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ABSTRACT

This report summarizes changes to existing federal education programs contained in the Improving America's Schools Act, the Goals 2000: Educate America Act, and the School-to-Work Opportunities Act. The publication looks at various programs that serve the broad educational priorities set forth in the Department of Education's Strategic Plan. The findings are grouped around a series of 11 questions such as the following: How well are students doing? Are federal regulation programs helping to prepare children for school? Are federal programs helping states develop and implement standards? Are federal programs contributing to greater choice in public schools? Are federal laws promoting flexibility and accountability for results? The report concludes that reform is headed in the right direction, though states are still in the process of implementing reforms. Even though federal programs supported and stimulated state-based reform and states have made significant progress in developing content standards, progress is considerably slower with respect to developing performance standards and aligned assessments. Based on the lack of evidence of when states have benchmarked standards against outside criteria, there is variability in the rigor of standards. The findings suggest that the reform efforts are producing changes in classrooms, with students making significant progress since the 1994 reauthorization. (RJM)

FEDERAL *Education* LEGISLATION *Enacted* IN 1994

An Evaluation of Implementation and Impact

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Federal Education Legislation Enacted in 1994

An Evaluation of Implementation and Impact

U.S. Department of Education
Office of the Under Secretary
Planning and Evaluation Service

APRIL 1999

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April 8, 1999

Honorable William F. Goodling
Chairman
Committee on Education and the Workforce
House of Representatives
Washington, DC 20510

Dear William:

Enclosed is the final report Federal Education Legislation Enacted in 19947 An Evaluation of Implementation and Impact, which is submitted pursuant to Section 14701 of Title XIV of the reauthorized Elementary and Secondary Education Act (ESEA). In responding to Congress' mandate, this report summarizes changes to existing federal education programs contained in the Improving America's Schools Act, the Goals 2000: Educate America Act, and the School-to-Work Opportunities Act.

The evaluations contained in this report benefited from the involvement of an independent panel composed of representatives of state and local education agencies and private schools, school-level staff, parent representatives, education researchers, and policy experts. The Panel's own report, Measured Progress: The Report of the Independent Review Panel, is being submitted to Congress simultaneously with this report. It comments on the recently released report Promising Results, Continuing Challenges: Findings from the National Assessment of Title I. Panel members have defined issues for evaluation of the programs and participated in reviews of study plans, data analysis, and draft text for both reports.

We hope that this report will be of use to you and your staff. If you have any questions about the report, please contact Alan Ginsburg, Director of the Planning and Evaluation Service, at (202) 401-3132.

Yours sincerely,

Richard W. Riley

Enclosure

Our mission is to ensure equal access to education and to promote educational excellence throughout the Nation.

This work is dedicated to the memory of our late friend and colleague, Ed Reidy. A member of the Independent Review Panel since its inception, Ed shared his knowledge and insights about high-quality, equitable schooling throughout our deliberations. His memory continues to shape our thinking and actions toward improving education for the nation's children.

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EXECUTIVE SUMMARY

Introduction

The education legislation passed in 1994—the Improving America's School Act, which reauthorized the Elementary and Secondary Education Act (ESEA), the Goals 2000: Educate America Act, and the School-to-Work Opportunities Act—reflects the federal government's traditional role in helping all students, particularly those at risk of school failure, to reach challenging standards, and in supporting state and local efforts to provide students with a high-quality education. In FY 1999, Congress appropriated more than $14 billion for programs authorized under the 1994 legislation.

What Was Accomplished in the 1994 Legislation?

The 1994 legislation fundamentally changed the direction of federal education programs. Federal programs shifted to stimulate and support state standards-driven reform. The idea that all children can succeed to high standards replaced the notion that a remedial education was good enough for some children. Flexibility increased and federal program integration with the regular education program improved. A new policy framework designed to propel the country toward reaching the National Education Goals informed the development of ESEA, Goals 2000, and the School-to-Work Act:

- High standards for all children—with the elements of education aligned, so that everything is working together to help all students reach those standards;
- A focus on teaching and learning;
- Flexibility to stimulate local school-based and district initiatives, coupled with responsibility and accountability for student performance; and
- Links among schools, parents, and communities.

Principles for the Federal Role

In elementary and secondary education, the federal government works with states, school systems, and communities to support its dual mission of ensuring equity and excellence in schooling for all students. Some of its programs are intended to target resources to areas where educational needs are the greatest; others are designed to leverage support for school improvement overall.

Goals 2000 legislation and reauthorization of the ESEA in 1994 introduced a new federal approach built around a framework of state standards-driven reform to promote equity and excellence. It was envisioned that federal resources would help underwrite the development and implementation of challenging state standards for all children. State standards would focus federal, state, and local efforts to work together to improve teaching and learning. New and reauthorized federal programs would provide support for leadership, resources, and assistance to improve schools through professional development of teachers, access to new technology, and resources for a safe climate for learning. Federal programs would provide flexibility and increase public school choice to stimulate local initiatives. Programs would couple increased flexibility with responsibility for student performance.

The Goals 2000 legislation and ESEA reauthorization intended that federal programs support and stimulate state and local reform efforts, consistent with the national purposes of the programs authorized. Some states were at the forefront of reforming their educational systems and further advanced than federal programs; others had yet to begin. Federally supported efforts were to help underwrite and be well integrated into the reforms of states and local school districts. Distinctions between federal support and the efforts to which federal programs contributed were blurred. At the same time, the passage of the Government Performance and Results Act in 1993 called for heightened attention to analyzing and reporting on individual program impacts.

Analytic Approach

In reauthorization, Congress mandated a national assessment of Title I and an evaluation of the impact of federal programs on state and local reforms in the reauthorization of ESEA. The Department's Planning and Evaluation Service approached the task of assessing the implementation and impact of the programs legislated in 1994 by grouping programs into the two broad purposes: (1) strengthening the effectiveness and capacity of the elementary and secondary educational system and (2) improving education for special-need populations. While these twin purposes of excellence and equity are inextricably linked, the Department's evaluations reported separately on the impact of the legislation in building capacity in (1) all federal programs included in ESEA, Goals 2000, and School-to-Work legislation and (2) in Title I specifically. This report on the impact of federal education legislation enacted in 1994 includes Title I among the other federal elementary and secondary programs that it treats. The report on Title I, *Promising Results, Continuing Challenges: The Final Report of the National Assessment of Title I*, focuses in depth on that program and its components. The two reports are complementary analyses, and both benefited from the guidance of a congressionally mandated Independent Review Panel.

This report looks across the various programs that serve the broad educational priorities set forth in the Department of Education's *Strategic Plan*. The priority areas in which the federal government works with states, districts, and schools are (1) enabling young children to enter school ready to learn; (2) adopting high and challenging standards for school-age children; (3) providing skilled teachers, a safe and drug-free environment in which to learn, and advanced technology so that students can achieve to those standards; and (4) preparing young adults for the world of work. These broad educational priority areas are also reflected in the Department of Education's *Strategic Plan.*

Within these broad priority areas, programs are evaluated in terms of the following three questions:

- How well are federal programs achieving their desired outcomes?
- Are programs being effectively implemented?
- Do programs demonstrate sound performance accountability?

In reviewing the evaluation results, it is important to remember that the federal effort in elementary and secondary education contributes to and is influenced by broader reforms in which it plays a small but strategic part. As has been shown in earlier evaluations, federal programs do not and should not operate in isolation. The state and local investment in education is much larger than that of the federal government. The 1994 legislation recognized the fundamental responsibility of states and local school systems to provide a high-quality education to all children by calling for a partnership in which the federal government contributed resources, leadership, and assistance. For these reasons, it is impossible

to disentangle the impact of federal programs from the impact of the state and local reform efforts that the federal programs are designed to support.

Key Findings

Based on available evidence from evaluations of the programs included in the 1994 ESEA Improving America's Schools Act, Goals 2000, and School-to-Work legislation, this report finds that:

Reform is headed in the right direction, but states are still in the process of implementing reforms. The rapid development of statewide academic standards is unprecedented in the United States, and awareness of the need to change practice to support standards is strong across states, districts, and schools. Federal programs have been a major force in supporting and stimulating state-based reform. However, implementing standards-driven reform at the school and classroom levels is a much more difficult and long-term effort.

States have made significant progress in developing content standards, but progress is considerably slower with respect to developing performance standards and aligned assessments. Variability in the rigor of standards is a concern, given the lack of evidence when states have benchmarked standards against outside criteria, including the National Assessment of Educational Progress (NAEP).

The impact of standards-based reform is only beginning to be seen, as evidenced by the findings presented in various chapters of this report.

How Well Are Students Doing? Are Key Outcomes Improving?

The reforms begun under ESEA, Goals 2000, and the School-to-Work Act have begun to produce changes in the nation's classrooms. Data from the NAEP and two international assessments clearly indicate that these changes are working in some subject areas.

Overall, our nation's students have made significant progress since the 1994 reauthorization. The percentage of all students performing at or above the basic achievement level has improved for most grade levels in reading and mathematics. However, in comparison with their international counterparts, U.S. students' standing in core subjects declines from among the highest in the world at the fourth grade to among the lowest at the twelfth grade. Exhibit 1 displays U.S. students' National Report Card on progress in core subjects since 1994 (or in some cases 1992, if that was the most recent assessment).

Exhibit 1
National Report Card[1]

	Percentage of Students Scoring At or Above the Basic Level on the Most Recent NAEP Test	Change Since Previous NAEP Assessment[a]	U.S. Performance Compared with International Average on Latest Assessment
4TH Grade			
1998 Reading	62%	⇔	(1992) Above Average
1996 Math	64%	⇑ (+5%)	(1995) Above Average
1996 Science	67%	NA	(1995) Above Average
8TH Grade			
1998 Reading	74%	⇑ (+4%)	(1992) Above Average
1996 Math	62%	⇑ (+4%)	(1995) Below Average
1996 Science	61%	NA	(1995) Above Average
12TH Grade			
1998 Reading	77%	⇑ (+2%)	No Data
1996 Math	69%	⇑ (+5%)	(1995) Below Average
1996 Science	57%	NA	(1995) Below Average

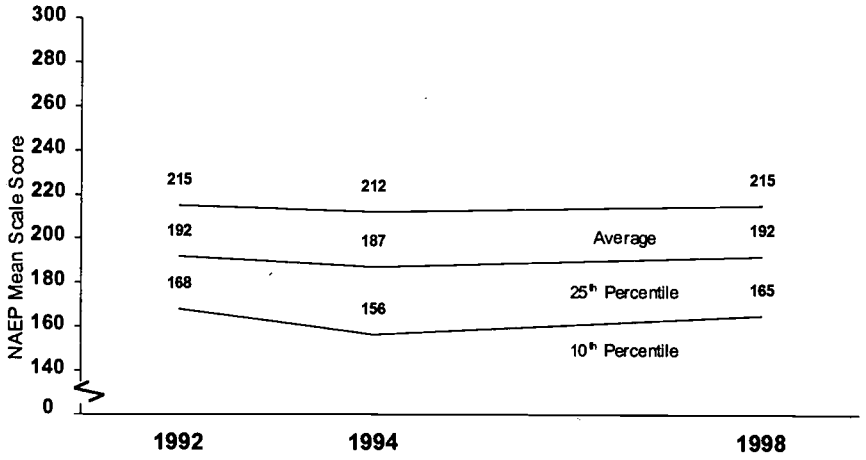
Sources: National Assessment of Educational Progress (Main NAEP), 1996 and 1998; Third International Mathematics and Science Study (TIMSS); IEA Reading Literacy Study.

[a] Only statistically significant differences are reported.

Reading: A long-term view of reading achievement shows that scores on the trend National Assessment of Educational Progress (NAEP) have improved slightly over the past two decades for 9- and 13-year-olds, and remained stable for 17-year-olds. In the short term, the percentage of fourth-graders scoring at or above the basic achievement level on main NAEP remained stable between 1994 and 1998, while eighth- and twelfth-graders' scores increased.

In addition to examining scores for all students, it is also important to examine the progress of those students most at risk of school failure, the target population for Title I. Exhibit 2 shows that the reading scores of fourth-grade students who scored in the lowest percentiles have improved significantly since 1994, after dropping between 1992 and 1994.

EXHIBIT 2
NAEP MAIN READING ASSESSMENT
SCALE SCORES OF PUBLIC SCHOOL FOURTH-GRADERS
BY PERFORMANCE PERCENTILE, 1992, 1994, AND 1998



Source: National Assessment of Educational Progress (Main NAEP, 1992-1998).

Mathematics: A long-term view of mathematics achievement shows that 9-, 13-, and 17-year-olds' scores on the trend NAEP assessment have improved over the past two decades, with 9-year-olds making the largest improvements. In the short term, the percentage of eighth-graders scoring at or above the basic achievement level on main NAEP increased between the two most recent assessments (1992 and 1996).

Course-Taking: Students are taking more rigorous courses, and the percentage of high school students taking challenging math and science courses such as geometry, calculus, and chemistry has increased throughout the decade for all racial and ethnic groups. Since 1990, an increasing proportion of eleventh- and twelfth-grade students have been taking Advanced Placement courses and successfully passing them.

High School Completion: There has been a small increase in the high school completion rates in the past two decades. The high school completion rate of 18- to 24-year-olds hovered around 84 percent between 1972 and 1983 and then in 1994 increased to 86 percent, where it has remained since.

Drug Use: Drug use is declining but remains a concern. In 1998, after six years of steady increases in the use of illicit drugs, use among secondary school students is down, as shown in Exhibit 2.15.[2] This downturn represents the second year of decreases for eighth-graders and the first for tenth- and twelfth-graders since their low points early in the decade.

Are Federal Education Programs Helping to Prepare Children for School?

Progress to date. Administered through the U.S. Department of Health and Human Services, the Head Start program represents the federal government's largest investment in early childhood services, serving almost 800,000 children in 1998. Title I, Part A, which serves about 260,000 preschool-age children, is the largest of the Department's early childhood efforts, yet little data exist on the quality of preschool services funded under the program or program performance. Data are available on the progress of the Even Start Family Literacy Program. Evaluations of the Even Start program indicate that this program is enhancing children's language development and readiness for school. Findings from these evaluations include these:

Program Indicator: The projects will continue to recruit low-income, disadvantaged families with low literacy levels. The Even Start Family Literacy Program serves economically and educationally disadvantaged families and their children.
Progress to Date: The second national evaluation found that at least 90 percent of families participating in 1996-97 had incomes at or below the federal poverty level. Eighty-five percent of adults who enrolled in 1996-97 had not earned a high school diploma or GED.

Program Indicator: By fall 2001, 60 percent of Even Start children will achieve significant gains on measures of language development and reading readiness.
Progress to Date: In 1995-96, 50 percent of children in the second national evaluation of Even Start achieved moderate to large gains on a test of language development. Children who participate in Even Start for at least one year make more progress on measures of school readiness and language development than normal development would suggest.

Program Indicator: Increasing percentages of parents will show significant improvement on measures of parenting skills, home environment, and expectations for their children.
Progress to Date: Parents also showed moderate gains on a measure of the home environment for literacy, gains not found in a control group of parents in a study of the Comprehensive Child Development Program.

Program Indicator: By fall 2001, half of projects will offer at least 60 hours of adult education per month, 20 hours of parenting education per month, and 65 hours of early childhood education per month.
Progress to Date: On average, Even Start projects have increased the amount of instruction they have offered over time. However, only about 25 percent of projects meet or exceed the Department's performance indicator for the number of service hours offered in the three core instructional components.

Program Indicator: By fall 2001, at least 60 percent of new families will stay in the program for more than one year.
Progress to Date: Of new families entering in 1995-96, 41 percent stayed for more than one year. Almost 5 percent met family-defined goals and 6 percent moved out of the area.

Program Indicator: An increasing percentage of preschool-age homeless children will enroll in preschool programs.
Progress to Date: For the Education of Homeless Children and Youth program, preliminary data from a 1998 study suggest that access to preschool programs among homeless children may be improving.

Options for strengthening the programs.

- **Clarify the objectives of the programs by helping to define school readiness.** Determination of whether preschool programs are meeting their objectives and attempts to hold programs accountable are complicated by the fact that there are no consistent standards on school readiness at the national or state levels. Legislation could help define school readiness.

- **Improve the intensity and retention in Even Start through the use of common indicators.** Although earlier evaluations of Even Start provided evidence that more-intense programs led to greater educational gains for children and their parents, few projects offer an amount of service that might be expected to produce large literacy gains for families most in need. Projects face a trade-off between the number of families they can serve and the intensity of service they can offer to each family. In addition, only 41 percent of families who enrolled in 1995-96 remained in Even Start programs for more than a year (although almost 10 percent of families reported meeting their goals or moving as the reason for their departure). States could be required to assess the intensity of services and efforts to retain families through the use of common indicators.

- **Strengthen accountability by requiring preschool programs to report on a common core set of results-based indicators.** Even Start's national evaluation provides adequate performance data, but it is unclear how the states use performance information to hold projects accountable. States could use the results-based indicators of quality they are required to develop under recent amendments to the program to hold projects accountable. Title I preschool has no performance accountability. More information is needed on the quality and outcomes of preschool programs funded under Title I, Part A. Title I preschool programs could report on the same results-based indicators required of Even Start programs. These could include child-based indicators (such as reading readiness) and, where appropriate, adult-based indicators (such as receipt of a high school diploma or GED).

Are Federal Programs Helping States Develop and Implement Standards?

Progress to date. ESEA and Goals 2000 have been essential in spurring standards-based reform in local schools and communities. Almost half of all school districts nationwide and more than 80 percent of poor districts reported that Title I is "driving standards-based reform in the district as a whole." According to a recent study by the General Accounting Office (GAO), states report that Goals 2000 has been a significant factor in promoting their education reform efforts. States have made substantial progress developing state content standards. Currently, 48 states, Puerto Rico, and the District of Columbia have completed the development of state content standards.

- Twenty states and Puerto Rico have completed the development of student performance standards in at least reading/language arts and mathematics.

> **Program Indicator.** By 2000-01, all states will have assessments aligned with content and performance standards for core subjects.
> **Progress to Date:** Fourteen states and Puerto Rico report that they have assessments aligned to state content standards in place.

- Six states have policies that link or align teacher professional development to state content standards, and 11 states are developing such policies.

Although there has been significant progress in the development of content standards, a number of states did not meet the 1997-98 deadline for completion of content and performance standards outlined in the 1994 legislation. In many cases, the reason for this delay is that states are developing their performance standards in tandem with their final assessment. Many states are now operating under a waiver from the U.S. Department of Education. All states have adopted a timeline that will produce assessments aligned with content and performance standards by 2000-01.

Options for strengthening the programs. Federal efforts to support standards-based reform need to be strengthened in at least four key areas:

- **Ensure the rigor of state standards.** Independent studies have revealed different and sometimes contradictory findings on the quality and rigor of state standards. Differences in student achievement on the National Assessment of Educational Progress (NAEP) and student performance on state assessments suggest wide variation in state standards.

- **Ensure alignment of standards and assessments.** States report needing "a great deal" more assistance in the development of aligned assessments and in linking those assessments to accountability systems.

- **Include all students, particularly limited-English-proficient and special education students, in assessments.** Guidelines and criteria for the inclusion of LEP students are inconsistent across and within states.

- **Align all aspects of educational systems with standards.** Standards-based reform requires systemic change, including retraining teachers, aligning curriculum and classroom practices with standards, involving families, and developing effective systems of holding schools and districts accountable for performance.

Are Federal Programs Supporting Effective Professional Development for Teachers?

Progress to date. Under the 1994 ESEA reauthorization and Goals 2000, Congress explicitly provided for programs intended to enhance teacher competence. The Eisenhower Program is the largest of these efforts. Professional development is an allowable activity under Titles I, VI, and VII, and varying portions of these funds are used to support professional development. However, little is known about the quality of the professional development activities supported by these programs, or about their outcomes or impact on teacher practice. Effective professional development is critical to helping the nation move toward the full implementation of standards in the classroom.

- A national survey of teachers shows that most do not yet think that they are fully equipped to implement standards. During the 1997-98 school year, only 36 percent of teachers of the core academic subjects said that they felt "very well prepared" to implement state or district standards.

Program Indicator: By 1998, over 50 percent of teachers participating in district-level or higher education Eisenhower-assisted professional development will participate in activities that are aligned with high standards.
Progress to Date: Half of teachers who participated in district-sponsored Eisenhower activities reported that the activities enhanced their ability to teach in ways consistent with state standards and curriculum frameworks.

Program Indicator: By 1998, over 50 percent of a sample of teachers participating in Eisenhower-assisted professional development will show evidence that participation has resulted in an improvement in their knowledge and skills.
Progress to Date: About two-thirds reported that those activities enhanced their knowledge and skills in instructional methods, and half reported that participation deepened their knowledge in mathematics and science. Now that the initial indicator goal has been met, future program activities could help teachers further deepen their knowledge and skills.

