where students and teachers treat each other respectfully, identifying students with poor academic skills and intervening intensively to improve these skills, improving the quality of instruction and helping students understand the importance of acquiring particular skills and knowledge, and connecting students to the world of work.[37]

Many states are attempting to address this challenge with changes in incentives, in instruction, and in curricular design. But most interventions are not accompanied by high-quality evaluations. Congress could improve the knowledge base on how to improve secondary schools by providing competitive grants to states or groups of states to support innovations, with the requirement that states must submit their innovations to an external evaluation.

Experience in another sector—welfare reform—illustrates the value of the federal role in supporting carefully evaluated state innovations. During the 1980s the U.S. Department

of Health and Human Services allowed states wishing to try new strategies for dealing with families in poverty to apply for waivers from federal welfare laws. One condition for being granted a waiver was that the state set aside a share of its federal funds to pay for a rigorous evaluation of the effects of its innovative system. The evaluations of these innovations provided much of the evidence that informed the design of welfare reform in 1996.[38] The same strategy—federal grants coupled with an evaluation requirement—could also increase policymakers' knowledge about the relative effectiveness of alternative statewide solutions to improving the secondary schooling of low-income youth.

In addition to state grants, Washington should provide competitive grants to school districts and community-based partners that are developing alternative educational programs for youth at risk of dropping out of school. Again, the grants should include a requirement for a rigorous external evaluation, with the goal of increasing the supply of successful models from which schools can draw.[39]

Cost

Implementing these recommendations will entail significant costs, though the costs are relatively modest given the importance of the problems that the recommendations address and the social payoff to solving them. Moreover, because the proposals do not involve entitlements, the size of the initiatives could be tailored to federal budget realities. I consider the cost of each proposal briefly, in turn.

It would cost little to revise adequate yearly progress requirements along the lines suggested by Robert Linn as part of the reauthorization of NCLB. The same would be true for making improved high school graduation rates one of the criteria for satisfying those requirements. But to estimate graduation rates accurately, most states need dramatically improved data systems. It is thus important to continue the Department of Education grant program that helps states develop systems to track individual students over time. Increasing annual funding for those grants from $25 million to $50 million would be a good investment, because high-quality long-term data on students are essential both to good educational policymaking and to evaluating the effects of innovations and new investments. Moreover, because good data systems are low on the education priority list for many state legislatures, substantial grants may be necessary to catalyze progress.

Congress might appropriate another $60 million for grants to states interested in aligning high school graduation requirements with the demands of postsecondary education and work. And it might appropriate another $20 million to push forward research on how to make the twelfth-grade NAEP examinations serve as a benchmark for varying state graduation requirements.

The annual budget of the Massachusetts METCO program, which serves 3,300 students, is roughly $20 million, or $6,000 per student. Using these figures as a base, I estimate that a one-to-one matching grant awarded to states to create interdistrict choice programs might cost the federal government $3,000 per student, on average, including funding for external evaluations. A $120 million annual investment in competitive matching could provide new educational options for approximately 40,000 low-income students attending poorly performing schools. Although this initiative is expensive on a cost-per-student basis, evaluations could provide extremely valuable information about how to design interdistrict choice programs.

The most costly recommendation is the third: targeted competitive matching grants for state and district initiatives to improve teaching in high-poverty schools and to tackle the secondary school problem. To interest districts and states in applying for the matching grants, the federal contributions would have to be large enough to fund the required evaluations and provide significant program money as well. Congress might invite proposals for projects with a total cost, including evaluations, of up to $20 million a year for up to five years, with a one-to-one matching rate. Thus, the annual federal cost for each project would be a maximum of $10 million. Funding 100 such projects would cost $1 billion.

Contrary to the specific provisions of the legislation, federal Title I funding may not have brought about a long-term increase in the resources used to educate disadvantaged children.