- The Eisenhower activities sponsored by institutions of higher education (IHEs) and nonprofit organizations (NPOs) are producing results comparable to exemplary professional development programs. Seventy-five percent of the participants in the Eisenhower activities sponsored by IHEs and NPOs reported that the activities deepened their content knowledge in mathematics and science.

- The goal of providing extended, in-depth learning for teachers as part of district-provided Eisenhower professional development has not yet been achieved. Results are more positive for professional development provided by institutions of higher education and nonprofit organizations.

- Eisenhower professional development activities are not especially targeted on teachers from high-poverty schools.

- The 1994 reauthorization required states to develop performance indicators for professional development. Thus far, only 30 states have done so for the Eisenhower program. The quality of these indicators is uneven.

Options for strengthening the programs. Federal efforts to improve the quality of our nation's teachers could consider the following options:

- **Emphasize professional development that focuses on subject matter content and ways to teach it.** This professional development could be provided in extended, intensive, collaborative, active learning opportunities.

- **Federal professional development programs could place a much greater emphasis on serving teachers who work in high-poverty schools** and teachers who would not necessarily volunteer to participate in professional development.

- **Strengthen state and local performance indicator reporting systems through technical assistance and increased resources.** The requirement that states and districts develop indicators has resulted in more and higher-quality indicators than other federal programs, but these indicators are still uneven.

- **Grantees could be required to use performance indicator data from their programs for both continuous improvement and accountability.**

Is the Safe and Drug-Free Schools and Communities Act Supporting Effective Prevention of School Drug Use and Violence?

Progress to date. The Safe and Drug-Free Schools and Communities Program is the primary source of federal funds to support school-based education to prevent drug use and violence. Annual surveys show that drug use among eighth-, tenth-, and twelfth-graders is declining after rising steadily in the early 1990s. Drug use in schools remains much lower than use in other locations.

Program Indicator: By 2001, rates of annual alcohol use in schools will decline to 4 percent for eighth-graders and 7 percent for tenth- and twelfth-graders, and rates of annual marijuana use in school for the same time period will decline to 3 percent, 9 percent, and 7 percent for eighth-, tenth-, and twelfth-graders.
Progress to Date: In 1996, annual alcohol use rates at school were 6 percent for eighth-graders, 9 percent for tenth-graders, and 8 percent for twelfth-graders. In 1996, rates of annual marijuana use at school were 6 percent for eighth-graders, 11 percent for tenth-graders, and 10 percent for twelfth-graders (for eighth- and tenth-graders, rates include other drugs in addition to marijuana).

- Crime in schools also has declined in recent years, and the rate of students experiencing serious violent crime remains much lower in schools than outside schools.

Program Indicator: By 2001, the proportion of high school students in a physical fight on school property will decrease to 12 percent and the annual rate of students aged 12 to 18 who report experiencing serious violent crime in schools or going to and from school will decrease to 8 per 1,000.
Progress to Date: In 1995, 16 percent of high school students were in a fight on school property; in 1995, 11 per 1,000 students aged 12 to 18 reported experiencing serious violent crime in school or going to and from school.

- Progress under the Safe and Drug-Free Communities and Schools Act has been harder to measure. A review of state goals and objectives for the program found that these goals were sometimes poorly articulated or that they lacked a data source or methodology for assessing outcomes.

- The Department recently established Principles of Effectiveness for the program that require districts to establish measurable goals and objectives, implement research-based programs, and evaluate programs regularly. An evaluation of state and local implementation of these principles will be completed in the spring of 1999.

- To target a greater percentage of program funds on high-quality programs in areas of significant need, the Department will expand National Programs activities in FY 1999 by investing more than $95 million in competitive grants designed to meet that goal. In this way, the Department seeks to focus limited resources on high-quality programs and enlarge the available pool of strategies of demonstrated effectiveness.

Options for strengthening the programs. Federal policymakers might consider balancing the flexibility of the SDFSCA with accountability for implementing strong programs and accountability for achieving results in the following ways:

- **Incorporate the Principles of Effectiveness**. This option would require grant recipients to use research-based prevention approaches; engage in coordinated, comprehensive planning; and use evaluation data for program planning and development.

- **Explore ways to target funds more effectively.** This option would support high-need areas and high-quality programming.

- **Encourage states and districts to move toward outcomes-based performance measurement** and better performance reporting.

- **Increase coordination within states** between the state education agencies and governors' programs.

Is Federal Support Strengthening Access to and Use of Technology to Support Learning?

Progress to date. Access to modern computers and the Internet is growing rapidly. The ratio of students to modern multimedia computers in the nation's classrooms was cut by almost half between 1997 and 1998.

Program Indicator: The ratio of students per modern multimedia computer in public schools will improve to 5 students per modern multimedia computer by the year 2000.
Progress to Date: The ratio of students per modern multimedia computer fell from 21:1 in 1997 to 14:1 in 1998.

- More than half of all public school classrooms have access to the Internet, compared with almost none in 1994.

Program Indicator: The percentage of public school instructional rooms connected to the Information Superhighway will increase from 14 percent in 1996 to 25 percent in 1998, and higher percentages thereafter.
Progress to Date: In 1994, 4 percent of public school classrooms had Internet access, compared with 51 percent in 1995.

- The "digital divide" between students in high- and low-poverty schools has been nearly eliminated in terms of access to instructional computers. Gaps remain in classroom access to modern multimedia computers, Internet access, and access outside school. For example, 76 percent of households earning over $75,000 in 1997 owned a computer, compared with less than 17 percent of households earning less than $20,000. However, these gaps are closing.

- Federal funds paid for a quarter of all computers received by schools last year. Federal funds paid for half of all new computers in high-poverty schools, and they paid for more computers in high-poverty schools than in low-poverty schools.

- Districts report that long-term district plans, such as the education technology plans required by the Technology Literacy Challenge Fund, are important influences on their educational technology activities.

- States and subgrantees vary widely in their allocation of the Technology Literacy Challenge Funds to high-need areas. Star Schools and Technology Innovation Challenge Grant programs are demonstrating effective uses of educational technology but are not providing clear federal leadership in developing the knowledge base.

- Many states and other grantees have not worked hard enough to evaluate the effectiveness of their programs. They also collect very different data, making it difficult to monitor performance and impact across districts and sites.

Options for strengthening the programs. Since the pioneering creation of the Star Schools program to provide national leadership in educational technology a decade ago, the context for federal policy in educational technology has changed in fundamental ways. This context includes rapidly growing and widespread access to computers and the emergence of the Internet, the E-rate, and a growing understanding of how these technologies can be used to improve teaching and learning. The following options could help ensure that this investment in technology works to increase equity and excellence in our nation's schools:

- **Focus the Technology Literacy Challenge Fund on professional development.** Given the rapid rate of growth in computers overall, increasing access through education programs is no longer as important as strengthening teachers' ability to effectively use these technologies to improve teaching and learning.

- **Target Technology Literacy Challenge Fund resources** to ensure that, in combination with state and local resources, high-poverty and high-need schools receive adequate resources to effectively use educational technology.

- **Clarify the purposes of the Technology Innovation Challenge Grants** as to whether they are simply a funding source for educational technology or are focused on developing the knowledge base and demonstrating strategies for effective use of educational technology. With the tremendous growth in technology access, the Department could launch rigorous evaluations of strategies that could optimize technology's potential to improve teaching and learning.

- **Adopt a uniform set of core performance indicators** in the legislation for states to use in preparing their technology performance reports for the Technology Literacy Challenge Fund, the Technology Innovation Challenge Grants, Star Schools, and other relevant programs.

Are Federal Programs Contributing to Greater Choice in Public Schools?

Progress to date. The federal government has promoted public school choice primarily by supporting the development and expansion of charter schools and magnet schools. On balance, both the Public Charter Schools Program (PCSP) and the Magnet Schools Assistance Program (MSAP) support the public school choice standards described in the report.

Charter Schools

- The Public Charter Schools Program (PCSP) has supported nearly three-fourths of the roughly 1,100 charter schools currently operating, and an even larger proportion of charter schools in the planning stages. PCSP funds represent about 6 percent of the total costs incurred by these schools.

Program Indicator: By the year 2002, there will be 3,000 charter schools in operation around the nation.
Progress to Date: In 1998, there were 1,100 charter schools in operation.

- Thirty-one states plus the District of Columbia and Puerto Rico received grants in 1998.

Program Indicator: By the year 2000, 40 states will have charter schools legislation.
Progress to Date: As of January 1999, 34 states (plus DC and Puerto Rico) had legislation authorizing charter schools.

- A lack of access to start-up funds continues to be the largest single barrier to the successful implementation of charter schools.

- Charter schools serve a demographic profile of students similar to those in public schools, although national averages mask significant state-by-state variability.

- It is too early to tell if student achievement is improving in charter schools, both because the research base is limited and the schools are young. State and district-level evaluations are another source of information about the achievement of students enrolled in charter schools, but so far, preliminary conclusions are mixed. These evaluations of the impact of charter schools on student achievement reveal the difficulty of collecting uniform, comparable student achievement data across schools.

Magnet Schools

- A 1996 evaluation found that about half of districts that received 1991-93 grants met their desegregation targets. Progress in achieving desegregation objectives is still unknown for the 1998 grantees; however, preliminary data show that these grantees have a greater ability to specify their desegregation objectives than the 1991-93 grantees.

Program Indicator: Targeted schools will *eliminate*, *reduce*, or *prevent* minority group isolation according to the desegregation objective they set for themselves.
Progress to Date: A comprehensive evaluation of the Magnet Schools Assistance Program (MSAP) is currently under way to provide information about the four MSAP purposes: reduce minority group isolation, contribute to systemic reform, offer innovative educational programs, and improve student performance.

Options for strengthening the programs.

Charter Schools

Although the 1998 reauthorization of the PCSP did address such important issues as flexibility and accountability, there are still several ways the PCSP can be strengthened through administrative means:

- **Increase federal PCSP support for states that target disadvantaged students.** The PCSP currently considers how states target educationally disadvantaged students when determining the grant awards, but the PCSP may want to direct more funds to those states that specifically target such students.

- **Ensure that charter schools receive equitable and sufficient funds.** A logical federal role may be to direct PCSP funds to those states that ensure that charter schools receive funding comparable to the funding for other public schools in the district or state.

Magnet Schools

Although information on the effectiveness of the MSAP is limited, the information in this report suggests several options for federal policymakers:

- **Clarify the kind of diversity the MSAP should address.** Clarification is needed about whether and how the purpose of the MSAP could be expanded to include reducing isolation of students from different ethnic and economic backgrounds (in addition to different racial backgrounds) in order to adapt to the context within which magnet schools are operating.

- **Improve the targeting of MSAP funds.** Consider a district's level or degree of minority group isolation as a selection criterion for MSAP grants.

- **Clarify congressional intent for the MSAP statute** in regard to whether the MSAP should aim to achieve districtwide desegregation, in addition to affecting individual magnet schools.

- **Clarify the role of innovative programs.** Congress may wish to consider ending this authority or using it as a research and development set-aside in which the new approaches to promoting diversity can be designed, evaluated, and emulated when appropriate.

- **Implement an information management system that could provide data regarding the overall progress of the MSAP grantees.** The MSAP should consider developing a system that could aggregate the progress reports of grantees and provide data on the program as a whole.

Is the School-To-Work Opportunities Act Helping Graduates Leave School Ready to Begin Careers or to Continue Their Studies?

Progress to date. The School-to-Work Opportunities Act (STWOA) provided venture capital to states and localities to help underwrite the initial costs of planning and establishing statewide systems for helping young people make more effective transitions between high school and careers or further education. To promote local experimentation, Congress gave states and localities significant discretion to design and implement school-to-work systems. The law was designed to end in 2001.

There is little existing research on the long-term effects of federal school-to-work programs. There is, however, a growing body of evidence of some positive early results.

- Participation in well-designed STW programs appears to increase students' academic focus and motivation. Studies have found that students in high-quality STW programs enroll in more college prep courses than their peers in the general curriculum do, particularly in advanced math and science courses.

Program Indicator: By fall 2000, the percentage of high school graduates from STW systems completing three years of math and three years of science will increase by 10 percent.
Progress to Date: Baseline data from an independent evaluation found that in 1996, 83 percent of high school seniors graduating from school-to-work systems completed three years of math, 73 percent completed three years of science, and 69 percent completed three years of math and science.

- An independent evaluation found evidence that increasing collaboration between employers and schools has been a particularly successful aspect of STW implementation. Employer involvement has steadily increased since the Act was passed.
- Participation in school-to-work activities is as common among high school seniors enrolled in college-preparatory curricula as among those who are not.
- Students give high marks to the STW activities, particularly those that afford them workplace experience and academic classes related to their career goals.
- One study of four programs found an increase in college attendance rates among those students initially identified as "non-college-bound."
- Students in high-quality STW programs enroll in more college prep courses than do their peers in the general curriculum.

Options for strengthening the programs. Federal funding for School-to-Work ends in 2001. In the relatively short period since School-to-Work began, however, obstacles to implementing effective STW programs have included (1) the complexity of the reforms and the limited and short-term nature of federal funding, (2) confusion about the definition of the target population, (3) lack of coordination with academic reforms, and (4) a trade-off between breadth and depth in programs. As the end of federal funding for STW nears, federal policymakers might consider ways to promote and sustain the following promising activities through the reauthorization of ESEA or other legislative vehicles:

- **Promotion of linkages between the academic standards movement and STW efforts**, through curricula that combine academic rigor with greater relevance to students' future plans;
- **Support for professional development** that can help teachers become more adept and comfortable with contextual teaching methods that strengthen the links between school and outside resources; and
- **Continued support for community-level partnerships** and institutions that connect young people with experiences outside the classroom.

Is the Department of Education Providing High-Quality Help and Guidance?

Progress to date. The 1994 legislation authorized four major field-based technical assistance programs, each designed to reach a slightly different audience and to address a different issue: (1) Comprehensive Regional Assistance Centers, (2) Eisenhower Regional Mathematics and Science Consortia, (3) Regional Technology in Education Consortia, and (4) Parent Information and Resource Centers. In addition, Title I established a system of state- and district-level school support teams designed to provide assistance to Title I schools.

- Evaluation and program performance data currently available show that technical assistance providers have reached a significant number of families, schools, and districts in their regions.

- Customer surveys suggest that the Department's technical assistance programs are providing valuable services to the field. Most direct recipients of technical assistance services report that they are satisfied with the quality and the usefulness of the assistance.

Program Indicator: At least 80 percent of teachers, and providers of professional development who participate in the consortia's technical assistance will report improvement in their practice.
Progress to Date: In a national evaluation of the Eisenhower Regional Mathematics and Science Education Consortia, nearly two-thirds of participants in selected professional development activities reported they had incorporated some new behavior into their jobs as a result of what they had learned.

- General surveys of states and district administrators suggest, however, that the Department's technical assistance services do not address all customers' needs and purposes, and that state and district staff often turn to other, more accessible, sources for help in implementing programs.

Options for strengthening the programs. The Department's current technical assistance programs could be integrated into a more coherent system with the following characteristics:

- **Focus the federal technical assistance system on those areas where providers offer unique expertise and where they can add the most value**. These areas include (1) the implementation of federal programs, (2) the development and implementation of performance indicator systems and continuous progress models, and (3) the neutral assessment of research-based comprehensive school reform models.

- **Integrate the Comprehensive Centers, Eisenhower Consortia, R*TEC, and PIRCs** into a system of regionally based comprehensive centers, complemented by national specialty centers.

- **In one or two pilot regions, test a range of options for integrating the Department's technical assistance programs**. These approaches include (1) allowing individual technical assistance providers or a consortium of providers to submit a consolidated application to operate the Comprehensive Center, the Eisenhower Consortium, the R*TEC, and the PIRCs that serve the region; (2) providing some additional funding to support the development of new models for collaboration; and (3) consolidating existing programs into a single omnibus center providing all services to the entire pilot region.

- **Create an electronic network that would disseminate products and information electronically** on behalf of all federal technical assistance programs. Modeled on, or embedded in, the ERIC system, this electronic network would provide users with access to products and materials developed by all of the Department's technical assistance providers, from a single point of entry.

- **Create a national dissemination system that would promote the adoption of high-quality, research-based, comprehensive school reform models.**

- **Deploy federal technical assistance services to complement existing state-level systems.** Federal technical assistance providers would (1) train state-level technical assistance providers in their particular areas of expertise; (2) train Title I school support teams and support their work with schools; and (3) provide consultation and expertise in evaluation, analysis of student performance data, and continuous improvement.

- **Target direct assistance to schools and districts to those with the highest numbers and percentages of children in poverty, and to areas where state capacity is low.**

Are Federal Laws Promoting Flexibility and Accountability for Results?

Progress to date. States, districts, and schools have begun to take advantage of the increased flexibility in the legislation to create learning environments that can help all students reach challenging academic standards. Several sources indicate that more—and probably sufficient—flexibility is now available and being used. Comparisons of Goals 2000 and ESEA Title VI underscore the importance of providing direction for the use of federal funds in conjunction with flexibility.

- The implementation of federal education programs ranging from Goals 2000 to the Technology Literacy Challenge Fund is being tied to state and local reform efforts; consolidated planning by states and districts is fostering better coordination with federal education programs.

- Relatively few waivers of federal requirements have been requested, even though waivers are available to states and districts through the Department or the Ed-Flex program. This finding suggests that federal education programs are sufficiently flexible.

- Only two of the programs authorized in 1994 require the use of performance measures for accountability. States have made considerable progress in implementing state content and performance standards required by ESEA Title I, although state accountability systems will remain incomplete until aligned assessments, which are required by 2000-01, are implemented. In general, accountability in the ESEA remains weak.

Options for strengthening the programs. Although the evidence suggests that significant flexibility is available to, and being taken advantage of by educators, the intended exchange of increased flexibility for increased accountability has not yet been fulfilled:

- States and districts need to further develop their capacity for innovation in order to take full advantage of available flexibility. The Department and states should try to ensure that the technical assistance needed by schools and districts to develop this capacity is available.

- The establishment of better accountability systems is critical to measure progress toward federal program goals and to inform decision-making at all levels.

- Accountability under Title I remains incomplete because of the transition period—until 2000-01—allowed by ESEA Title I for states to fully develop aligned accountability systems. Some states are still in the process of defining adequate yearly progress for districts and schools, and variation in definitions across states makes it difficult to hold districts and schools accountable for progress made using federal funds.

Conclusions

The concluding chapter considers the implication of the findings drawn from the preceding chapters according to the three organizing principles used throughout the report:

- How well are federal programs achieving their desired outcomes?

- Are programs being effectively implemented with respect to such issues as targeting to the populations in need, delivery of high-quality services, and coordination of services across programs?

- Do programs demonstrate sound performance accountability?

Implications of Findings on How Well Programs Are Achieving Their Desired Outcomes

- **Continue to support and accelerate the pace of standards-driven reform that states and local school districts are implementing.** The findings suggest that standards-driven reform should be given a chance to fully take hold while the nation continues to assess progress in student performance. At the same time, the pace of reform must accelerate if the achievement gap is to be significantly reduced for those students most at risk of school failure.

- **Reorient program implementation to focus more on results.** Many ESEA programs are demonstrating improvements in certain performance areas consistent with standards-driven reform, but continued improvements in performance are required if federal programs are to contribute to greater results.

- **Clarify current program objectives.** Some programs lack clarity of purpose concerning the expected outcomes of program resources, which hinders their ability to effectively focus on achieving clear outcomes.

Implications of Findings for the Quality of Program Implementation

- **Improve effective targeting of federal resources.** The federal government has a historic responsibility to help ensure adequate educational opportunities to students in highest- poverty communities, schools, and racial/ethnic population groups. Title I is the major program to reach these communities and populations, but a case can be made for other programs to also give priority to the neediest populations.

  Options for Consideration

  - Clarify provisions to target federal programs within states to the neediest populations, including high-poverty schools. Decide whether to give states discretion over program participation with appropriate performance accountability and reporting, or, instead, to target funds on federal priority populations.

  - Call on states to report publicly on how they distribute federal funds to schools serving high concentrations of low-income and other federally targeted students.

  - Create "Catch-up Consolidated Grants" focused on achieving high performance for high-poverty schools.

- **Effectively implement federal program services.** Programs that are not applying the best knowledge of promising and effective practices to their own projects are wasting taxpayer money and short-changing participants. While some progress in improving the quality of ESEA services is evident, serious implementation weaknesses remain.

  Options for Consideration

  - Adopt "Principles of Effectiveness" as an explicit legislative provision across all major federally funded programs. This action could help focus limited resources on high-quality programs and enlarge the available pool of strategies of demonstrated effectiveness.

  - Introduce competitive awards. To the degree that recipients of federal funds are assured automatic funding solely on the basis of need, the incentives for high project quality are diminished. Basing awards on the quality of the projects' proposals could enhance competition and produce better proposals. To help ensure that competitively awarded funds reach high-need areas, some funds might also be set aside for separate competitions for high-need areas, and by contingency funding of projects in which continuations depend on demonstrated progress.

- **Modernize the system of technical assistance.** Although the 1994 ESEA reauthorization consolidated some technical assistance authorities, the seamless network of support initially envisioned has yet to develop. Providers of federal assistance often remain isolated from each other and from the direct delivery of technical assistance by state or locally funded providers. However, new tools such as the Internet could make such a network possible.

Options for Consideration

- Support an integrated national electronic education network. A federally supported network would serve as an electronic resource center for sound education information. Specialty area clearinghouses, built around a state-of-the-art ERIC system, could support the provision of information electronically. The network could provide schools and school systems with productivity-enhancing tools. The network might also make it easier for the collaboration and information sharing that now take place within state electronic systems among universities, school administrators, teachers, and parents to occur nationally and regionally.

- Better integrate the Comprehensive Centers, the Eisenhower Consortia, and the R*TECS into a seamless system of regionally based comprehensive centers, complemented by national specialty centers linked to state and community providers. Under reauthorization, federal technical assistance centers should emphasize "training the trainer" models and work through state or local assistance collaboratives rather than directly provide assistance themselves. Furthermore, the Comprehensive Centers should focus directly on issues of federal program implementation, including performance measurement to support continuous progress, a core program component that is weak among most programs. Specialty Centers, designed to disseminate research-based instructional materials and reform models in priority areas such as mathematics and science, reading, and the uses of technology in instruction, would work nationally, including electronically, with one to two centers serving the entire country on a topical area.

- Support "Grants for Evaluating Model Effectiveness." Rigorous independent evaluations of models would provide objective information that would be disseminated through the electronic network and Comprehensive Centers. Competitive awards could be made to support independent testing of model approaches using evaluations that meet rigorous standards of quality.

- **Improve coordination across programs.** Legislation that is acceptable when looked at in isolation may not be optimal when all parts are combined and the aggregate effects are considered. Administrative burden accumulates, and the sheer number of pieces of legislation may unintentionally scatter efforts, confuse purposes, and fragment service delivery. Legislation may be improved by clarifying objectives and criteria for effective services.

Options for Consideration

- Programs that provide major support for professional development, including Eisenhower Professional Development, Goals 2000, and Innovative Educational Program Strategies (Title VI-A), all provide relatively broad assistance. In addition, the Technology Literacy Challenge Fund and Title VII professional development programs support professional development in areas of high need. Legislative provisions could improve coordination across these programs.

- Information technology programs, including four major elementary and secondary programs (the Technology Literacy Challenge Fund, Technology Innovation Challenge Grants, Star Schools, and the E-rate) and seven smaller authorities, all support the

expansion of technology in schools. Methods of improving coordination among technology programs should be considered.

  - Technical assistance is supported through various authorities with different foci, including assistance to parents, technology, math, and science. Coordination among technical assistance providers would improve their services.

- **Strengthen across-program coherence.** A number of programs with different purposes have common program components that would benefit from being made more coherent across programs. Two program components in particular should be reviewed:

  - Professional development provisions that could be made similar by incorporating common language that is consistent with high-quality practices, including professional development provided through programs such as Title I and Title VII.

  - Parental involvement provisions to incorporate a common set of policies and requirements for schools to develop a single set of parental policies and compacts to cover all ESEA programs that now have distinct parental involvement provisions.

Implications of Findings for Performance Accountability: Creating an Integrated Performance and Benchmarking System

Efforts are under way in several program offices of the Department of Education to consolidate data collections and to bring them on-line electronically. In addition, most states already provide the public with information about their public schools in the form of "school profiles" or "report cards;" however this information is rarely comparable from state to state. Several states are already developing statewide integrated data collection systems for their administration of federal and state programs, in such a way that schools and districts can compare themselves with others. Many are working toward the goal of a better-integrated performance and benchmarking data system. Such an **Integrated Performance and Benchmarking System** (IBPS) could enhance federal and state efforts by developing a set of mutually needed core measures and performance indicators, and could increase the compatibility of the data collection systems. The goals of an IPBS would be to:

- Make federal education data more coherent, timely, and comparable across units and over time;

- Increase the usefulness of federal data to states, districts, and the general public;

- Facilitate the development of annual school, state, and district report cards, that allow comparison and benchmarking between states and districts; and

- Reduce the burden of federally required program data collections and surveys.

Options for Consideration

The Department of Education could work with states and districts on a long-term project to develop an IPBS. Such a system could be developed over the next five years to replace the currently overlapping and antiquated federal-state education program reporting system by the year 2004. It could:

- Be based on a core set of program performance indicators incorporated in ESEA reauthorization legislation, as well as in state program performance reports;
- Use the core set of indicators as a basis for streamlining other duplicative and inconsistent program data collections;
- Facilitate standardization of measures for program performance indicators across states, similar to the Common Core of Data;
- Make possible aggregation of data across schools, districts, and states, to provide national estimates as well as comparable benchmarking between sites;
- Use modern electronic reporting methods, by having schools and districts sign on to an Internet site and report the data needed for the performance indicators;
- Include data quality standards for collection, aggregation, and reporting of data;
- Include grants and technical assistance to states to develop or improve their performance data reporting systems to be able to participate in IPBS; and
- Be designed to ensure the complete confidentiality of student information.

The IPBS would be designed in partnership with various states and state education organizations, piloted as a demonstration project in a few partner states, and then revised and gradually expanded to all states.

A Final Note

The Department's evaluations of Goals 2000, Title I, and other Elementary and Secondary Education Act programs have shown that federal programs have contributed to the nation's progress in implementing standards-based reform. Many of the key elements for achieving the democratic ideal of excellence and equity for all are just being put in place. Other reform elements need to be strengthened if challenging standards are to reach all classrooms and help all children reach high expectations. Evaluations have documented how federal programs can stimulate and work in tandem with the best efforts of states and local school systems to improve education for our nation's children. They have also shown where federal programs, and education in general, must address shortcomings in delivering on the promise of high-quality schooling for all students. Educational improvement is a work in progress and benefits from a careful analysis of its implementation and early impact.

[1] U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Fourth-Grade Mathematics and Science Achievement in International Context* (Washington, DC: U.S. Government Printing Office, 1997); U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching, Learning, Curriculum, and Achievement in International Context* (Washington, DC: U.S. Government Printing Office, 1996) 18; U.S. Department of Education, National Center for Education Statistics, *Reading Literacy in the United States: Findings from the IEA Reading Literacy Study* (Washington, DC: U.S. Government Printing Office, 1996); U.S. Department of Education, National Center for Education Statistics, *1996 Science Performance Standards, 1996 Math Report Card, 1994 Reading Report Card* (Washington, DC: U.S. Government Printing Office, 1996).

[2] University of Michigan, Survey Research Institute, Institute for Social Research, *Monitoring the Future Study* (Ann Arbor, MI: University of Michigan, Survey Research Institute, Institute for Social Research, December 1998).

FOREWORD

This report is mandated by Title XIV, Section 14701, of the reauthorization of the Elementary and Secondary Education Act (Improving America's Schools Act), which requires the Secretary of Education to conduct a comprehensive evaluation and review of federal assistance to states in their efforts to reform their educational systems through legislation passed in 1994. The report was to summarize changes to existing federal education programs contained in the 1994 ESEA legislation as well as two then-new initiatives: the Goals 2000: Educate America Act and the School-to-Work Opportunities Act of 1994. Because of the scope of its legislative mandate, the report does not address programs established by other important education-related legislation such as the Higher Education Act and the Individuals With Disabilities Education Act.

The law requires the Secretary of Education to summarize and analyze the overall effects of the 1994 legislative changes and developments. Specifically, the law requires the Secretary to consider effects on school readiness, improvement in student outcomes, school-to-work relationships, schools' adoption of higher standards for curricula and teacher training, assessment practices, and student populations that have traditionally benefited from federal assistance.

Title XIV of ESEA also requires the Secretary to appoint an Independent Review Panel of distinguished researchers and educators to review the plans for the evaluation of the relevant programs, to advise the Secretary on the progress of the evaluation, and to comment on the final report. This report is being submitted to the Committee on Education and the Workforce of the U.S. House of Representatives and to the Committee on Labor and Human Resources of the U.S. Senate.

This report has been prepared pursuant to that legislative mandate. The information contained in it is based on the best available national data and on numerous evaluations undertaken specifically for this report. It has been informed by the advice of the Independent Review Panel, through meetings held since the inception of the project. The members of the Independent Review Panel are listed on the inside front cover of this report.

This report has two companion reports, *Promising Results, Continuing Challenges: The Final Report of the National Assessment of Title I,* by the U.S. Department of Education; and *Measured Progress: An Evaluation of the Impact of Federal Education Legislation Enacted in 1994*, by the Independent Review Panel on the Evaluation of Federal Education Legislation. *Promising Results, Continuing Challenges*, written by the Department of Education, provides an intensive examination of the Title I program. *Measured Programs* offers a nongovernmental expert perspective on federal support for elementary and secondary education focused on Title I.

1. OVERVIEW

What Did the 1994 Federal Legislation Seek to Accomplish?

The Elementary and Secondary Education Act (ESEA), the Goals 2000: Educate America Act, and the School-to-Work Opportunities Act (STWOA) all stemmed from a new policy framework designed to support the country's efforts to reach the National Education Goals. The goals were adopted by the President and all 50 governors in 1989. Congress recognized and added to the goals in 1994 in setting a course for educational improvement. Exhibit 1.1 shows the resulting National Goals.

EXHIBIT 1.1
NATIONAL EDUCATION GOALS

1. By the year 2000, all children in America will start school ready to learn.
2. By the year 2000, the high school graduation rate will increase to at least 90 percent.
3. By the year 2000, all students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.
4. By the year 2000, the Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.
5. By the year 2000, United States students will be first in the world in mathematics and science achievement.
6. By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.
7. By the year 2000, every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.
8. By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

The three laws addressed in this report all helped realign federal education programs with state and local efforts to reach the National Education Goals. Many states had already made significant strides in implementing reforms designed to improve education for all students, especially those at risk of school failure. The policy framework reflected in all three pieces of legislation was designed to lend greater support to those efforts by:

- Supporting states in setting high standards for all children—with the elements of education aligned, so that they are working together to help all students reach those standards;
- Focusing on teaching and learning through upgrading curriculum, accelerating instruction, and providing teachers with professional development to teach to high standards;
- Providing flexibility to stimulate local school-based and district initiatives, coupled with responsibility for student performance; and
- Creating links among schools, parents, and communities.

To ensure that these principles guide federal education programs, the Department of Education has developed a strategic plan that aligns all of its programs with these principles and establishes performance indicators for each program. The plan and performance indicators also respond to the Government Performance and Results Act of 1993, which required all government agencies to implement strategic plans. Throughout this report, relevant performance indicators are cited to assist in evaluating program activities.

The key provisions of the Elementary and Secondary Education Act, the Goals 2000, and the School-to-Work Opportunities Act, and the chapters in which they are treated in this report, are summarized in Exhibit 1.2:

EXHIBIT 1.2
TREATMENT OF FEDERAL EDUCATION PROGRAMS IN THIS REPORT

REPORT CHAPTERS ⟹ / FEDERAL EDUCATION PROGRAMS ⇩	3--Readiness for School	4--Standards-Based Reform	5--Teacher Training	6--Safe and Drug-Free Schools	7--Technology	8--School Choice	9--School to Work	10--Technical Assistance	11--Flexibility and Accountability
ESEA Title I, Part A—Improving Basic Programs Operated by Local Education Agencies—Supports districts in providing opportunities for students in high-poverty schools to meet the same challenging academic standards as all other students.	X	X	X		X			X	X
ESEA Title I, Part B—Even Start Family Literacy Program—Provides family-centered education programs for low-income parents and their children, from birth through age seven.	X								

EXHIBIT 1.2
TREATMENT OF FEDERAL EDUCATION PROGRAMS IN THIS REPORT

REPORT CHAPTERS ⟹ / FEDERAL EDUCATION PROGRAMS ⇩	3–Readiness for School	4–Standards-Based Reform	5–Teacher Training	6–Safe and Drug-Free Schools	7–Technology	8–School Choice	9–School to Work	10–Technical Assistance	11–Flexibility and Accountability
ESEA Title II—Dwight D. Eisenhower Professional Development Program— Provides states with funding to give teachers opportunities to learn more of the content and processes of teaching core subject areas, especially math and science.		X	X						X
ESEA Title III—Technology for Education—Provides funding to encourage innovative uses of technology to support teaching and learning.		X			X			X	X
ESEA Title IV—Safe and Drug-Free Schools and Communities—Gives states and districts funding to implement comprehensive drug and violence prevention programs in schools and communities.				X					X
ESEA Title V, Part A—Magnet Schools Assistance—Supports programs that promote racial integration in districts with either voluntary or court-ordered desegregation plans.						X			
ESEA Title VI—Innovative Education Programs and Strategies—Allows school districts to use funds to support a broad array of educational reforms.			X						X
ESEA Title VII, Part A—Bilingual Education, Language Enhancement, and Language Acquisition Programs—Provides funds to states, districts, and certain other entities to improve teaching for students with limited English proficiency and to help these students learn English and achieve to high standards.		X	X						

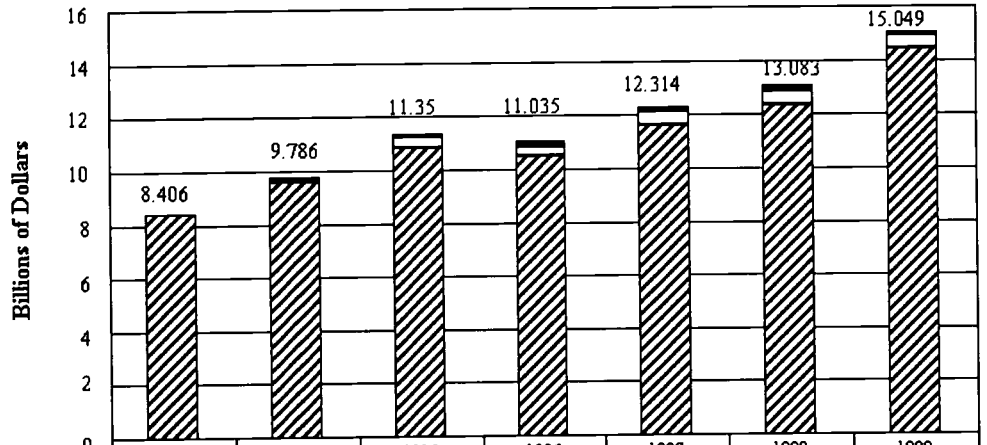
EXHIBIT 1.2
TREATMENT OF FEDERAL EDUCATION PROGRAMS IN THIS REPORT

REPORT CHAPTERS ⟹ / FEDERAL EDUCATION PROGRAMS ⇩	3–Readiness for School	4–Standards-Based Reform	5–Teacher Training	6–Safe and Drug-Free Schools	7–Technology	8–School Choice	9–School to Work	10–Technical Assistance	11–Flexibility and Accountability
ESEA Title XIII—Support and Assistance Programs to Improve Education—Funds a network of 15 Comprehensive Regional Assistance Centers to provide support, training, and assistance to states, tribes, districts, schools, and other ESEA grantees.								X	
Goals 2000 Title III—State and Local Systemic Education Improvement—Supports states and districts in developing and implementing systemic, standards-based education reforms focused on raising student achievement.		X	X		X				X
Goals 2000 Title IV—Parental Assistance—Authorizes a Parent Information and Resource Center in every state to enhance parental involvement with schools.								X	
School-to-Work Opportunities Act—Provides grants to states and districts to implement systems that enable students to engage in school- and work-based learning that prepares them for specific careers.							X		X
Stewart B. McKinney Homeless Assistance Act—Education for Homeless Children and Youth—Gives states funds to help eliminate obstacles that homeless children face in enrolling and succeeding in school.	X								

How Much Money Was Spent?

In FY 1999, Congress appropriated approximately $15 billion for the programs funded under the three laws covered by this report. Exhibit 1.3 shows that in both constant and current dollars,[1] combined federal funding for ESEA, Goals 2000, and the School-to-Work Opportunities Act has increased in every year but one since 1994, with the greatest single-year increase occurring in 1999. Funding for Goals 2000 increased rapidly in its early years and has remained relatively stable for the last three years. Funding for the School-to-Work program reached its peak in 1997 and then began a decline that will continue until 2001, when the law is slated to expire. All together, appropriations for programs funded under these three pieces of legislation account for more than 40 percent of the Department of Education's discretionary spending.

EXHIBIT 1.3
FEDERAL FUNDING FOR ESEA, GOALS 2000, AND SCHOOL-TO-WORK (IN CONSTANT 1999 DOLLARS IN BILLIONS)



	1990	1994	1995	1996	1997	1998	1999
School-to-Work	$0	$54,528,000	$130,454,000	$188,003,000	$204,997,000	$202,597,000	$125,000,000
Goals 2000	$0	$127,596,000	$399,210,000	$370,784,000	$508,462,000	$502,441,000	$498,000,000
ESEA	$8,405,880,000	$9,603,615,000	$10,820,378,000	$10,476,131,000	$11,600,378,000	$12,378,037,000	$14,425,820,000

Source: U.S. Department of Education, Budget Service.

What Is Unique about the Federal Government's Efforts?

Historically, the federal role in education has been to work with states, school systems, and communities to further its dual mission of:

- **Promoting equity by providing additional resources for students at risk of school failure and**
- **Improving the overall quality of education by strategically targeting funds to induce change.**

The standards-based reform framework reflected in both ESEA and Goals 2000 maintains state responsibility and local control of education by supporting states in establishing their own standards for what students should know and be able to do. Because state, local, and private sources account for 94 percent of the total national expenditure on elementary and secondary education, they carry the main responsibility for elementary and secondary education in this country. However, because education is of critical national importance, the federal government is a partner in this nationwide responsibility. The federal programs contained within ESEA, Goals 2000, and the School-to-Work Opportunities Act provide leadership, resources, and assistance in the critical areas of professional development of teachers, access to new technology, and establishment of a safe environment for learning. In exchange for giving states and districts greater flexibility in their use of federal resources, these programs require greater accountability for improving student performance.

The federal government's resources play an important role in stimulating and supporting comprehensive school reform based on high standards for all students. They also provide additional support for students at risk of school failure in high-poverty communities. A recent General Accounting Office (GAO) study found that in 45 states, federal funding is more targeted to poor communities than is state funding. For every $1 of federal funding supplied per typical student, the average district received an additional $4.73 in federal funds per poor student, but only an additional $0.62 of state funds per poor student.[2] In most states, the combination of these state and federal funds reduced or eliminated the local funding gap between high- and low-poverty districts.

Even as the federal government seeks to influence state and local school reform efforts by, for instance, diminishing funding inequities, it must also recognize that the primary responsibility for those efforts rests with states and local communities. In the 1994 legislation addressed in this report, Congress made it easier for federal programs to support state and local reform efforts, particularly in high-poverty schools, instead of operating as isolated programs. This approach may make it harder to ascertain the specific contribution that federal funds make in improving educational services and outcomes, but by bringing together all federal, state, and local education resources to address the same problems, it should move the country closer to achieving the National Education Goals.

Thus the effects of federal education policies and programs need to be considered in terms of overall improvement in the nation's schools as well as on their own terms. Among the types of evidence that should be examined to gauge the effects of federal programs are these:

- Aggregate effects on outcomes: What are the trends in the core academic outcomes of students in reading and math overall and in highest-poverty schools? What are the trends in student drug use and violence? Are students making good personal choices that affect their futures?

- Aggregate effects on service provision: What is the scope of programs serving a particular national priority area, and how well do these programs work together?

What Is and Is Not Included in This Report?

According to its legislative mandate as described in the Foreword, **this report discusses only those programs reauthorized or created in 1994: the Goals 2000: Educate America Act, the Elementary and Secondary Education Act, and the School-to-Work Opportunities Act.** It presents findings from a number of recently completed, previously unpublished studies and evaluations of these programs. It also incorporates performance indicators developed in response to the Government Performance and Results Act to allow readers to track the Department of Education's progress toward meeting the standards it has established for itself and its programs. The National Assessment of Title I, *Promising Results, Continuing Challenges: The Final Report of the National Assessment of Title I*, focuses in greater depth on that program and its components. As described in the Foreword, the two reports are complementary analyses, and both benefited from guidance provided by a congressionally mandated Independent Review Panel.

This report does not discuss programs included in the Individuals With Disabilities Education Act or the Educational Research, Development, Dissemination, and Improvement Act. It also does not include discussion of major new elementary and secondary education initiatives adopted in 1998, which are to begin in 1999. Although not discussed in this report, major 1998 initiatives are described briefly in Exhibit 1.4.

EXHIBIT 1.4
MAJOR NEW EDUCATION INITIATIVES ENACTED IN 1998

Class-Size Reduction ($1.2 billion)
These new funds will be used to hire and train approximately 30,000 new teachers in grades K-3, with the long-term goal of reducing class size in the early grades to a nationwide average of 18. Districts will use funds to pay the salaries and benefits of new teachers; a small portion may be used for professional development, testing of new teachers, and development of more rigorous tests.