Competitive matching grants to address the secondary school problem would be somewhat more costly. The annual federal cost for grants to states to reduce dropout rates might be $500 million. Another $800 million a year could usefully go to school districts to develop and test new educational models for increasing high school graduation rates while retaining high standards.[40]

The total annual cost to the federal government of my proposals would be $2.525 billion.[41] That is roughly 20 percent of the $12.7 billion that Congress now allocates under Title I, Part A, of No Child Left Behind for locally designed programs to improve the skills of students at risk of academic failure, especially those attending high-poverty schools.[42] Should the funds for the proposed programs come out of this appropriation? There are arguments on both sides.

The main reason to use existing Title I funds to pay for these programs is that Title I funding has not improved the achievement of the target population of students.[43] Why not reallocate the money to more promising uses? The complication is that, contrary to the specific provisions of the legislation, federal Title I funding may not have brought about a long-term increase in the resources used to educate disadvantaged children. Although an increase in Title I funds allocated to a district does initially raise the district's instructional spending, the increase almost entirely disappears after three years.[44] In other words, the Title I funds end up paying for core expenses, such as teacher salaries and professional development, that otherwise would have been paid for with local or state tax revenue.

How can federal Title I funds end up replacing local and state education funding when the ESEA legislation explicitly prohibits such substitution? Let us consider the example of Central City, an urban district in which all schools are eligible for Title I funds because they serve high concentrations of low-income students. Suppose in 1992 the average spending per student in Central City's schools is $6,000, of which $1,000 is Title I funds. In 1993 Central City receives an increase in Title I funding of $500 per student because the newly available 1990 census shows that the number of low-income students in Central City has grown markedly. In accordance with the law, Central City increases per student funding for

the 1993 school year by $500, to a total of $6,500. Over the next several years, however, the purchasing power of the $6,500 is eroded by inflation. To maintain the ability of its schools to purchase the goods and services that they had purchased in 1993, the city council would have had to increase local funding. But facing strong pressures from voters to keep property taxes in check, it does not do so. So by 1995, the real purchasing power of the $6,500 is no greater than that of the $6,000 per student that the district spent in 1992. In effect, the increase in Title I funding has allowed the district over a several-year period to avoid the unpopular tax increase that would have been necessary to keep real per student spending (that is, net of inflation) constant.[45]

If Title I funds used by a district to fund core educational activities were withdrawn, the district would face a fiscal crisis. It would need either to raise taxes to generate more revenue or to reduce spending by eliminating professional development or by laying off teachers and increasing class sizes. Districts under such fiscal pressure would hardly respond favorably to invitations to compete for matching grants for interdistrict choice programs or programs to increase high school graduation rates.

For these reasons, I recommend that federal funds for these programs be new money, added to the federal education budget. Additional funding would address the frequent criticism that NCLB is a laundry list of new unfunded mandates. Districts could use their Title I money to pay for their share of the cost of competitive matching grants.

Limitations and Strengths of the Recommendations

My recommendations for changes in accountability and incentives seem far removed from the classrooms where teaching and learning take place. The proposals to build instructional capacity focus more directly on teaching and learning, but even they do not include a single direct federal program, such as a $5,000 annual salary bonus to skilled teachers who agree to work in high-poverty schools. Why such an indirect federal role? The answer has three parts.

First, the precise design of incentives to attract teachers and principals to high-poverty schools must be negotiated locally. Local circumstances vary far too widely for the federal government to propose a program of fine-grained incentives or resource packages that would consistently improve the quality of education in high-poverty schools. Perhaps when more is known about the effects of locally designed incentive programs, a larger, more focused federal program to improve instruction in high-poverty schools would be appropriate. At this point, however, federal policymakers simply do not have the knowledge base they need to justify a larger direct role.

Second, states and districts are much more likely to embrace initiatives if they are homegrown. More such initiatives are springing up, and the proposed matching grant program would further stimulate growth. The challenge now is to learn which initiatives make a difference to children in high-poverty schools.