The Reading Excellence Act ($260 million)
Districts will use funds to provide professional development for teachers; to operate tutoring programs before school, after school, on weekends, and during vacations; and to provide family literacy services. More than 500,000 children in grades pre-K to 3 will be served under the Act.

21st Century Community Learning Centers: After-School Programs ($200 million)
Approximately 1,600 centers will establish or expand school-based after-school programs. The centers will provide academic enrichment and support, extracurricular activities, service learning projects, nutritional and health services, and access to technology for 250,000 children.

GEAR UP ($120 million)
GEAR UP will award grants to colleges and high-poverty middle schools to increase college-going rates among low-income youth, and grants to states to provide early college awareness activities, improved academic support, information on paying for college, and scholarships.

EXHIBIT 1.4 (Continued)
MAJOR NEW EDUCATION INITIATIVES ENACTED IN 1998

Teacher Quality Enhancement Programs ($75 million)
These programs include grants to teacher preparation institutions and local school districts in high-need areas, scholarships and other support to prospective teachers who agree to teach in high-need areas, and grants to states to strengthen recruitment and certification of new high-quality teachers.

Source: U.S. Department of Education, Budget Service.

How Is This Report Organized?

This report looks across the programs authorized by the three pieces of legislation at relevant objectives identified in the Department's *Strategic Plan*. For each Strategic Plan objective, the report provides (1) an introduction to the programs and the 1994 legislative changes, (2) a brief summary of what research has learned about good practice, (3) data from recent evaluations on how well the programs are working, and (4) options for strengthening the program. The questions it seeks to answer are these:

- How well are students doing? Are key outcomes improving?
- Are federal education programs helping to prepare children for school?
- Are federal programs helping states develop and implement standards?
- Are federal programs supporting effective professional development for teachers?
- Is the Safe and Drug-Free Schools and Communities Act supporting effective school drug and violence prevention?
- Is federal support strengthening access to and use of technology to support learning?
- Are federal programs contributing to greater choice in public schools?
- Is the School-to-Work Opportunities Act helping graduates leave school ready to begin careers or continue their studies?

Next, the report considers the Department's role in helping states and local school districts make the best use of federal resources to improve student performance. It addresses the following two questions:

- Is the Department of Education providing high-quality help and guidance?
- Are federal laws promoting flexibility and accountability for results?

The Conclusions section offers some options for strengthening the federal contribution to education reform.

[1] The following table shows federal education funding in thousands of current dollars.

	1990	1994	1995	1996	1997	1998	1999
ESEA	$6,830,114,	$8,639,131	$9,663,290	$9,495,162	$10,620,080	$11,523,351	$13,802,820
Goals 2000	$0	$117,000	$374,870	$355,000	$496,000	$496,000	$498,000
School-to-Work	$0	$50,000	$122,500	$180,000	$199,973	$200,000	$125,000
Total	$6,830,114	$8,806,131	$10,160,660	$10,030,162	$11,316,053	$12,219,351	$14,425,820
Source: U.S. Department of Education, Budget Service.							

[2] U.S. General Accounting Office, *School Finance: State and Federal Efforts to Target Poor Students,* GAO/HEHS-98-36, January 1998, 9, 12.

2. HOW WELL ARE STUDENTS DOING? ARE KEY OUTCOMES IMPROVING?

Key Findings

Overall Progress in Reading and Mathematics

- The percentage of all students performing at or above the basic achievement level has generally improved in mathematics since 1992 and in reading since 1994.

- Internationally, U.S. students' standing in both reading and mathematics is stronger at the fourth grade than at the eighth and twelfth grades.

Reading

- A long-term view of reading achievement shows that scores on the trend NAEP assessment have improved slightly over the past two decades for 9- and 13-year-olds, and remained stable for 17-year-olds. In the short term, the percentage of fourth-graders scoring at or above the basic achievement level on main NAEP remained stable between 1994 and 1998, while eighth- and twelfth-graders' scores increased.

- For minority students and students attending high-poverty schools, reading achievement has increased significantly over the past two decades. These students have also made significant gains since 1994, but this improvement brought achievement scores only to late-1980s levels.

Mathematics

- A long-term view of mathematics achievement shows that the scores of 9-, 13-, and 17-year-olds on the trend NAEP assessment have improved over the past two decades, with 9-year-olds making the largest improvements. In the short term, the percentage of eighth-graders scoring at or above the basic achievement level on main NAEP increased between the two most recent assessments (1992 and 1996).

Course-Taking

- Students are taking more rigorous courses, and the percentage of high school students taking challenging math and science courses such as geometry, calculus, and chemistry has increased throughout the decade for all racial and ethnic groups. Since 1990, an increasing proportion of eleventh- and twelfth-grade students have been taking and passing Advanced Placement courses.

High School Completion

- There has been a small improvement in high school completion rates since 1972. The high school completion rate hovered around 84 percent from 1972 to 1983, and by 1994 had increased to 86 percent, where it has remained since.

Drug Use and Violence

- Drug use is declining but remains a concern. In 1998, after six years of steady increases in the use of illicit drugs, use among secondary school students is down. This downturn represents the second year of decreases for eighth-graders and the first for tenth- and twelfth-graders since their previous declines early in the decade. Between 1993 and 1996 violence in and on the way to schools has decreased substantially.

Is U.S. education as a whole improving? Are we building a solid foundation of learning for all the nation's children? In particular, are our students reaching challenging academic standards? Are they being prepared for responsible citizenship, further learning, and productive employment? Are our students keeping pace with students in other countries? To answer these questions, this chapter provides an overview of national trends in achievement since 1971, with a particular focus on progress since 1994, the year of the reauthorization of the Elementary and Secondary Education Act.

This chapter presents data from the National Assessment of Educational Progress (NAEP), the Third International Mathematics and Science Study (TIMSS), and the International Reading Literacy Study. Two types of NAEP data are presented: *Trend NAEP*, which has used the same set of items and tasks since 1971, is used to report long-term trends in academic performance of 9- 13-, and 17-year-olds. Trend NAEP scores are reported as average scale scores, ranging from 0 to 500 points. The second type of NAEP data, from the *Main NAEP,* consists of items measuring current standards of what fourth-, eighth-, and twelfth-grade students should know and be able to do in each subject area. Scores are reported as the percentage of students achieving at three levels of performance as determined by expert judges in each subject area. In this chapter, two levels of performance are reported: basic and proficient.[1]

The data on outcomes presented in this chapter should be viewed as indicators of the nation's need to continue the effort to improve education for all children, rather than as an evaluation of a fully accomplished reform effort. Many of the provisions of the 1994 legislation have been only partially implemented; indeed, some key provisions are not required to be in place until a later date. The results in this chapter focus on changes since 1994, as a measure of progress since the reauthorization. Rather than a final evaluation, these results are a reflection on a change in process, offering an opportunity for midcourse correction as the nation continues to strive toward improving education for all students.

Are Our Students Achieving to Current Academic Standards in Reading, Mathematics, and Science?

EXHIBIT 2.1
NATIONAL REPORT CARD[2]

	PERCENTAGE OF ALL STUDENTS SCORING AT OR ABOVE THE BASIC LEVEL ON THE MOST RECENT MAIN NAEP TEST	CHANGE SINCE PREVIOUS MAIN NAEP ASSESSMENT[a]	U.S. PERFORMANCE COMPARED TO INTERNATIONAL AVERAGE ON LATEST ASSESSMENT
4TH GRADE			
1998 READING	62%	⇔	(1992) ABOVE AVERAGE
1996 MATH	64%	⇑ (+5%)	(1995) ABOVE AVERAGE
1996 SCIENCE	67%	NA	(1995) ABOVE AVERAGE
8TH GRADE			
1998 READING	74%	⇑ (+4%)	(1992) ABOVE AVERAGE
1996 MATH	62%	⇑ (+4%)	(1995) BELOW AVERAGE
1996 SCIENCE	61%	NA	(1995) ABOVE AVERAGE
12TH GRADE			
1998 READING	77%	⇑ (+2%)	NO DATA
1996 MATH	69%	⇑ (+5%)	(1995) BELOW AVERAGE
1996 SCIENCE	57%	NA	(1995) BELOW AVERAGE

Sources: National Assessment of Educational Progress (Main NAEP), 1996 and 1998; Third International Mathematics and Science Study (TIMSS); IEA Reading Literacy Study. Also see endnote 2.

[a] Only statistically significant differences are reported as changes.

Our national report card (Exhibit 2.1) shows that since the previous main NAEP assessment, student achievement—as measured by the percentage of all students performing at or above the basic achievement level—has generally improved for most grade levels in reading and mathematics. In reading, the percentage of students scoring at or above the basic achievement level on the main NAEP Assessment increased since 1994 for eighth- and twelfth-graders, and remained stable for fourth-grade students.[3] In mathematics, the most recent main NAEP Assessment was administered in 1996. Since 1992, the percentage of students scoring at or above the basic level improved for fourth, eighth, and twelfth grades.[4]

Internationally, U.S. students' standing in reading, mathematics, and science are above average at the fourth grade but below average for students in the twelfth grade.[5]

EXHIBIT 2.2
HOW NAEP TESTS ARE USED TO REPORT PROGRESS

The National Assessment of Educational Progress (NAEP) consists of two separate tests, the **Trend Assessment** and the **Main Assessment**. They differ in purpose, item content, sample, assessment years, and method of scoring results, and are used in this chapter to answer different questions about student progress.

The **NAEP Trend Assessment** is designed to measure long-term trends in student performance on sets of items that have not changed since NAEP was first conducted in 1969.[6] The test measures the performance of 9-, 13-, and 17-year-old students at the national level. Results are reported as average scores on a scale from 0 to 500 points. In this chapter, NAEP trend data for 9-year-olds are used to answer the question, **Has student achievement improved over time in reading, mathematics, and science?** The NAEP Trend Assessment is also used to report the performance of students by race/ethnicity, and these data are used to answer the questions, **Has student achievement improved over time among racial/ethnic groups? and, How does the performance of minority students compare to that of white students?**

The **Main NAEP Assessment**, first conducted in 1990, is designed to measure short-term trends in student performance on items reflecting more current curricular content and standards. The test measures the performance of students in grades 4, 8, and 12 at the national level, and at the state level in states that elect to participate in the state NAEP. Test scores are reported in two ways, as average scale scores and as the percentage of students achieving at established standards of performance. The standards are determined by expert judges at three levels of achievement: *Basic, Proficient,* and *Advanced.* Each of these measures is used as follows in this chapter:

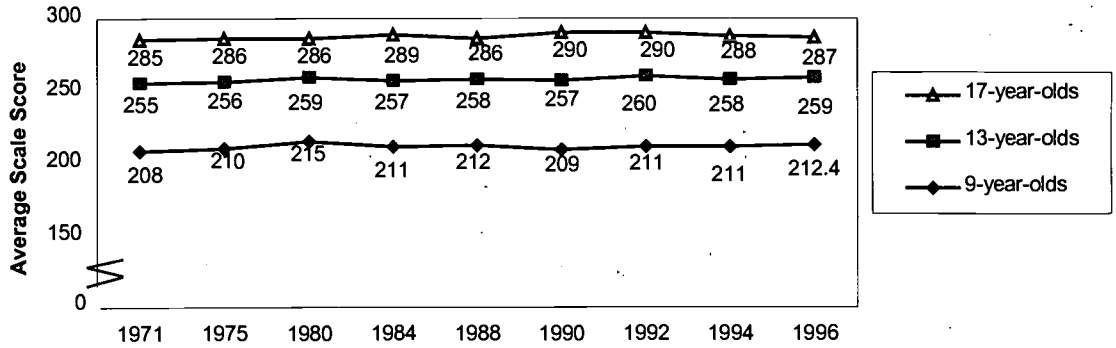
- The average scale scores of lowest-achieving students (the bottom 10 and 25 percent of scorers) are used to answer the question, **Has the achievement of the lowest-performing students improved over time?**
- The percentages of students achieving at and above the *Basic* and *Proficient* levels are used to answer the question, **Are students achieving to the academic standards being set for all students across the nation?**

Reading: Long-Term Trends

Fourth-grade students' reading scores are an important indicator for several reasons. One of the goals in the Department of Education's Strategic Plan is that every child will read independently by the end of third grade. Federal programs such as Title I are also more heavily targeted toward reading in elementary school than in middle school. Therefore, after discussing reading achievement at the fourth-, eighth-, and twelfth-grade levels, this report focuses on the fourth grade.

Taking a long-term view, Exhibit 2.3 shows that 9- and 13-year-old students' scores on the trend NAEP have improved slightly in reading performance over the past two decades,[7] and remained stable for 17-year-olds.[8] During the past decade, performance for all three age levels has remained relatively static. In comparison with their counterparts in other countries, the most recent international comparison of reading, conducted in 1992, shows that U.S. fourth-graders scored above the international average.[9]

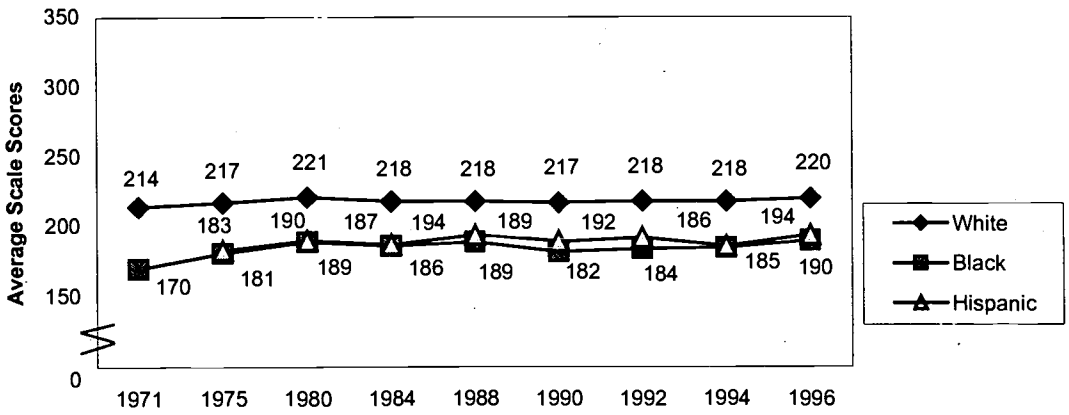
EXHIBIT 2.3
TRENDS IN READING ACHIEVEMENT ON NAEP, 1971-1996



Source: National Assessment of Educational Progress (Trend NAEP). Also see endnote 8.

For both minority students and students attending high-poverty schools, reading performance on the trend NAEP increased over the past two decades. Exhibit 2.4 shows that minority students also have made gains since 1994, but this improvement only helped to regain ground that was lost during the previous decade. Despite the gains made at the lowest levels of achievement, large gaps between racial/ethnic groups and income levels remain. Since 1994, the gap in reading performance between 9-year-old black and white students narrowed, but the gap between white and Hispanic students did not.[10] Results by school poverty and for 13- and 17-year-olds followed the same patterns but are not shown here.

EXHIBIT 2.4
TRENDS IN NAEP READING SCORES FOR 9-YEAR-OLDS, BY RACE/ETHNICITY

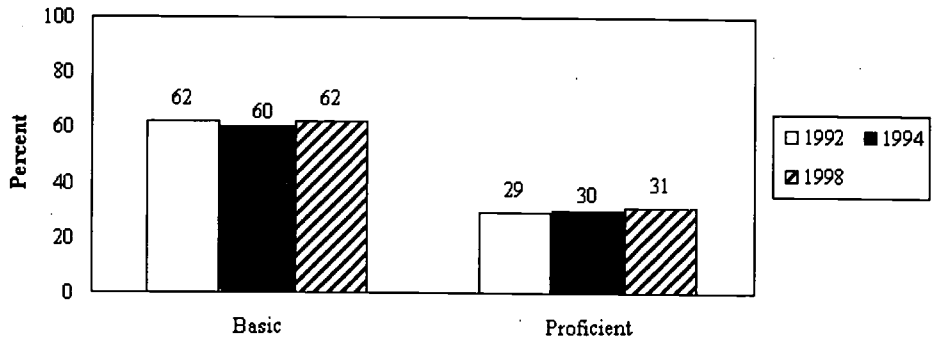


Source: National Assessment of Educational Progress (Trend NAEP). Also see endnote 8.

Reading: Recent Trends

The main NAEP reading assessment measures reading achievement that is based on more recent reading curriculum and standards, and provides a short-term view of changes in performance. The three most recent assessments were administered in 1992, 1994, and 1998. Exhibit 2.5 shows that there have been no significant changes in the percentage of fourth-graders scoring at or above either the basic or the proficient level of performance since 1994 or 1992. Exhibit 2.1 summarizes trends for the eighth and twelfth grades. At grade 8, the percentage of students who performed at or above the basic level increased in 1998, compared with the percentages in 1994 and 1992. At grade 12, the percentage who performed at or above the basic level increased in 1998, compared with the percentage in 1994, but it remained lower than the 1992 percentage.[11]

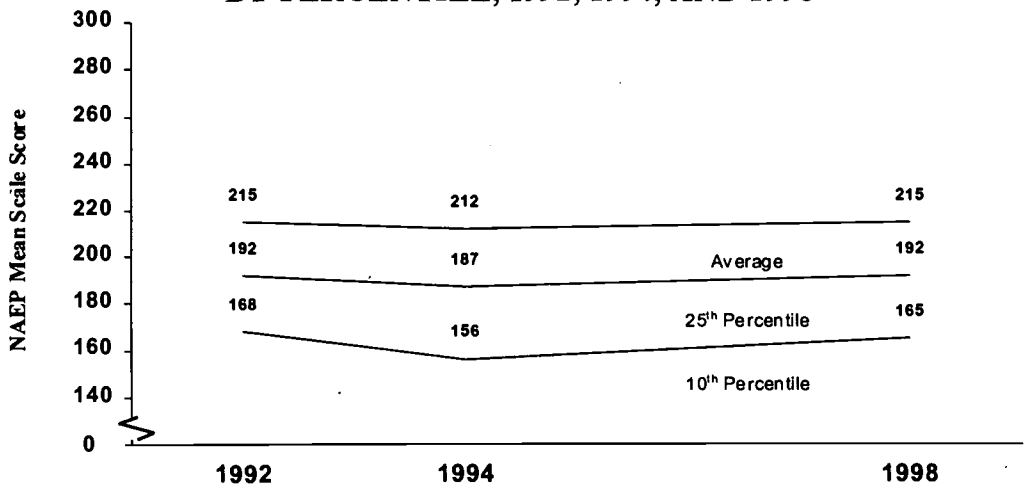
EXHIBIT 2.5
PERCENTAGE OF FOURTH-GRADERS PERFORMING AT OR ABOVE BASIC AND PROFICIENT LEVELS IN READING ON MAIN NAEP, 1992-1998



Source: National Assessment of Educational Progress (Main NAEP, 1992, 1994, 1998). Also see endnote 3.

In addition to examining recent scores for all students, it is also important to examine the progress of those students traditionally most at risk. Exhibit 2.6 shows that students who scored in the lowest percentiles have improved their achievement significantly since 1994, after dropping between 1992 and 1994.

EXHIBIT 2.6
NAEP MAIN READING ASSESSMENT
SCALE SCORES OF PUBLIC SCHOOL FOURTH-GRADERS BY PERCENTILE, 1992, 1994, AND 1998



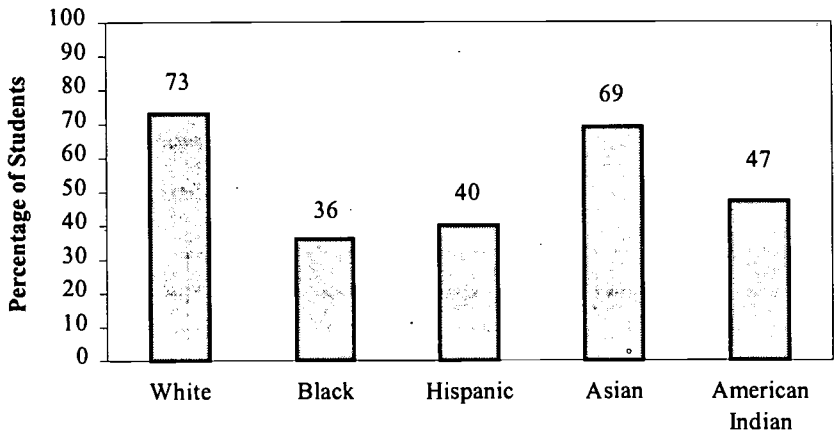
High-poverty school = 76% to 100% of students eligible for free or reduced-price lunch.

Low-poverty school = 0% to 25% of students eligible for free or reduced-price lunch. Scale scores are 0-500.

Source: National Assessment of Educational Progress (Main NAEP, 1992-1998). Also see endnote 3.