Third, NCLB now hampers local efforts to attract and retain talented teachers and administrators in high-poverty schools, especially those serving a racially and ethnically diverse student body. Such schools cannot meet the adequate yearly progress provisions of current law even if they substantially improve students' performances, and the fear of

being tarred as working in a failing school discourages talented educators from teaching where they are most needed.

In summary, the federal actions proposed here would strengthen all three legs on which successful standards-based reforms rest: accountability, incentives, and capacity. The proposals would improve the incentives that educators face and provide better benchmarks against which to judge the performances of individual schools and the value of new initiatives. Encouraging states to align high school graduation requirements with the demands of postsecondary education and work should reduce the disjuncture between high schools and the colleges and workplaces where students go after they graduate. Helping states develop interdistrict choice programs could bring to life a critical provision of NCLB, namely, that low-income children attending poorly performing schools should be able to move to better schools.

Finally, providing funds for states and districts to develop initiatives to improve teaching in high-poverty schools and raise the high school graduation rates of low-income youth could, if accompanied by a requirement for rigorous evaluations, increase understanding about how to solve the nation's most pressing educational problem. They would be a wise investment in the nation's future.

Last Words

Beginning with the Elementary and Secondary Education Act of 1965, a major focus of federal education policy has been improving the education of disadvantaged children. No Child Left Behind is the latest federal effort to reach the goal of equal educational opportunity. The new law is not without its strengths—most important, its focus on improving outcomes for children who have historically been poorly served by American schools. As is inevitable in such pathbreaking legislation, the current version of NCLB has many flaws. My proposals would increase the likelihood that a reauthorized NCLB would bring the nation closer to fulfilling the promise of equality of educational opportunity.

Notes

1. Data are from the Current Population Survey and were taken from the Economic Policy Institute Data Zone, www.epinet.org/datazone/05/wagebyed_a.xls.

2. Richard J. Murnane and others, "How Important Are the Cognitive Skills of Teenagers in Predicting Subsequent Earnings?" *Journal of Policy Analysis and Management* 19, no. 4 (Fall 2000): 547–68.

3. Richard J. Murnane, John B. Willett, and Frank Levy, "The Growing Importance of Cognitive Skills," *Review of Economics and Statistics* 77, no. 2 (May 1995): 251–66.

4. National Center for Education Statistics, National Assessment of Educational Progress (NAEP) 2005 Mathematics Assessment (U.S. Department of Education, Institute of Education Sciences).

5. Robert Balfanz and Nettie Legters, "Locating the Dropout Crisis—Which High Schools Produce the Nation's Dropouts? Where Are They Located? Who Attends Them?" (Johns Hopkins University, September 2004), www.csos.jhu.edu/tdhs/rsch/Locating_Dropouts.pdf.

6. For example, 16 percent of public school students in Boston have limited English proficiency, compared with 5 percent of students statewide (http://profiles.doe.mass.edu/home.asp?mode=o&so=-&ot=5&o=164&view=enr).

7. This description of standards-based educational reforms is taken from Frank Levy and Richard J. Murnane, *The New Division of Labor: How Computers Are Creating the Next Job Market* (Princeton University Press, 2004), pp. 134–35.

8. See Center on Education Policy, *Title I Funds: Who's Gaining, Who's Losing and Why* (Washington, 2004), www.cep-dc.org/pubs/TitleIfunds15June2004/TitleIfunds15June2004.pdf.

9. Robert L. Linn, "Accountability: Responsibility and Reasonable Expectations," *Educational Researcher* 32, no. 7 (October 2003): 7.

10. For a discussion of the difficulties in getting the incentives right in accountability systems and the consequences of not doing so, see Helen F. Ladd and Randall P. Walsh, "Implementing Value-Added Measures of School Effectiveness: Getting the Incentives Right," *Economics of Education Review* 21, no. 1 (February 2002): 1–17.

11. Robert L. Linn, "Fixing the NCLB Accountability System," Policy Brief 8 (Los Angeles, Calif.: Center for Research on Evaluation, Standards, and Student Testing, Summer 2005).