Results from the 1998 main NAEP reading assessment reveal significant differences in the percentage of students from different racial/ethnic groups who score at or above the basic level (Exhibit 2.7).[12] White and Asian students are twice as likely as black and Hispanic students to score at or above the basic level. Trends for 13- and 17-year-olds are similar, with greater percentages of white and Asian students performing at or above basic than black and Hispanic students.

EXHIBIT 2.7
PERCENTAGE OF FOURTH-GRADERS SCORING AT OR ABOVE BASIC IN READING ON THE 1998 MAIN NAEP, BY RACE/ETHNICITY



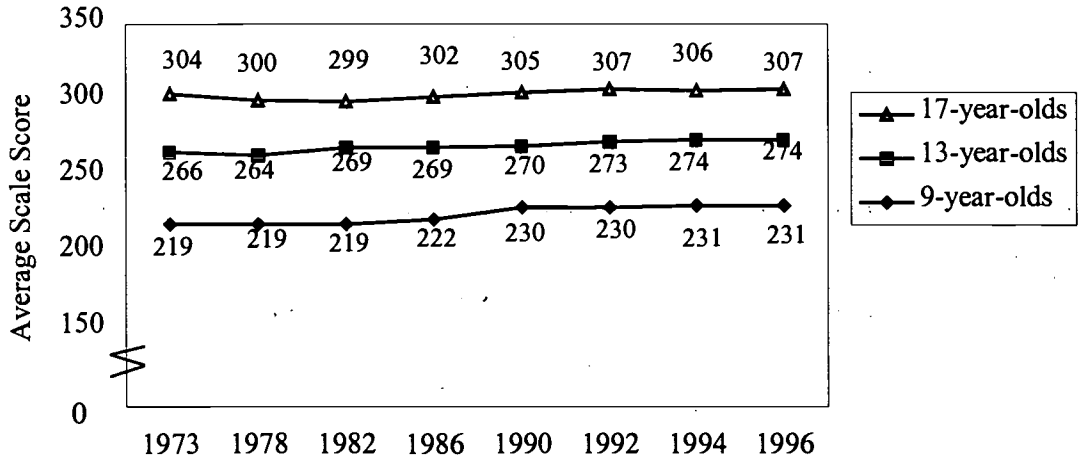
Source: National Assessment of Educational Progress (1998 Main NAEP). Also see endnote 3.

Mathematics: Long-Term Trends

Eighth-grade students' mathematics scores are an important indicator for several reasons. One of the goals of the Department of Education's Strategic Plan is that every eighth-grader will master challenging mathematics, including the foundations of algebra and geometry. This is particularly important in light of the U.S. students' scores on the Third International Mathematics and Science Study (TIMSS) mentioned earlier. We have seen that **U.S. students' international standing was above the international average in mathematics at the fourth grade,[13] below average at the eighth grade,[14] and among the lowest-performing countries at the twelfth grade.**[15] These results suggest possible weaknesses in mathematics instruction in U.S. middle schools, and underscore the importance of encouraging middle-school students to take rigorous coursework to prepare them for advanced mathematics courses in high school. In light of these findings, this section will focus on eighth-grade students.

Taking a long-term view of progress in mathematics, Exhibit 2.8 shows that on the NAEP trend assessment, average mathematics performance improved over the past two decades for 9-, 13-, and 17-year-olds. After declining in the 1970s and early 1980s, scores increased in the late 1980s and have leveled off during the past decade. **After these fluctuations, student mathematics scores on the trend NAEP assessment were higher in 1996 for all three grade levels than they had been two decades ago, with 9-year-olds making the largest improvements, a gain of a little more than one grade level since 1973.**

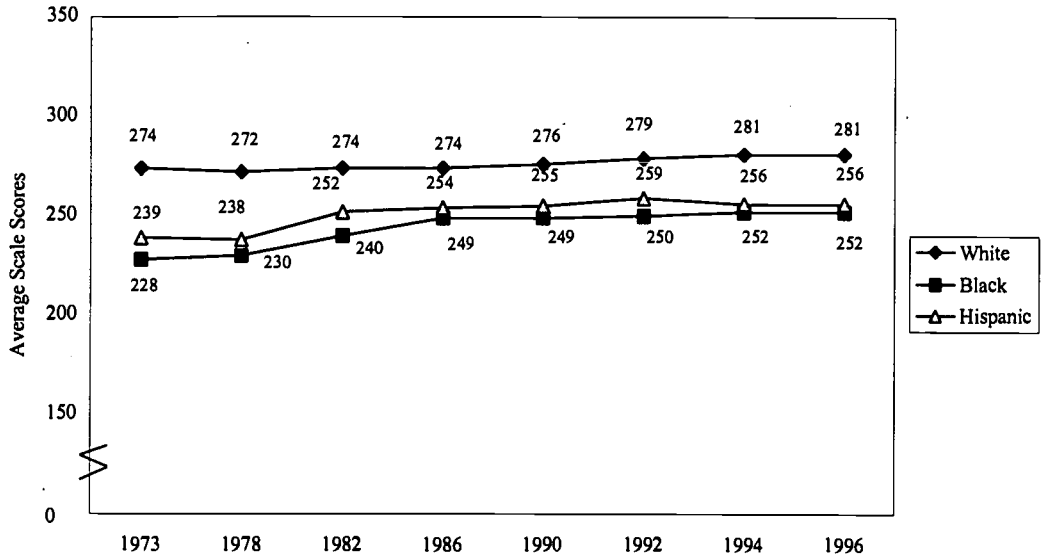
EXHIBIT 2.8
MATHEMATICS ACHIEVEMENT ON TREND NAEP, 1973-1996



Source: National Assessment of Educational Progress (Trend NAEP). Also see endnote 8.

Since 1973, math scores have improved for all race/ethnic groups, by 0.7 grade level for white students, by 1.7 grade levels for Hispanic students, and by 2.4 grade levels for black students.[16] These gains have narrowed the achievement gaps between black and white 13-year-olds and between Hispanic and white 13-year-olds, as shown in Exhibit 2.9.[17] Results for 9- and 17-year-olds followed the same patterns, except that 9-year-old Hispanic students did not narrow the gap with white students.

EXHIBIT 2.9
TRENDS IN NAEP MATH SCORES FOR 13-YEAR-OLDS, BY RACE/ETHNICITY

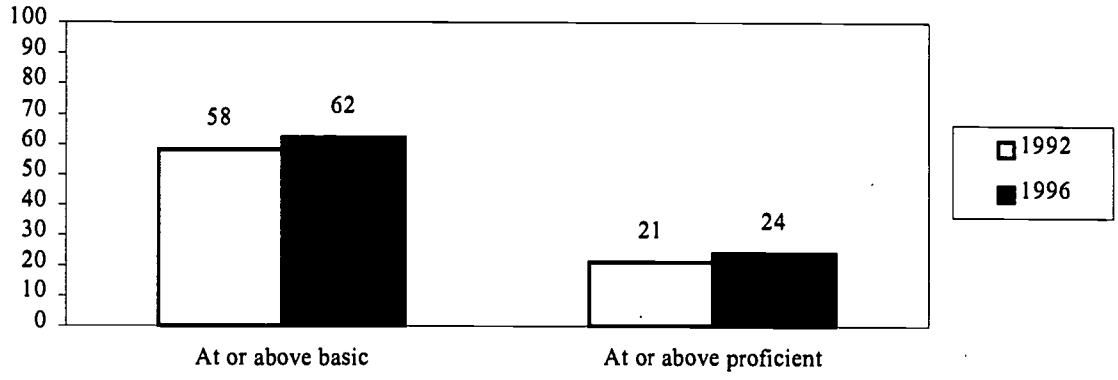


Source: National Assessment of Educational Progress (Trend NAEP). Also see endnote 8.

Mathematics: Recent Trends

The main NAEP mathematics assessment measures achievement on the basis of recent mathematics curricular emphasis and standards developed by the National Council of Teachers of Mathematics. Exhibit 2.10 shows that **the percentage of eighth-graders scoring at or above either the basic or the proficient level of performance has increased since 1992.**[18]

EXHIBIT 2.10
PERCENTAGE OF EIGHTH-GRADERS SCORING AT OR ABOVE BASIC AND PROFICIENT LEVELS IN MATH ON MAIN NAEP, 1992-1996



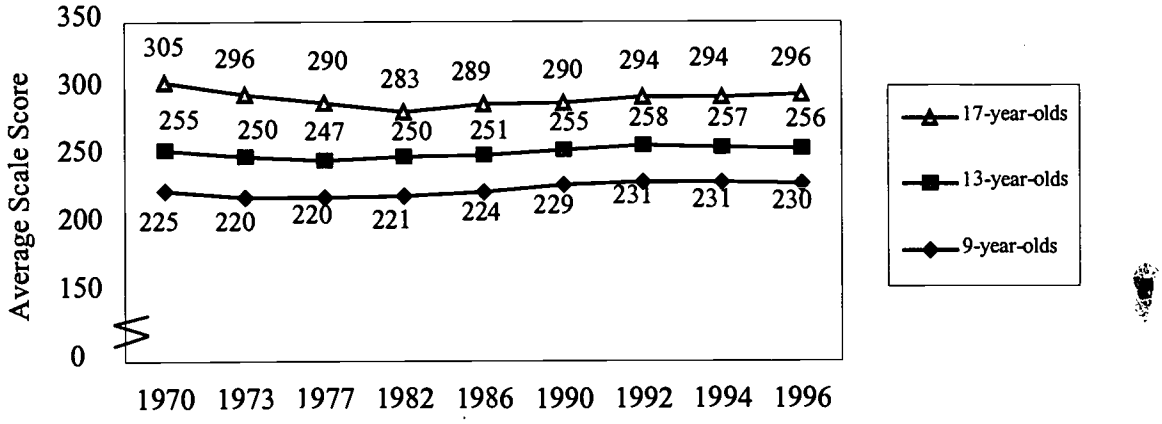
Source: National Assessment of Educational Progress (Main NAEP, 1992 and 1996). Also see endnote 4.

Science Achievement: Long-Term Trends

Twelfth-grade students' science scores are an important indicator of students' readiness to live and work in today's technological and scientific society. U.S. high school graduates now must compete for jobs in an increasingly global and international workplace. On TIMSS, U.S. fourth-graders' international standing was among the best in the world. Our students were outperformed by those in only one other country.[19] Our eighth-grade international standing was above average,[20] while at the twelfth-grade level, U.S. standing was among the lowest of the nations tested.[21] These results raise concerns about how well prepared U.S. students are for the workplace of the future.

Taking a long-term view of progress in science, Exhibit 2.11 shows that average student achievement, after declining in the 1970s, rose during the 1980s for all age groups. However, scores have been relatively static throughout the 1990s for all groups of students except 17-year-olds, for whom they have improved.

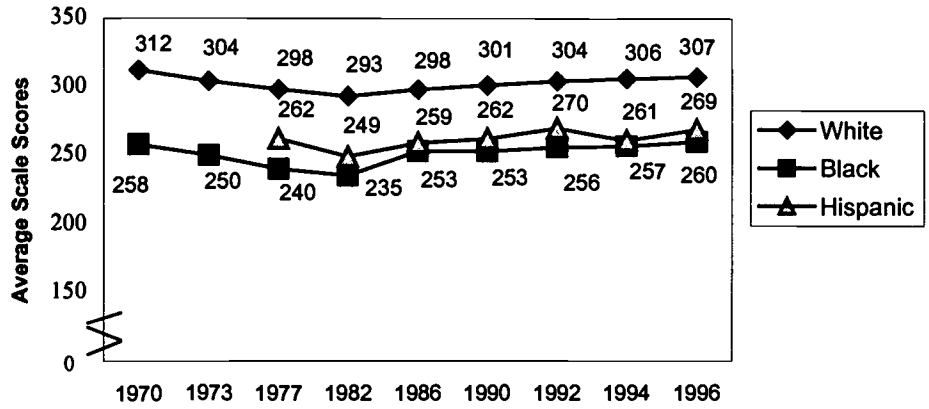
EXHIBIT 2.11
TRENDS IN SCIENCE ACHIEVEMENT ON NAEP, 1970-1996



Source: National Assessment of Educational Progress (Trend NAEP). Also see endnote 8.

During the past two decades, the achievement gap in science narrowed slightly for white and black 17-year-olds, but the gap between white and Hispanic students did not narrow (Exhibit 2.12).[22] Results for 9- and 13-year-olds followed the same trends, except that 13-year-old Hispanic students did narrow the gap with white students.

EXHIBIT 2.12
TRENDS IN NAEP SCIENCE SCORES FOR 17-YEAR-OLDS, BY RACE/ETHNICITY

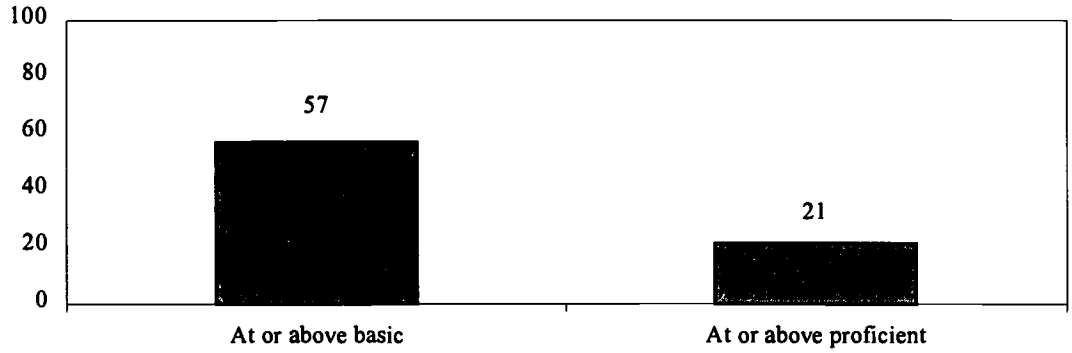


Source: National Assessment of Educational Progress (Trend NAEP). Also see endnote 8.

Science: Short-Term Trends

The percentage of students scoring at or above various proficiency levels in science on the main NAEP has been assessed only once before, in 1996. Until the next assessment is completed, this is the only information available on the percentage of students scoring at or above the basic and proficient levels in science. Exhibit 2.13 shows the percentage of students scoring at or above the basic and proficient levels in the twelfth grade.[23]

EXHIBIT 2.13
PERCENTAGE OF ALL TWELFTH-GRADE STUDENTS SCORING AT OR ABOVE BASIC AND PROFICIENT LEVELS IN SCIENCE ON MAIN NAEP, 1996



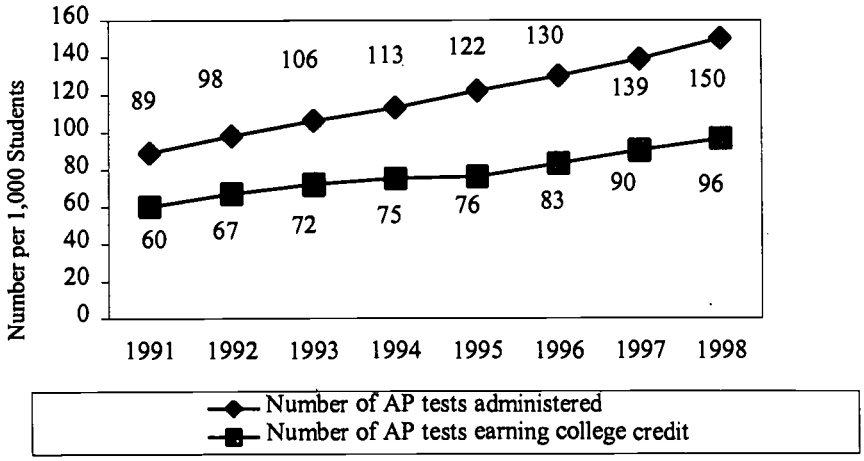
Source: National Assessment of Educational Progress (1996 Main NAEP). Also see endnote 22.

Are Our Students Making the Personal Choices Necessary for Productive Citizenship?

Course-Taking

To prepare for college and careers, more students are taking demanding classes in high school. Research has shown that an increased amount of time spent in more academically challenging courses is strongly related to better achievement.[24] Between 1990 and 1994, the percentage of high school students taking challenging math and science courses such as geometry, calculus, and chemistry increased for all race/ethnic groups;[25] data on course-taking patterns in later years are not available. Since 1994, an increasing proportion of eleventh- and twelfth-grade students have been taking Advanced Placement courses, and an increasing number have passed at the level required to receive college credit (Exhibit 2.14).[26] Policymakers hope that this trend toward studying more advanced material will lead to higher achievement for the nation's students.

EXHIBIT 2.14
NUMBER OF ADVANCED PLACEMENT (AP) TESTS ADMINISTERED PER 1,000 11TH- AND 12TH-GRADE STUDENTS, AND NUMBER WITH TEST SCORES REQUIRED FOR COLLEGE CREDIT, 1991-1998



Source: The College Board, Advanced Placement Program, *National Summary Reports,* various years.

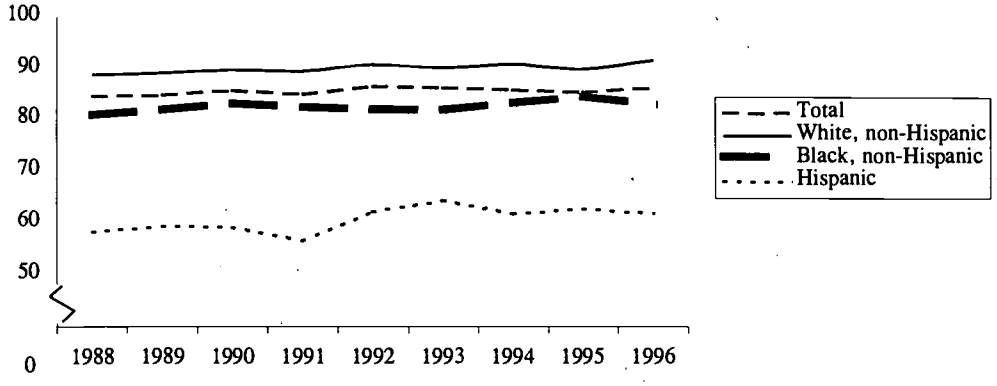
Note: Data for years prior to 1991 are not available.

High School Completion

The economic value of a high school education has continued to increase over the past two decades, although the overall high school completion rate—measured as the percentage of 18- to 24-year-olds who have earned a high school diploma or its equivalent—has increased only slightly. **The rate hovered around 84 percent between 1972 and 1983 and then increased in 1994 to 86 percent, where it has remained since.** Within particular racial/ethnic groups, completion rates have fared differently. The completion rates of white and black youth have increased over the past two decades, while completion

rates for Hispanics, although fluctuating somewhat, have remained stable at rates well below those of whites and blacks.[27] In 1996, approximately 91.5 percent of white young adults had completed high school, compared with 84 percent of blacks and about 62 percent of Hispanics.

EXHIBIT 2.15
HIGH SCHOOL COMPLETION RATES FOR PERSONS AGES 18-24 NOT CURRENTLY ENROLLED IN HIGH SCHOOL, BY RACE/ETHNICITY: OCTOBER 1988 THROUGH OCTOBER 1996



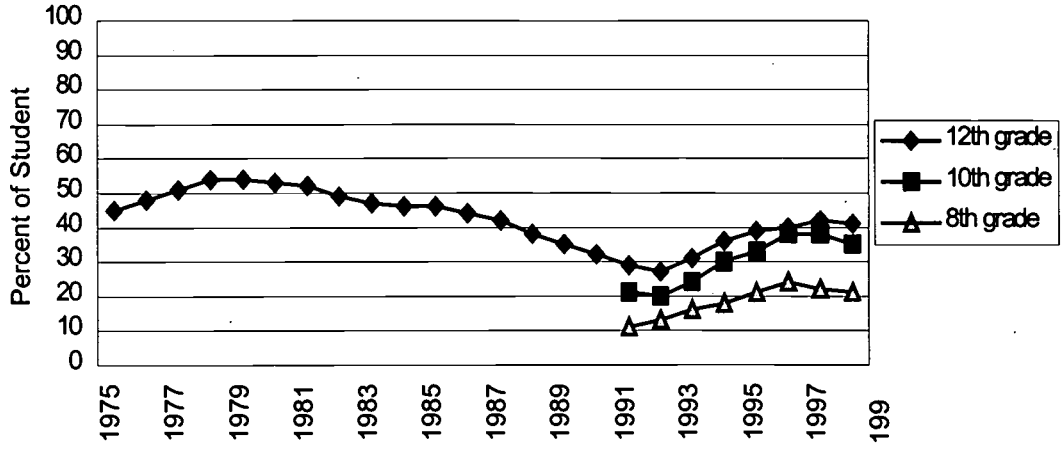
Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

The slow progress over the past decade in increasing high school completion rates is of major concern, since the costs of not completing high school have risen over the past decade. Earnings for college graduates have increased while earnings of high school completers and those without a high school diploma have decreased. Moreover, high school dropouts are more likely to face a number of difficulties in life. Compared with high school graduates, they are more likely to be unemployed and to receive public assistance, and young women who drop out are more likely to have children at younger ages and to be single parents.[28]

Drug Use and Violence

Drug use is declining but remains a concern. In 1998, after six years of steady increases in the use of illicit drugs, use among secondary school students is down, as shown in Exhibit 2.16.[29] This downturn represents the second year of decreases for eighth-graders and the first for tenth- and twelfth-graders since their previous declines early in the decade. The longest-term trend data for twelfth-graders show that, after peaking in the late 1970s, drug use declined steadily throughout the 1980s, and even after increasing in the 1990s did not return to its previous high. The recent downturn is considered modest but represents the reversal of a troublesome trend. Reported use of alcohol, which increased gradually among secondary students in the 1990s, also declined somewhat in 1998; yet one-third of high school seniors reported being drunk at least once in the previous 30 days.

EXHIBIT 2.16
TRENDS IN ANNUAL USE OF ILLICIT DRUGS AMONG SECONDARY SCHOOL STUDENTS

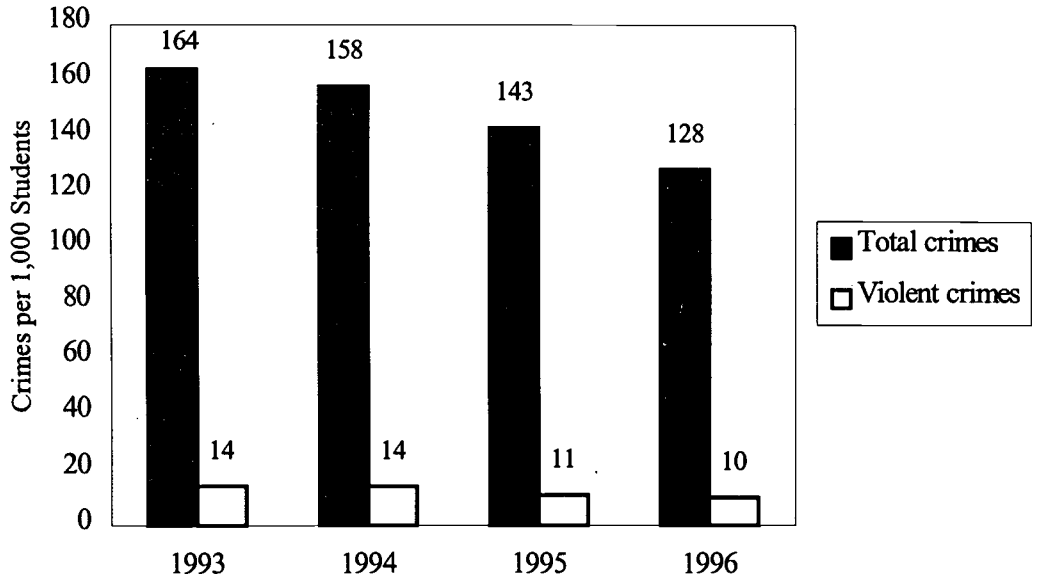


Source: *Monitoring the Future*, University of Michigan.

Note : Data are not available for eighth- and tenth-grade students prior to 1991.

Violence in schools appears to have decreased significantly. According to student reports, crime in or on the way to school has fallen steadily, from 164 crimes per 1,000 students in 1993 to 128 crimes per 1,000 students in 1996[30] (Exhibit 2.17). The most common school crime is theft, and violent crime is comparatively less common.[31] Students are almost twice as likely to experience violent crime outside school as they are in or going to school.[32] However, one in 10 schools reported at least one violent crime in the 1996-97 school year.[33]

EXHIBIT 2.17
NUMBER OF VICTIMIZATIONS OF STUDENTS AGED 12 TO 18 OCCURRING AT OR ON THE WAY TO SCHOOL, PER 1,000 STUDENTS



Source: Annual Report on School Safety, 1998, U.S. Department of Education and U.S. Department of Justice.

Note: According to a household survey of students.

[1] A recent report from the National Research Council, *Grading the Nation's Report Card*, (National Academy Press, 1999) raised questions about the internal consistency and validity of the achievement levels and concluded that they should continue to be considered developmental and therefore be interpreted and used with caution (p. 183).

[2] U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Fourth-Grade Mathematics and Science Achievement in International Context* (Washington, DC: U.S. Government Printing Office, 1997); U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching, Learning, Curriculum, and Achievement in International Context* (Washington, DC: U.S. Government Printing Office, 1996) 18; U.S. Department of Education, National Center for Education Statistics, *Reading Literacy in the United States: Findings from the IEA Reading Literacy Study* (Washington, DC: U.S. Government Printing Office, 1996); U.S. Department of Education, National Center for Education Statistics, *1996 Science Performance Standards, 1996 Math Report Card, 1994 Reading Report Card* (Washington, DC: U.S. Government Printing Office, 1996).

[3] Patricia L. Donahue, Kristin E. Voelkl, Jay R. Campbell, and John Mazzeo, *NAEP 1998 Reading Report Card for the Nation* (Washington, DC: U.S. Government Printing Office, 1998) 20.

[4] Clyde M. Reese, Karen E. Miller, John Mazzao, and John A. Dorsey, *NAEP 1996 Mathematics Report Card* (Washington, DC: U.S. Government Printing Office, 1996) 47.

[5] U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Fourth-Grade Mathematics and Science Teaching*, 1997; U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching*, 1996; U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of Twelfth-Grade Mathematics and Science Achievement in International Context*, 1998.

[6] NAEP measures for low-income status using percentage of students receiving free and reduced-price lunch go back to 1986 in math and 1988 in reading. For earlier trend data back to 1970, see I.V.S. Mullis et al., *Trends in Academic Progress* (Washington, DC: U.S. Department of Education, 1991). Earlier measures of the gap in performance by poverty were made by comparisons of children living in advantaged and disadvantaged urban communities. Mullis found some closing of the gap in performance between students in advantaged and disadvantaged urban communities through the late 1980s.

[7] NAEP trend scores are reported for 9-, 13-, and 17-year-olds. Most U.S. students of those ages are enrolled in fourth, eighth, and twelfth grades, respectively.

[8] Jay R. Campbell, Kristin E. Voelkl, and Patricia L. Donahue, *Report in Brief: NAEP 1996 Trends in Academic Progress* Publication No. 98-530 (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 1998) 5-6.

[9] U.S. Department of Education, National Center for Education Statistics, *Reading Literacy in the United States: Findings from the IEA Reading Literacy Study* (Washington, DC: U.S. Government Printing Office, 1996).

[10] Campbell, Voelkl, and Donahue, 1998, 14-15, 17-18.

[11] Donahue et al., 1998, 20.

[12] Donahue et al., 1998, 70.

[13] U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Fourth-Grade Mathematics and Science Achievement in International Context* , 1997.

[14] U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Achievement in International Context* , 1996.

[15] U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Twelfth-Grade Mathematics and Science Achievement in International Context* , 1998.

[16] John H. Bishop, "Employment Testing and Incentives to Learn," *Journal of Vocational Behavior* 33 (1988): 404-423.

[17] Campbell, Voelkl, and Donahue, 1998, 5-6, 14-15, 17-18.
[18] Reese et al., 1996, 47.
[19] U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Fourth-Grade Mathematics and Science Achievement in International Context*, 1997.
[20] U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Achievement in International Context,* 1996.
[21] U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence: A Study of U.S. Twelfth-Grade Mathematics and Science Achievement in International Context*, 1998.
[22] Campbell, Voelkl, and Donahue, 1998, 5-6, 14-15, 17-18.
[23] U.S. Department of Education, National Center for Education Statistics, *1996 Science Performance Standards* (Washington, DC: U.S. Government Printing Office, 1996) 23.
[24] Rolf Blank and D. Langesen, *State Indicators of Science and Mathematics Education: 1997* (Washington, DC: Council of Chief State School Officers, 1997) 24.
[25] U.S. Department of Education, National Center for Education Statistics, *The 1994 High School Transcript Study Tabulations: Comparative Data on Credits Earned and Demographics for 1994, 1990, 1987, and 1982 High School Graduates* (Washington, DC: U.S. Government Printing Office, 1996).
[26] The College Board, Advanced Placement Program, *National Summary Reports,* various years.
[27] U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States,* (Washington, DC: U.S. Government Printing Office, 1996).
[28] U.S. Department of Education, National Center for Education Statistics, *Dropout Rates*, 1996.
[29] University of Michigan, Survey Research Institute, Institute for Social Research, *Monitoring the Future Study* (Ann Arbor, MI: University of Michigan, Survey Research Institute, Institute for Social Research, December 1998).
[30] U.S. Department of Education and U.S. Department of Justice, *Annual Report on School Safety 1998* (Washington, DC: U.S. Government Printing Office, 1998) 2.
[31] Serious violent crime includes murder, rape or other type of sexual battery, suicide, physical attack or fight with a weapon, and robbery.
[32] U.S. Department of Education and U.S. Department of Justice, *Annual Report on School Safety 1998*, 2.
[33] U.S. Department of Education and U.S. Department of Justice, *Annual Report on School Safety 1998*, 3.

3. ARE FEDERAL EDUCATION PROGRAMS HELPING TO PREPARE CHILDREN FOR SCHOOL?

Key Findings

Title I, Part A

- Serving about 260,000 preschool-age children, Title I, Part A, is the largest of the Department's early childhood efforts, yet little data exist on program performance or on the quality of preschool services funded under the program. Recent evaluations have not explicitly addressed this topic.

Even Start

- The Even Start Family Literacy Program serves approximately 34,000 seriously economically and educationally disadvantaged families and their children. The second national evaluation found that at least 90 percent of these families had incomes at or below the federal poverty level. Eighty-five percent of adults had not earned a high school diploma or GED at enrollment.

- On average, Even Start projects have increased the amount of instruction they have offered in all core service areas over time, and attendance rates have improved. However, only about 25 percent of all projects meet or exceed the Department's performance indicator for the number of service hours offered in the three core instructional components.

- About half of new Even Start families in 1995-96 dropped out of the program within the first year, for reasons other than accomplishing their goals or moving out of the area.

- Children who participate in Even Start for at least one year make more progress on measures of school readiness and language development than could be expected by normal development.

- Parents also showed moderate gains on a measure of the home environment for literacy, gains not found in a control group of parents in a study of the Comprehensive Child Development Program.

- A 1998 synthesis of Even Start evaluations found that the quality of local evaluations varied, and that, as shown in their evaluation reporting, projects "rarely engage in the systematic use of data to manage and improve their programs."

Education for Homeless Children and Youth

- The percentage of state administrators who report that homeless children in their state had no difficulty enrolling in public preschool programs has increased slightly, but is still below 20 percent.

The first National Education Goal states, "By the year 2000, all children in America will start school ready to learn." Although no national benchmark for "school readiness" has been agreed upon, the National Goal includes three specific objectives:

- All children will have access to high-quality and developmentally appropriate preschool programs that help prepare children for school.
- Every parent in the United States will be a child's first teacher and devote time each day to helping their child learn, and parents will have access to the training and support parents need.
- Children will receive the nutrition, physical activity experiences, and health care needed to arrive at school with healthy minds and bodies, and to maintain mental alertness necessary to be prepared to learn, and the number of low-birthweight babies will be significantly reduced through enhanced prenatal health systems.

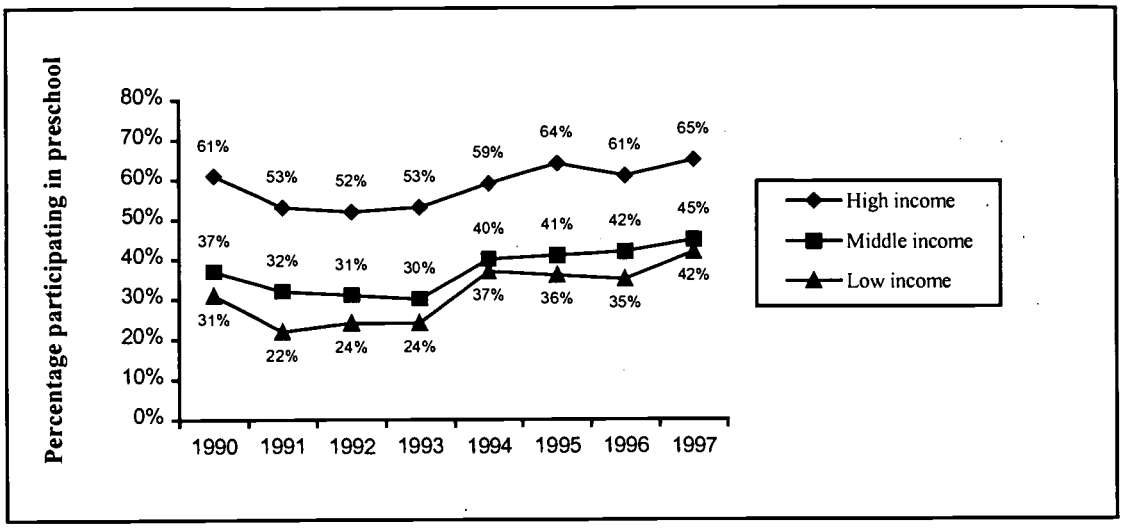
In addition, one of the objectives in the Department of Education's Strategic Plan is that all children will enter school ready to learn. One of the indicators of progress for this objective reflects the extent to which children from low-income families participate in preschool.

National Indicator: The disparity in preschool participation rates between children from high-income families and children from low-income families will become increasingly smaller.

Despite the federal and state investment in early childhood programs, national data show that children from high-income families are more likely to attend preschool than children from low-income families, although participation rates for both groups have increased over the past decade. As Exhibit 3.1 shows, in 1997, 42 percent of three- and four-year-olds from low-income families were enrolled in preschool programs, compared with 45 percent of those from middle-income families and 65 percent of those from high-income families.[1]

Research in the field of early childhood education indicates that quality matters. While research suggests that participation in high-quality preschool services leads to short-term gains, often these effects "fade out" if not reinforced in the primary grades. In addition, researcher-developed model programs are the most likely to produce long-term learning gains; results of large-scale public programs reviewed by Barnett in 1995 were variable.[2] Studies have found that high-quality programs produce positive outcomes, including greater school achievement, reduced retention in grade, and increased rates of high school graduation. However, the cost of these high-quality programs is high. The Perry Preschool program is an example of such a nationally recognized high-quality program. Vinovskis cites data from Barnett showing that the Perry Preschool program would cost more than $12,000 per child in 1990 dollars. Vinovskis also notes that this program costs about three times what Head Start costs.[3] Both the results of early childhood education programs as well as the cost-effectiveness of providing services of sufficient quality must be examined further.

EXHIBIT 3.1
PRESCHOOL PARTICIPATION OF CHILDREN FROM LOW-, MIDDLE-, AND HIGH-INCOME FAMILIES, 1990-1997



Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, unpublished tabulations.

Note: Data collected in 1994 and later were collected using new procedures and may not be comparable with figures for earlier years.

Research on brain development and reading difficulties provides an important incentive for further examination of the possibilities of early childhood education, specifically, family literacy and services for very young children, starting at birth. Research has found that "important experiences related to reading begin very early in life."[4] Reading is the foundation for all other learning. Ensuring that all children have the early learning experiences necessary for learning to read is vital to their future school success. Programs for young children that foster emergent literacy and help parents reinforce their children's learning may reduce the number of children who have difficulty learning to read once they enter school.

Introduction to the Programs and the 1994 Legislative Changes

Several programs funded by the federal government focus on school readiness, most notably the Head Start program administered through the U.S. Department of Health and Human Services. The Head Start program represents the federal government's largest investment in early childhood services, with a 1999 appropriation of almost $4.7 billion.[5] Head Start funds local programs that provide comprehensive health, education, parental involvement, nutritional, social, and other services to aid low-income, preschool-age children to attain their full potential.[6] The program served almost 800,000 children in 1998.[7] However, evidence of the program's effectiveness on increasing student achievement has been mixed.[8]

The Department of Education's efforts to increase children's school readiness generally focus on ensuring that needy children have access to preschool services and providing assistance in family literacy and

parental involvement. Several Department of Education programs include provisions for preschool services. The Department of Education also sponsors the Partnership for Family Involvement in Education, an initiative begun in 1994 to bring together employers, educators, families, religious groups, and community organizations to improve schools and raise student achievement. In 1994, Congress reauthorized three of these readiness-related programs: (1) Title I, Part A, Improving Basic Programs Operated by Local Educational Agencies; (2) the Even Start Family Literacy Program; and (3) the Education for Homeless Children and Youth provisions of the Stewart B. McKinney Homeless Assistance Act.

Title I, Part A, is the largest of the programs reauthorized. This program focuses on enabling schools to provide opportunities for the children served to acquire the knowledge and skills contained in challenging state content and student performance standards.[9] The program provides grants to states to support the improvement of basic programs operated by school districts. Grants to states and districts are distributed on a formula basis. Program funds may be used at the local level for preschool services. The 1994 reauthorization of this program focused on improving the quality of preschool services provided through the program by requiring adherence to specific quality standards. Preschool programs under Title I, Part A, are required to comply with the Head Start Performance Standards[10]or to use the Even Start model.

The Even Start Family Literacy Program is a state-administered discretionary grants program that provides support to states and local grantees for family literacy programs that integrate early childhood education, adult literacy or basic education, and parenting education for the purpose of breaking the cycle of poverty and illiteracy in low-income families. Even Start, a demonstration program, is designed to promote achievement of the National Education Goals, help children from low-income families prepare for success in school, and help the parents of these children improve their education, literacy, and potential for self-sufficiency. The program serves children from birth through age seven and their parents who are most in need of family literacy services as defined by a low level of income, a low level of adult literacy or English-language proficiency, and other need-related indicators. As a result of findings from the national evaluation of the program and lessons learned from implementation, the 1994 reauthorization made several substantive changes to the Even Start program, including these:

- Target services to those families most in need, with special attention to teenage parents;
- Promote continuity and retention of grantees by requiring projects to provide services to at least a three-year age range of children and to provide services over the summer months;
- Focus on family services by allowing projects to permit ineligible family members to participate in appropriate family literacy activities; and
- Require stronger collaboration between schools and communities in the application and implementation process.

Amendments subsequent to the 1994 reauthorization include a requirement, enacted in 1996, that instructional services be intensive.[11] Recent amendments to the Even Start program included in the Reading Excellence Act (part of the FY 1999 Appropriations Bill for Health and Human Services, Labor, and Education) address the need for local evaluations to collect data on program effectiveness, and require the Department of Education to provide technical assistance to states and Even Start projects to ensure that local evaluations provide accurate information on the effectiveness of local projects. The legislation also requires states to develop results-based indicators of program quality and to use these indicators to monitor, evaluate, and improve Even Start programs.[12] The legislation lists several

indicators that must be included for adults and children. For participants who are children, the indicators must include the following:

- Improvement in ability to read on grade level or reading readiness;
- School attendance;
- Grade retention and promotion; and
- Such other indicators as the states may develop.[13]

The Education for Homeless Children and Youth provisions of the Stewart B. McKinney Homeless Assistance Act require states to ensure that homeless children have equal access to a free, appropriate public education, and to provide funds that may be used to support preschool programs for homeless children at the local level. Funds for the Education for Homeless Children and Youth program are distributed to states on a formula basis. States have discretion in making subgrants to districts. Reauthorization of this legislation in 1994 added several provisions that were specific to preschool services, including these:

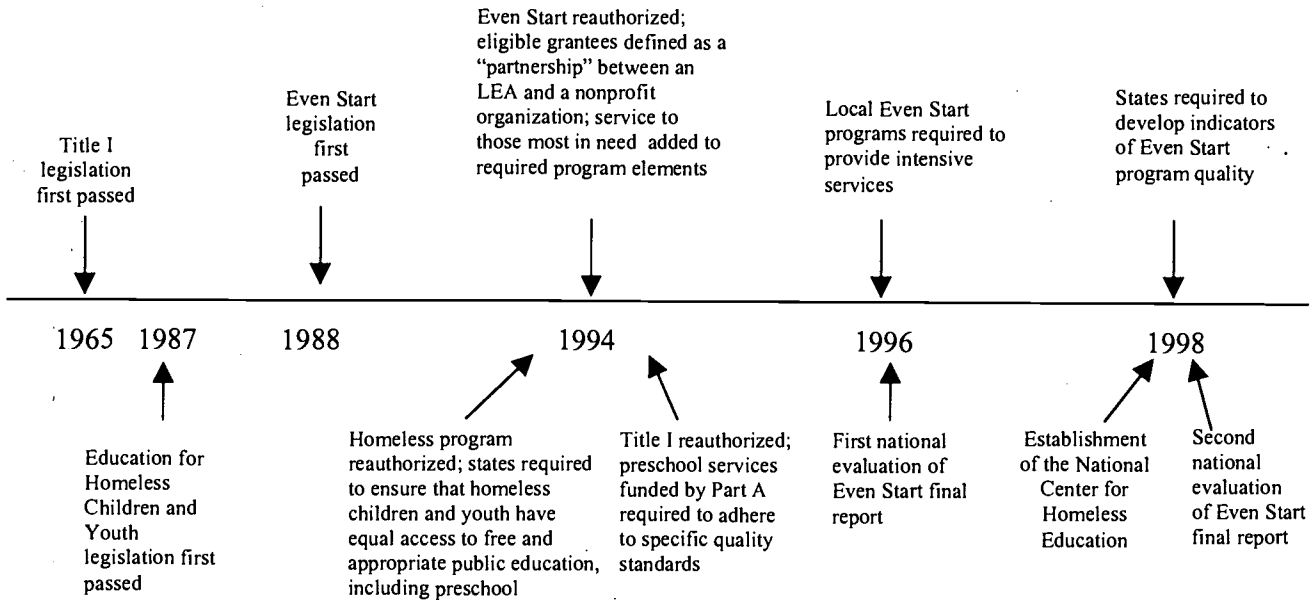
- A requirement that states ensure that homeless children and youth have equal access to the same free and appropriate public education, including preschool education, as is provided to other children and youth, and
- Provisions that specifically allow and encourage the funding of preschool services for homeless children through the program.[14]

In addition, the Department of Education funds preschool services for children with disabilities through programs authorized under the Individuals with Disabilities Education Act (IDEA), including Grants to States for the Education of Children with Disabilities, Preschool Grants for Children with Disabilities, and the Early Intervention Program for Infants and Toddlers with Disabilities. Although these programs represent the Department of Education's largest investment in preschool services, programs funded through IDEA are not included in this chapter's discussion because IDEA was recently reauthorized. This reauthorization changed these programs, but there are no new data on them to date.