12. Organization for Economic Cooperation and Development, "Education at a Glance: Highlights" (Paris, 2006), p. 10, www.oecd.org/dataoecd/44/35/37376068.pdf, p. 10.

13. Robert Linn is distinguished professor emeritus of education at the University of Colorado at Boulder. In this section, the ideas for revising the adequate yearly progress formula are taken from Robert L. Linn, "Toward a More Effective Definition of Adequate Yearly Progress," paper prepared for the Measurement and Accountability Roundtable sponsored by the Chief Justice Earl Warren Institute on Race, Ethnicity and Diversity, Washington, November 16–17, 2006.

14. Thomas J. Kane and Douglas O. Staiger, "Unintended Consequences of Racial Subgroup Rules," in *No Child Left Behind? The Politics and Practice of Accountability*, edited by Paul E. Peterson and Martin R.

West (Brookings, 2003), pp. 152–76. As these authors explain, the greater difficulties that schools with heterogeneous student populations face in meeting adequate yearly progress stem from the instability of statistics based on small numbers of scores.

15. For a discussion of methods of using growth in student achievement to measure adequate yearly progress, see Martin R.West, "No Child Left Behind: How to Give It a Passing Grade," Policy Brief 149 (Brookings, December 2005).

16. Christina A. Samuels and Michelle R. Davis, "2 States Selected for 'Growth Model' Pilot," *Education Week* 25, no. 38 (May 24, 2006): 27–28.

17. The National Governors' Association (NGA) provides a brief description of the Graduation Counts Compact at www.nga.org/Files/pdf/0507GRADCOMPACT.pdf (accessed December 19, 2006). According to the document on this website, states have agreed to "take steps to implement a standard, four-year adjusted cohort graduation rate. States agree to calculate the graduation rate by dividing the number of on-time graduates in a given year by the number of first-time entering ninth graders four years earlier. Graduates are those receiving a high school diploma. The denominator can be adjusted for transfers in and out of the system and data systems will ideally track individual students with a longitudinal student unit record data system. Special education students and recent immigrants with limited English proficiency can be assigned to different cohorts to allow them more time to graduate."

18. Lynn Olson, "Number of Graduation Exams Required by States Levels Off," *Education Week* 26, no. 1 (August 30, 2006): 28, 32.

19. The American Diploma Project, *Ready or Not: Creating a High School Diploma That Counts*, executive summary, p. 2, www.achieve.org/node/552.

20. For a discussion of the reason why these skills are increasingly important in workplaces full of computers, see Levy and Murnane, *The New Division of Labor* (see note 7).

21. James J. Kemple, *Career Academies: Impacts on Labor Market Outcomes and Educational Attainment* (New York: MDRC, March 2004).

22. For a discussion of the standard-setting collaborations among states taking place under the auspices of Achieve, see *Closing the Expectations Gap 2006* (February 2006). In its September 2006 electronic newsletter, *Perspectives,* Achieve reported that the number of states participating in the American Diploma Project had grown to twenty-five.

23. Sean Cavanagh, "NAEP Governing Board Gives Nod to More Complex 12th Grade Math," *Education Week* 26, no. 1 (August 30, 2006): 9.

24. This section draws heavily from *12th Grade Student Achievement in America: A New Vision for NAEP*, a Report to the National Assessment Governing Board, National Commission on NAEP 12th Grade Assessment and Reporting (March 5, 2004).

25. Daniel M. Koretz, "Limitations in the Use of Achievement Tests as Measures of Educators' Productivity," *Journal of Human Resources* 37, no. 4 (Autumn 2002): 752–77.

26. While the law specifies that school districts must create transfer options for students in schools that do not make adequate yearly progress for two years in a row, to date this provision has rarely been enforced.

27. Goodwin Liu and William L. Taylor, "School Choice to Achieve Desegregation," *Fordham Law Review* 74, no. 2 (November 2005): 791–823.

28. Joshua D. Angrist and Kevin Lang, "How Important Are Classroom Peer Effects? Evidence from Boston's Metco Program," *American Economic Review* 94, no. 5 (December 2004): 1613–34.

29. See Liu and Taylor, "School Choice to Achieve Desegregation" (see note 27) for a description of this evidence.

30. See, for example, Steven G. Rivkin, Eric A. Hanushek, and John F. Kain, "Teachers, Schools, and Academic Achievement," *Econometrica* 73, no. 2 (2005): 417–58.

31. Paul T. Decker, Daniel P. Mayer, and Steven Glazerman, *The Effects of Teach for America on Students: Findings from a National Evaluation* (Mathematica Policy Research, June 2004).

32. Kenneth K. Wong and Francis X. Shen, "Do School District Takeovers Work?" *State Education Standard* (National Association of State Boards of Education) (Spring 2002): 19–23.

33. Lynn Olson, "Financial Evolution," *Education Week* 24, no. 17 (January 6, 2005): 8–12, 14.

34. Cynthia Prince, "Higher Pay in Hard-to-Staff Schools: The Case for Financial Incentives" (Arlington, Va.: American Association of School Administrators, June 2002), www.aasa.org/files/PDFs/Publications/higher_pay.pdf.

35. Learning First Alliance, "A Shared Responsibility: Staffing All High-Poverty, Low-Performing Schools with Effective Teachers and Administrators" (May 2005), p. 6, www.okea.org/NBCTSummit/LFAFinalPDF.pdf. In addition to initiatives that focus specifically on improving the quality of instruction in high-poverty schools, there is a growing interest in basing teachers' pay, at least in part, on evidence of students' test score gains. See, for example, Jennifer Azordegan and others, "Diversifying Teacher Compensation," issue paper (Education Commission of the States, December 2005). A critical question is how particular performance-based pay plans would influence the relative attractiveness of teaching in high-poverty schools.

36. See Gary Orfield, ed., *Dropouts in America: Confronting the Graduation Rate Crisis* (Harvard Education Press, 2004).

37. This list is taken from Janet Quint, *Meeting Five Critical Challenges of High School Reform* (New York: MDRC, May 2006).

38. The Department of Health and Human Services' policy was a response to Section 1115 of the Social Security Act, which allowed the federal government to grant waivers from provisions of the Aid to Families with Dependent Children law to states that wanted to test new welfare reform provisions. One condition for a waiver was that the state commission a rigorous evaluation of the consequences of the trial provisions. See Judith M. Gueron and Edward Pauly, *From Welfare to Work* (New York: Russell Sage, 1991); and Judith M. Gueron and Gayle Hamilton, "The Role of Education and Training in Welfare Reform," Policy Brief (New York: MDRC, 2002).

39. For an example of a high-quality random assignment evaluation of a program to improve high school education, see James J. Kemple, *Career Academies: Impacts on Labor Market Outcomes and Educational Attainment* (New York: MDRC, March 2004).

40. The estimated cost figures for the proposals to increase high school graduation rates are taken from Adria Steinberg, Cassius Johnson, and Hilary Pennington, *Addressing America's Dropout Challenge* (Center for American Progress and Jobs for the Future, November 2006). I also draw heavily on this document for ideas about the design of programs to increase high school graduation rates.

41. This figure includes only the suggested annual increase of $25 million in grants to states to improve data systems. It does not include the $25 million currently allocated to such grants.

42. The $12.7 billion for Title IA of ESEA is the recommendation of the Senate Committee for 2007, as reported on the Department of Education's website: www.ed.gov/about/overview/budget/budget07/07action.xls.

43. H. Wilbert and M. Van Der Klaauw, "Breaking the Link between Poverty and Low Student Achievement: An Evaluation of Title 1," *Journal of Econometrics* (forthcoming 2007).

44. Nora Gordon, "Do Federal Grants Boost School Spending? Evidence from Title I," *Journal of Public Economics* 88, nos.9-10 (2004): 1771–92.

45. The argument in this paragraph is based on Gordon, "Do Federal Grants Boost School Spending?" (see note 44).