The Department of Education also supports the National Center for Early Development and Learning, which is conducting a comprehensive research and development program in early childhood education. In addition to federal programs, at least 32 states fund prekindergarten programs, mostly for low-income or otherwise at-risk children.[15]

This chapter focuses on the three readiness-related programs funded through the Department of Education that were reauthorized in 1994. Exhibit 3.2 summarizes key legislative events and program evaluations for school readiness programs.

EXHIBIT 3.2
TIMELINE FOR SCHOOL READINESS PROGRAMS



Source: U.S. Department of Education.

Exhibit 3.3 summarizes the key readiness-related provisions of these three programs and describes how each of the programs works.

EXHIBIT 3.3
SCHOOL READINESS PROGRAMS AT A GLANCE

Program Name	1999 Appropriation	Purpose	Funding and Targeting	Participation	Readiness-related Services
Title I, Part A	An unknown percentage of $7.676 billion is used for Title I preschool. Preschool children comprise an estimated 2% of Title I participants.	Enable schools to provide opportunities for children served to meet challenging state content and student performance standards.	Formula grants to states and districts based on poverty level	50 states More than 44,000 public schools More than 11 million children, including more than 260,000 preschool-age children	Preschool services for children who are failing, or most at risk of failing, to meet the state's challenging performance standards
Even Start Family Literacy Program	$135 million	Improve educational opportunities of low-income families by integrating early childhood education, adult literacy or adult basic education, and parenting education into a unified family literacy program.	Formula grants to states based on Title I, Part A, allocations Discretionary grants to local partnerships comprised of school districts and community-based organizations, based on demonstrated need and likelihood of success	50 states More than 700 local partnerships More than 34,000 families and 48,000 children below age eight, who are most in need of family literacy services	Local family literacy projects that provide (1) adult education for parents, (2) early childhood education for their children, (3) assistance for parents to effectively promote their children's development
Education for Homeless Children and Youth	An unknown percentage of $28.8 million supports ensuring equal access to public preschool education.	Ensure that homeless children and youth have equal access to the same free, appropriate, public education, including public preschool education, provided to other children and youth.	Formula grants to states based on Title I, Part A, allocations Discretionary grants to local educational agencies based on demonstrated need	50 states Children and youth of preschool, elementary, or secondary school age who are homeless	State and local activities to ensure that homeless children and youth have equal access to a free, appropriate, public education and have an opportunity to meet challenging state student performance standards

Source: U.S. Department of Education.

What Do We Know about Good Readiness Programs?

Preschool programs should prepare children for success in school. This preparation includes encouraging the development of early literacy and the building blocks for later reading (such as learning the alphabet) and other school readiness skills. The Department of Education's *Guide to Quality for Even Start Family Literacy Programs* lists a variety of specific quality considerations for providing each of the instructional components of Even Start family literacy services.[16] However, these quality considerations are not limited to Even Start but can serve as standards of good practice for all early childhood programs. The considerations are drawn from guidelines published by the National Association for the Education of Young Children and findings from evaluations of the Even Start program.

In general, considerations of quality in Even Start programs relate to the importance of the following elements:

- **Well-qualified and well-trained staff;**
- **Staff-child ratios that allow for frequent staff-child interaction and meet state licensing standards;**
- **Safe, comfortable, age-appropriate, culturally appropriate, and language-rich environments;**
- **Curricular bases that address all areas of children's development**—social, emotional, physical, cultural, cognitive, aesthetic, and language—and that encourage interactive experiences and child-initiated learning;
- **Language-rich environments** in which children are read to daily, books and other reading material are abundant, and staff demonstrate ways to encourage children to talk and represent their ideas in stories and pictures;
- **Expectations and activities geared to the needs and development of each child;**
- **Parent input and involvement; and**
- **Sufficient intensity of early childhood experiences**—ideally at least 60 hours monthly for children ages three to five.

These quality considerations are based on the Even Start legislation, which calls for "high-quality" and "intensive" instructional programs and "developmentally appropriate" early childhood services. However, the quality considerations provide more specific guidelines for meeting these requirements than are provided in the legislation. For example, neither the legislation nor the guidance defines what is a "sufficiently intensive" instructional program, although the Department of Education's performance indicator plan for Even Start identifies target levels for service intensity.

The Homeless Education legislation also requires that preschool services be "developmentally appropriate." Preschool programs funded through Title I, Part A, may use the Even Start model or must meet the Head Start Program Performance Standards. The Head Start Program Performance Standards are generally consistent with the Even Start quality considerations, although they also do not address intensity of services.

How Well Are the Programs Working?

Little data exist on whether or not preschool programs funded through Title I, Part A, adhere to the specific quality considerations in the Guide to Quality for Even Start Family Literacy Programs or the Head Start Program Performance Standards, or on the programs' performance. Available data do suggest that, consistent with the Homeless program's legislative mandate, access to preschool programs among homeless children may be improving.

The Even Start national evaluation provides rich descriptive data, but in-depth information on project quality is limited. Data on program performance from the second national evaluation of Even Start

indicate that the program has improved the school readiness skills of participating children, improved the parenting skills of participating adults, and recruited those families most in need of services. The program has been less successful in meeting the targets set in the program's performance indicator plan for intensity of services and retention of participants.

The following findings are organized around key indicators identified for the programs under the Government Performance and Results Act.

Even Start

In all three core areas (early childhood education, adult literacy or basic education, and parenting education) assessed throughout the life of the program, Even Start participants have made gains. However, in a small-scale experimental study in five projects during the first national evaluation (1989-90 through 1992-93), families in a control group achieved similar gains on most measures, suggesting that Even Start did not cause the gains of participating families.[17] It is important to note that although control group families were restricted from participating in Even Start, they were not restricted from participating in other early childhood, parenting, or adult education programs they could find on their own. Thus control group families may have received educational services similar to those provided through Even Start. In addition, this study was conducted during the early years of the program, and important changes to the program have been made since the time of the study.

The second national evaluation (1993-94 through 1996-97) assessed program outcomes through a sample study of Even Start projects and did not include a control group. The outcomes described below come from this sample study and are based on data from participants who remained in Even Start long enough for at least two rounds of data collection (about one program year). This means that the results below cannot be generalized to the universe of Even Start participants.

The Even Start program shows progress toward key program performance indicators related to school readiness for families who participate for about one year.

In 1995-96, 50 percent of children in the second national evaluation of Even Start achieved moderate-to-large gains on a test of language development.[18] This evaluation also found that children who participated in the Even Start program for at least one year made greater progress on tests of school readiness and language development than would be expected on the basis of development alone. The longer children participate in Even Start, the steeper their growth rate, on average.[19]

Program Indicator: By fall 2001, 60 percent of Even Start children will achieve significant gains on measures of language development and reading readiness.

The second national evaluation assessed changes in the home environment, using a questionnaire that measured the quality of cognitive stimulation and emotional support provided to children by their families. **Throughout the second national evaluation, Even Start parents showed moderate gains in improving the home environment.**[20] This finding compares favorably with a national evaluation of the Comprehensive Child Development Program (CCDP), a family-support, two-generation program that was funded by the Department of Health and Human Services. Control families in the CCDP evaluation showed no gains on this measure over time.[21] In 1995-96, 41 percent of parents scored 75 percent or higher on the measure.[22]

Program Indicator: Increasing percentages of parents will show significant improvement on measures of parenting skills, home environment, and expectations for their children.

The second national evaluation of Even Start found that at least 90 percent of Even Start families participating in 1996-97 had incomes at or below the federal poverty level at intake.[23] Even Start families also demonstrate educational need. The percentage of Even Start adults without a high school diploma or GED at entry increased from 79 percent in 1992-93 to 85 percent in 1996-97. Forty-five percent of adults who enrolled in 1996-97 had not gone beyond grade 9.[24] The percentage of Even Start parents with limited English proficiency also has increased since 1992-93.[25] More than one-third of families who enrolled in Even Start in 1996-97 were headed by parents who did not speak English at home.[26] About three-quarters of these parents had difficulty in understanding, speaking, or reading English.

Program Indicator: The projects will continue to recruit low-income, disadvantaged families with low literacy levels.

Although the average intensity of services has increased over time, most projects still fall well below the performance indicator for service intensity. The first national evaluation of Even Start found a relationship between service intensity and educational outcomes for children and adults.[27] Data from the second national evaluation of Even Start demonstrate that, on average, hours of instructional services offered to participants increased steadily from 1993-94 to 1996-97.[28] In 1995-96, half of projects offered 32 hours or more of adult education per month, 13 hours or more of parenting education per month, and 34 hours or more of early childhood education per month.[29] Only about 25 percent of projects meet or exceed the Department's performance indicator for the number of service hours offered in the three core instructional components.

Program Indicator: By fall 2001, half of projects will offer at least 60 hours of adult education per month, 20 hours of parenting education per month, and 65 hours of early childhood education per month.

Projects face a trade-off between the number of families they can serve and the intensity of services they can offer to each family. An observational study of 12 well-implemented projects examined projects' service intensity and found the following: "Almost all of the projects provided center-based services for at least 20 hours per week in at least one site; however, many projects served two different groups of participants every week by dividing their weekly operating schedules into morning and afternoon sessions or Monday/Tuesday and Wednesday/Thursday sessions. Fewer than half the projects were designed to provide at least 20 hours per week of center-based services to all families."[30] The Department of Education should continue to stress the importance of providing intensive services, even if it means serving fewer families per project. The effectiveness of the Department of Education's leadership in this regard is suggested by the fact that the average number of families per project decreased from 58 in 1993-94 to 54 in 1996-97.

The national evaluations show that, despite small improvements, improving retention is a major challenge for the Even Start program. Of new families entering in 1995-96, 41 percent stayed for more than one year.[31] Almost 5 percent met family-defined goals and 6 percent moved out of the area.[32]

Program Indicator: By fall 2001, at least 60 percent of new families will stay in the program for more than one year.

Findings from the national evaluation of Even Start suggest that the program has been successful in building on existing services. Although not included in program performance indicators, an additional key legislative requirement for the implementation of Even Start is that the projects build on existing community resources to create a new range of services. As a result, Even Start funds are often referred to as "glue" that can bind existing community services.[33] In 1996-97, collaborating agencies were solely responsible for providing adult education services in about one-third of project sites, and Even Start and collaborating agencies shared responsibilities for adult education in about one-quarter of project sites.[34] In the domain of early childhood education, collaborators exclusively provided or shared responsibility

for services to 3- and 4-year-olds in just over half of the sites, and provided or shared responsibility for services to 5-year-olds in approximately two-thirds of sites. Services for infants and toddlers and parenting education services were most likely to be provided directly by local Even Start projects.[35]

Education for Homeless Children and Youth

Preliminary data from a 1998 study suggest that access to preschool programs among homeless children may be improving. According to this data, in 1998, 16 percent of state administrators reported that homeless children in their state had no difficulty accessing Head Start or other publicly funded preschool programs.[36] This is an improvement from 1994, in which only 11 percent of state coordinators reported that homeless children in their state had no difficulty accessing these programs.[37]

Program Indicator: An increasing percentage of preschool-age homeless children will enroll in preschool programs.

Options for Strengthening the Programs

To better assess progress toward the National Education Goal that, by the year 2000, all children will start school ready to learn, and to improve program quality and accountability, national standards for school readiness could be developed. There are no consistent standards on school readiness at the national or state levels to which programs can be held accountable, or by which progress toward the National Goal can be measured. Similarly, there is no regular source of information at the national level that can be used to monitor the school or reading readiness skills of preschoolers over time.[38]

Specifically, such standards for school readiness should focus on ensuring that the preschool experience equips children with cognitive skills needed for learning to read in school. Such standards would take into account the work of the Committee on Early Childhood Pedagogy (National Research Council, National Academy of Sciences) that is currently being funded by the Department of Education to identify what young children between age two and five should be learning, how best to teach them these skills and knowledge, and how to measure the extent to which the desired learning is taking place.[39] An alternative would be to require states to develop state standards and to report annual progress toward them. This is one way to emphasize the importance of preschool experiences that stimulate children's cognitive growth and provide a solid foundation for academic learning.

Even Start services should be more intense. Although Even Start legislation calls for intensive services, what constitutes "intensive services" is not defined in the legislation or policy guidance. It is possible that this lack of clear guidance has contributed to the findings that relatively few projects meet the Department of Education's indicator for service intensity, and that projects vary greatly in the intensity of services they offer. Few projects meet a level of intensity that might be expected to produce large literacy gains for families who are most in need. **Projects need clearer guidance on what constitutes intensive services.** In addition to the indicators specifically listed in the Even Start amendments of 1998, additional indicators might address the issue of intensity. States could develop an indicator that identifies the levels of service intensity and duration of participation that are necessary to achieve state-defined outcomes. For further guidance, the Department of Education's program performance plan for Even Start sets target levels of service intensity, as discussed earlier.

Even Start families should stay in the program longer. Even Start is unique among federal programs in its ability to serve families with children from birth through age 7. Although many other programs serving young children are meant to last only nine months to a year, Even Start has the potential to help children progress from infancy through the third grade. Furthermore, Even Start families, having such profound educational and economic needs, need intensive, sustained services to achieve substantial outcomes. Although not required, the Department has encouraged states to provide multiple-year services through policy and technical assistance, and is working in partnership with states to improve retention. However, about half of new Even Start families in 1995-96 dropped out of the program within the first year, for reasons other than accomplishing their goals or moving out of the area. Increasing the amount and duration of both instructional and support services offered and making them more flexible are critical to increasing the retention of families. **Further examination of the reasons families leave Even Start and the long-term benefits of participation in the program is needed to improve retention and to understand what level of treatment is needed to yield long-term benefits.**

The quality of Even Start services should be improved. The legislative framework that drives Even Start makes ensuring quality difficult. The requirement to build on existing services, while reducing unnecessary duplication, creates challenges because Even Start is only as good as the existing services it brings together. While projects have been successful in arranging a good number of collaborations, preliminary findings from an observational study of 12 well-implemented projects indicate that there is limited data collection and reporting of outcomes of services provided by collaborators.[40] As a result, it is very difficult to assess the quality of these existing services. **In order for Even Start to be successful, local projects should not only collaborate as the legislation requires, but also work to ensure that collaborations can produce the literacy outcomes expected of Even Start.** Projects need to start on a solid foundation by building only on existing services of high quality. Furthermore, projects need to create meaningful relationships with collaborators to integrate the different services into a coherent program. Simply locating a Head Start or other preschool program that will take some of their preschool-age children is not sufficient.

The accountability of the Even Start program, preschool programs under Title I, Part A, and Education for Homeless Children and Youth needs to be strengthened. As discussed earlier, Title I, Part A, preschool programs represent the largest of the Department of Education's investments in early childhood education. Yet very little is known about the quality and performance of preschool programs funded under this program. The Reading Excellence Act's amendments to the Even Start program will improve states' ability to hold projects accountable for their outcomes. As noted, these amendments require states to develop results-based indicators of program quality for Even Start programs. **Preschool programs funded under Title I, Part A, might also report on the child-based indicators (such as improvement in reading readiness) and, where appropriate, on the adult-based indicators (such as receipt of a high school diploma or GED).**

The Department of Education should also coordinate with the Head Start program in the Department of Health and Human Services to develop a common set of core indicators for preschool outcomes. The 1998 reauthorization of Head Start, much like the amendments to the Even Start program, calls for the use of educational performance measures. The measures in the Head Start legislation are more specific than the indicators listed in the amendments to Even Start. Head Start programs are to include measures that ensure that children "know that letters of the alphabet are a special category of visual graphics that can be individually named; recognize a word as a unit of print; identify at least 10 letters of the alphabet; and associate sounds with written words."[41]

Local Even Start, Title I, and Homeless programs should be encouraged to adopt a continuous improvement framework for project management and evaluation, and to report results to state administrators, so as to help local project and state administrators ensure program quality and

accountability. Although local Even Start projects are required to conduct annual, independent evaluations, state administrators are not required to collect or review these evaluations. In addition, a 1998 synthesis of Even Start evaluations found that the quality of local evaluations varied,[42] and that, as shown in their evaluation reporting, projects "rarely engage in the systematic use of data to manage and improve their programs."[43] The underlying principle behind continuous improvement is the use of data. Such a framework would include developing measurable goals and objectives, identifying and implementing strategies to reach those goals and objectives, engaging in rigorous and objective assessment, and using these assessment data for continuous program improvement.

The Department of Education is currently exploring the viability of this framework as part of a three-year, in-depth study of 12 local Even Start projects. Although findings from this ongoing study are not yet available, all 12 projects expressed an interest in developing a continuous improvement framework for use in their projects. They are developing a rigorous, systematic plan for using the continuous improvement framework to evaluate their own services. The amendments to the Even Start program as part of the Reading Excellence Act also begin to build an infrastructure for such a framework. **The Department of Education should provide states and local projects with technical assistance to ensure that local evaluations provide accurate information on the effectiveness of local Even Start programs.** The Department will also provide assistance to states in developing and using results-based indicators through the Statewide Family Literacy Initiative grants authorized by the Reading Excellence Act.

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[2] W. Steven Barnett, "Long-Term Effects of Early Childhood Programs on Cognitive and School Outcomes," *The Future of Children* vol. 5 no. 3 (Los Altos, CA: The Center for the Future of Children, Winter 1995) 25, 40-51.
[3] Maris A. Vinovskis, *The Development and Effectiveness of Compensatory Education Programs: A Brief Historical Analysis of Title I and Head Start* draft October 1998, 20.
[4] Committee on the Prevention of Reading Difficulties in Young Children, Commission on Behavioral and Social Sciences and Education, and National Research Council, *Preventing Reading Difficulties in Young Children* (Washington, DC: National Academy Press, 1998) 317.
[5] U.S. Department of Health and Human Services, *Head Start 1998 Fact Sheet*, Head Start Bureau Web Page, http://www2.acf.dhhs.gov/programs/hsb/html/hs_98_fact_sheet.html, Oct. 29, 1998.
[6] Head Start Act, section 638.
[7] U.S. Department of Health and Human Services, *Head Start 1998 Fact Sheet*.
[8] For more information, see U.S. General Accounting Office, *Research Insufficient to Assess Program Impact* GAO/T-HEHS-98-126 (Washington, DC: U.S. General Accounting Office, March 26, 1998) and U.S. General Accounting Office, *Head Start: Research Provides Little Information on Impact of Current Program* GAO/HEHS-97-59 (Washington, DC: U.S. General Accounting Office, April 15, 1997.)
[9] Elementary and Secondary Education Act, section 1001(d).
[10] For more information on the Head Start Performance Standards, see U.S. Department of Health and Human Services, *Program Performance Standards for the Operation of Head Start Programs by Grantee and Delegate Agencies* (Washington, DC: U.S. Department of Health and Human Services, October 1997) 231-32.
[11] P.L. 104-34, section 2755.
[12] Reading Excellence Act, sections 203 and 204.
[13] Reading Excellence Act, section 204.
[14] Robin Bouckris, unpublished "McKinney Fact Sheet," December 1998.
[15] Gina Adams and Jodie Sandfort, *First Steps, Promising Futures: State Prekindergarten Initiatives in the Early 1990s* (Washington, DC: Children's Defense Fund, 1994).
[16] M. Christine Dwyer, *Guide to Quality Even Start Family Literacy Programs* (Portsmouth, NH: RMC Research Corporation, 1995) 35-36.
[17] Robert St. Pierre, Beth Gamse, Judith Alamprese, Tracy Rimdzius, and Fumiyo Tao, *Even Start: Evidence from the Past and a Look to the Future* (Washington, DC: U.S. Department of Education, 1998) 23.
[18] U.S. Department of Education, unpublished tabulations from the *National Evaluation of the Even Start Family Literacy Program.* A small standardized gain is generally in the range of 0.20 standard deviation units; a medium or moderate gain is about 0.50, and a large standardized gain is in the range of 0.80. See J. Cohen, *Statistical Power Analysis for the Social Sciences*, 2nd edition (Hillsdale NJ: Erlbaum, 1988).
[19] Fumiyo Tao, Beth Gamse, and Hope Tarr, *National Evaluation of the Even Start Family Literacy Program: 1994-97 Final Report* (Washington, DC: U.S. Department of Education, 1998) vii.
[20] Tao et al., 1998, ix.
[21] Tao et al., 1998, ix.
[22] U.S. Department of Education, *National Evaluation of the Even Start Family Literacy Program.*
[23] Tao et al., 1998, xii. Because of ambiguity in the national evaluation (ESIS) data collection form's use of the terms *family* and *household,* the family income reported may underestimate the household income for some Even Start families.
[24] Tao et al., 1998, xii.
[25] Tao et al., 1998, xiii.

[26] Tao et al., 1998, xiii.
[27] Tao et al., 1998, x. This finding was not replicated in the second national evaluation of the Even Start program. The authors of this second evaluation noted that increased variability in the quality of the data collected decreased their confidence in it.
[28] Tao et al., 1998, xvii.
[29] U.S. Department of Education, *National Evaluation of the Even Start Family Literacy Program.*
[30] M. Bruce Haslam and Elizabeth Stief, *Observational Study of Even Start Family Literacy Projects: Preliminary Findings* draft (Washington, DC: U.S. Department of Education, November 1998) 14.
[31] U.S. Department of Education, *National Evaluation of the Even Start Family Literacy Program.*
[32] U.S. Department of Education, *National Evaluation of the Even Start Family Literacy Program.*
[33] Tao et al., 1998, 68.
[34] Tao et al., 1998, 68.
[35] Tao et al., 1998, 69.
[36] U.S. Department of Education, unpublished tabulations from the *Study of Homeless Education: Follow-up to the 1995 National Evaluation of the Education for Homeless Children and Youth Program,* 1998, Item 21.
[37] Leslie Anderson, Matthew Janger, and Karen Panton, *An Evaluation of State and Local Efforts to Serve the Educational Needs of Homeless Children and Youth* (Washington, DC: U.S. Department of Education, 1995) 38.
[38] Federal Interagency Forum on Child and Family Statistics, *America's Children: Key National Indicators of Well-Being* (Washington, DC: Forum on Child and Family Statistics, 1998) 51.
[39] Naomi Karp, The National Institute on Early Childhood Development and Education, OERI. Personal communication with author regarding unpublished supporting documentation from the Committee on Early Childhood Pedagogy.
[40] Haslam and Stief, 1998, 21.
[41] Head Start Act, section 641A (4).
[42] Robert St. Pierre, Anne Ricciuti, and Cynthia Creps, *Synthesis of State and Local Even Start Evaluations* (Washington, DC: U.S. Department of Education, November 1998) 25.
[43] St. Pierre et al., 1998, 23.

4. ARE FEDERAL PROGRAMS HELPING STATES DEVELOP AND IMPLEMENT STANDARDS?

Key Findings

Standards and Assessment Development

- States have made substantial progress in developing state content standards. Currently, 48 states, Puerto Rico, and the District of Columbia have completed the development of state content standards. In 1995, only 19 states reported having content standards in place.

- States have made slower progress in developing state performance standards and aligned assessments. Twenty states and Puerto Rico have completed performance standards and 14 have assessments in place that are aligned to state content standards. Many other states are developing performance standards as they make final their assessments, which are not required to be in place until the 2000-01 academic year under Title I of the ESEA.

- Independent reviews of standards suggest that the quality and rigor of state standards vary. Differences in student achievement on the National Assessment of Educational Progress (NAEP) and student performance on state assessments suggest wide variation in the rigor of state standards.

- Ensuring that all students are held to challenging standards also is a concern. Policies for including disabled students and students with limited proficiency in English in state assessments vary across states, and accommodations for students not participating in state assessments are limited.

Federal Program Support for Standards-Based Reform

- According to a recent study by the General Accounting Office, states report that Goals 2000 has been a significant factor in promoting their education reform efforts and, in several cases, was a catalyst for standards-based reform.

- Almost half of district administrators report that Title I is "driving standards-based reform in the district as a whole" to a "moderate" or "great" extent, and 60 percent report that Title I is "driving standards based reform in the highest poverty schools in the district" to a "moderate" or "great" extent.

Alignment of Standards with Curriculum and Professional Development

- While awareness of standards has increased, states, districts, and schools have a long way to go to align their educational practices with standards. The proportion of Title I principals who report using standards to guide curriculum and instruction to a great extent increased from about half in 1995-96 to 74 percent in 1997-98. But only six states currently have a policy that aligns professional development for teachers with standards. Only 38 percent of teachers feel well prepared to implement standards in the classroom.

In 1989, the President and the nation's governors met for an education summit to begin to focus a decentralized education system around common and challenging expectations for all students. The meeting helped launch a unique bipartisan and intergovernmental body of federal and state officials, the National Education Goals Panel, to articulate plans for helping all students receive a world-class education. National goals were established, including ensuring that children are ready to learn when they enter school, raising student achievement, and improving adult literacy.

In response to the growing interest in standards, Congress created the National Council on Education Standards and Testing (NCEST) to explore the feasibility of national standards and recommend policies related to standards. NCEST observed, "In the absence of well-defined and demanding standards, education in the United States has gravitated toward *de facto* national minimum expectations," and urged the creation of standards that specify the content and level of performance expected from students, reflect high expectations, are national but not federal, and are voluntary rather than mandated.[1]

Standards-based reform is a systemic effort to increase the academic achievement of all students by raising expectations about what students should learn and by creating coordinated educational systems that support improved teaching and learning. Standards-based reform involves creating clear and challenging academic standards, and holding schools and districts accountable for student progress toward meeting those standards. It requires alignment of all components of educational systems—including curriculum, instruction, professional development, and family and community involvement activities—with the goal of increased academic achievement. Standards-based reform is focused on results, giving states, districts, and schools flexibility to carry out reforms, while putting in place measures to increase the accountability of schools and districts for improving achievement for all students.

Federal legislation has been designed to support standards-based reform in the states. The Goals 2000: Educate America Act and the 1994 reauthorization of the Elementary and Secondary Education Act (ESEA) encourage and support states in their efforts to develop and implement standards-based reform. Goals 2000 provides funds to help states and districts develop challenging standards and move them into classroom practice. To ensure that all students, particularly economically disadvantaged students, are held to high expectations for performance, Title I of the ESEA requires states to use the same academic standards for students in Title I programs as the standards established for all students.

Introduction to the Programs and the 1994 Legislative Changes

The Goals 2000: Educate America Act and the reauthorized Elementary and Secondary Education Act (ESEA) were both passed in 1994. These acts were envisioned as a means of helping states and school districts develop challenging standards and improve the educational achievement of all students, especially students in low-income communities, for whom expectations have often been low and for whom academic performance has lagged behind their more advantaged peers.

A 1993 evaluation of the Title I program (then called Chapter 1) revealed that the program was a relatively marginal educational intervention for students and, as structured, was insufficient to close the gap in achievement between students in high- and low-poverty schools. An important finding was that students in high-poverty schools were held to lower expectations and standards than their more advantaged peers.[2] This led to a rethinking of federal education programs in 1994, and legislative changes to ensure that all children would be held to the same high standards and provided with the

opportunities to meet those standards. Goals 2000 and ESEA programs, particularly Title I, provide funds to states and local school districts to develop standards and implement programs that support improved teaching and learning for all students using standards-based reform as a framework.

Goals 2000

Since it was enacted, Goals 2000 has provided $1.7 billion in funds to support states and local school districts as they develop standards and align professional development, curricula and materials, and parental and community involvement with the goal of better achievement for all students.
To participate in Goals 2000 states must:

- Submit a comprehensive educational improvement plan outlining state efforts to implement systemic, standards-based reform, including strategies for developing challenging content and performance standards;
- Adopt strategies for developing and implementing state assessments aligned with state standards and administered to all students, including students who have limited English proficiency and students with disabilities;
- Adopt strategies for developing and implementing accountability systems that are aligned with the standards; and
- Adopt strategies for the provision of teacher preparation, professional development, and community and family involvement aligned with standards. [3]

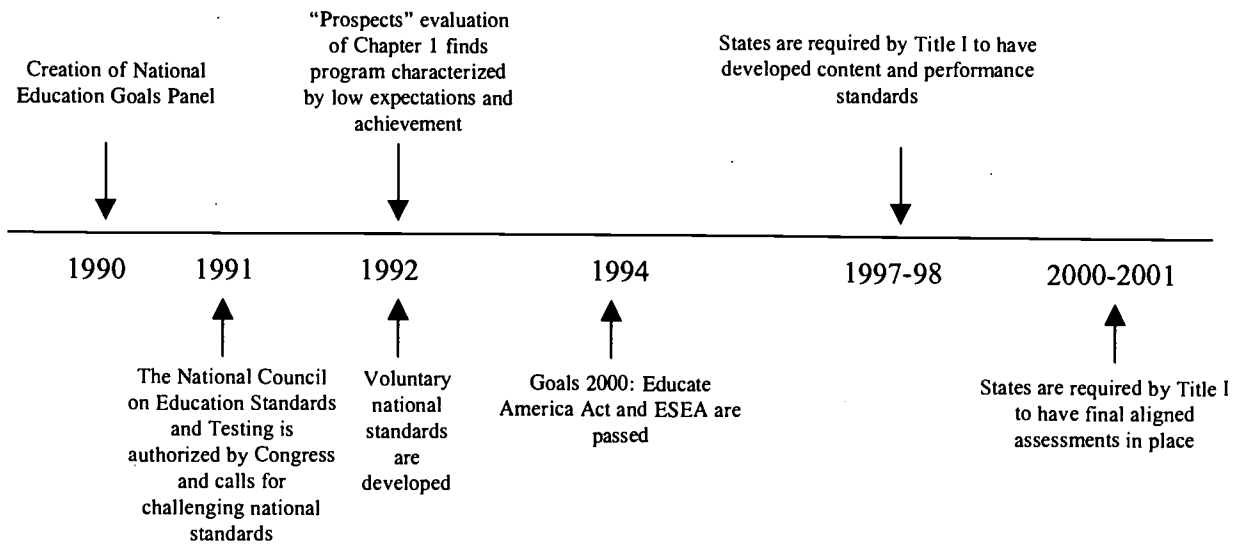
Title I

ESEA resources, especially almost $8 billion a year in Title I funds, have been used by states and local districts to develop standards and help all children, particularly children from economically disadvantaged communities, meet challenging academic standards. In relation to standards, Title I requires states to:

- Develop or adopt challenging content and performance standards for all children, including those who participate in Title I programs. The statute requires that performance standards include at least three levels of performance such as "basic," "proficient," and "advanced." States were required to develop content and performance standards by the 1997-98 academic year.
- Develop or adopt high-quality yearly assessments in at least reading and mathematics to determine how well children served by Title I are learning the material according to the state content standards.
- Use the same assessments adopted for all students for Title I and disaggregate results by student subgroups. States are required to develop or adopt these assessments by the 2000-01 academic year.[4]

Exhibit 4.1 summarizes milestones, evaluations, and legislative requirements related to the development of standards.

EXHIBIT 4.1
TIMELINE FOR STANDARDS-RELATED PROGRAMS



Source: U.S. Department of Education.

Exhibit 4.2 describes the key characteristics of the Goals 2000 and ESEA programs that support the development and implementation of standards-based reform strategies. The chart reflects the full appropriation for each program, as the purposes of all of the funds are related to helping all students reach high standards.

EXHIBIT 4.2
FEDERAL PROGRAMS SUPPORTING DEVELOPMENT AND IMPLEMENTATION OF STANDARDS

Program	FY1999 Appropriation	Purpose	Funding and Targeting	Participation	Standards-Related Services
Goals 2000: Educate America Act	$461 million	Support states and districts in developing and implementing systemic standards-based education reforms focused on raising student achievement.	Formula grants to states, then competitive sub-grants to districts Direct grants to districts under certain circumstances	48 states, the District of Columbia, Puerto Rico, outlying areas, and the Bureau of Indian Affairs	Support for local, standards-based systemic reform efforts and standards-based preservice training and professional development for teachers
ESEA: Title I, Part A	$7.6 billion	Help schools improve learning for students at risk of educational failure.	Formula grants to school districts based on numbers of poor school-age children	All states; approximately 13,500 districts, and 45,000 schools	Instructional staff, professional development, aligning curriculum and assessments with state standards, helping disadvantaged students meet standards
ESEA: Title II	$335 million	Provide professional development to help all children reach high standards, particularly in math and science.	States provide formula grants to districts, and competitive grants to institutions of higher learning.	All states; approximately 14,500 districts, and 1,000 institutions of higher education	Professional development related to educational standards

Source: U.S. Department of Education.

What Do We Know about Good Standards-Based Reform?

The development of challenging standards is a beginning step in implementing systemic standards-based reform. The important features of standards-based reform are delineated in education research that indicates that students learn best when:

- All stakeholders share clear and common expectations about what students should know and be able to do;
- All components of the educational system are coordinated and aligned around student learning; and
- Education is results-oriented, focusing on improving academic achievement, increased accountability for student learning, and continuous improvement.

Content and Performance Standards. Content standards identify broadly what students should learn in a particular subject area, and performance standards identify more specifically how well students should perform. These standards should focus on teaching students higher-order thinking skills such as conceptual understanding, reasoning, and analytical skills that can be applied in real-world situations. Challenging content and performance standards should be rigorous and require students to gain deeper understanding in particular subject areas than was previously required.[5]

Aligned Assessments and Educational Systems. "Aligned assessments" refers to tests that accurately measure student achievement against content and performance standards. To help all students meet standards, assessments should be administered to *all* students, including students with disabilities and limited proficiency in English. State assessment results should be disaggregated by student characteristics such as gender, ethnicity, English proficiency, migrant status, and poverty status in order to direct attention to the special needs of groups in meeting standards. Curriculum and instruction, professional development, and teacher certification should be coordinated and aligned with standards.

Local Flexibility with Accountability. Standards provide a framework for judging the progress of schools and districts in helping all students meet standards and draw attention to the needs of students who are not meeting standards. Strong accountability systems should be designed to give districts and schools maximum flexibility in designing educational programs to meet the needs of students in exchange for responsibility for ensuring that all students meet high standards. The degree to which this exchange of flexibility for accountability has been successful is discussed in Chapter 11 of this report.

How Well Are the Programs Working?

Goals 2000 and Title I have had an important role in moving all states toward engaging in systemic reform efforts to improve their educational systems for all students. Funds from these programs have been used to support activities designed to align educational systems with high academic standards for all children.

A 1998 Report by the General Accounting Office (GAO) has concluded, "Many state officials reported that Goals 2000 has been a significant factor in promoting their education reform efforts and, in several cases, was a catalyst for some aspect of the state's reform movement. State and local officials said that Goals 2000 funding provided valuable assistance and that, without this funding, some reform efforts either would not have been accomplished or would not have been accomplished as quickly."[6]

Exhibit 4.3 shows results from a 1998 national survey of district administrators that found that districts using Goals 2000 funds have made the development of standards a priority.[7]

EXHIBIT 4.3 DISTRICT USE OF GOALS 2000 FUNDS FOR DEVELOPMENT OF STANDARDS	
Activity	**Percentage of district administrators responding that they use Goals 2000 funds to support this strategy "a great deal"**
Providing professional development linked to standards	89%
Aligning curricula and instructional materials with content/performance standards	76%
Developing or adopting assessments linked to standards	70%
Source: Chambers, Lieberman, Parrish, Kaleba, Van Campen, and Stullich, *Study of Education Resources and Federal Funding: Preliminary Report*, 1999.	

The box gives examples of how some districts have used Goals 2000 funds to support standards-based reform efforts.

Examples of How Goals 2000 Funds Support Standards-based Reform

In **Kent County, a rural school district on Maryland's Eastern Shore, Goals 2000 grants supported district reform** by providing funds for (1) substitutes who enabled regular teachers to participate in in-service training, (2) consultants who conducted staff development in computer usage, and (3) transportation of students, salaries of teachers, and other expenses related to developing and implementing an extended-day and extended-year program. Student test scores on local and state assessments are increasing, and administrators contend that the increases are a result of the reform efforts in the state and district. To sustain the efforts, the district developed a partnership with a state juvenile prevention program to help support the extended-day program in some schools, and developed a similar partnership with the local Parks and Recreation Department to help finance the extended-year program.

District leaders in **Broward County, Florida, used a Goals 2000 grant as seed money for an intervention program in schools that were identified by the state as having "critically low" scores** on state assessments. As part of the program, a team of experts provided immediate intervention in each school in the areas of curriculum, instruction, classroom management, and parental involvement. The intervention proved successful. Students in the targeted schools increased their scores on state assessments and 24 of the 25 schools in Broward were removed from Florida's list of "critically low performing" schools.

In **Gresham, Oregon, the Gresham-Barlow School District** used a series of Goals 2000 grants to develop a comprehensive, standards-based assessment system that plays a central role in the district's reform effort. A leadership team, composed of teachers with expertise in assessment, developed and piloted districtwide assessments in reading and mathematics. These assessments were aligned with state and local standards. To familiarize other teachers with the assessments, team members helped their peers develop similar assessments at the classroom level, and district administrators implemented a collegial review process in which teachers score and discuss student work samples. Goals 2000 funding supported these efforts.

Source: U.S. Department of Education, *Goals 2000: Reforming Education to Improve Student Achievement.*

Districts also used Title I resources to fund reform efforts such as developing standards and assessments, aligning curriculum with standards, and providing professional development—particularly in high-poverty school districts. About half of school districts nationally report that Title I is driving standards-based reform in the district as a whole to a great or moderate extent, and 60 percent report that Title I is driving standards-based reform in the highest-poverty schools in the district to a moderate or great extent. Over 95 percent of the small poor districts and over 80 percent of the large poor districts report the same.[8]

According to a 1998 survey of district administrators:[9]

- Thirty-nine percent of respondents reported that Title I funds support aligning curricula and instructional materials with content and performance standards "a great deal,"
- Twenty-five percent of respondents reported that Title I funds support developing or adopting assessments linked to standards "a great deal," and
- Forty-five percent of respondents reported that Title I funds support providing professional development linked to standards "a great deal."

States are making considerable progress toward meeting Title I program requirements for developing standards, but slower progress toward developing student performance standards. Goals 2000 requirements are being implemented, but many states have not met timelines identified in Title I for completion of performance standards because they are developing the standards along with final state assessments, which are not required to be in place until the 2000-01 school year.

With regard to the program requirements of Goals 2000:

- Forty-seven states plus the District of Columbia and Puerto Rico have comprehensive educational improvement plans under Goals 2000.

With regard to the program requirements of Title I of the ESEA:

- Forty-eight states, Puerto Rico, and the District of Columbia have completed the development of state content standards. Of the remaining states, one is still in the process of developing state standards; in the other state, local districts have the responsibility for developing standards acceptable to the state.[10] Before 1994, 19 states reported that they had state content standards in place.[11]

Title I Program Indicator: By 1997-98, all states will have developed state content and student performance standards.

- Twenty states and Puerto Rico have completed the development of challenging performance standards in at least reading/language arts and mathematics.[12]
- Fourteen states have transitional assessments in place aligned with state content standards.[13]

Title I Program Indicator: By 2000-01, all states will have assessments aligned with state content and student performance standards for core subjects.

- For the 1996-97 school year, 21 states submitted annual Title I performance data disaggregated by school poverty. Twelve states disaggregated student assessment data for low-income students, 19 for students with limited proficiency in English, and 16 for migrant students.[14]

All states have adopted a timeline that will produce assessments aligned with content and performance standards by 2000-01 and there has been significant progress in the development of content standards, but a number of states did not meet the 1997-98 deadline for completion of content and performance standards outlined in the 1994 legislation. These states are operating under a waiver that extends the deadline for the completion of content and performance standards through spring of 1999. Most of these states have not yet completed performance standards because they are creating performance standards and assessments simultaneously. The process, though methodologically sound, is taking longer than envisioned when the 1994 legislation was written.

The quality and the rigor of state standards are of concern. States are not required to submit their standards to the Department of Education for review, but provisions in Title I of the ESEA do require states to submit evidence that challenging standards are in place and that states followed a rigorous process in adopting them. The Department of Education uses peer review panels to examine such evidence to verify that states have developed or adopted challenging content and performance standards and that these standards apply to all students. The types of evidence considered by peer reviewers include the following:

- Conclusions from an independent peer review panel convened by the state to review its standards;

- A detailed description of the process the state used to develop its standards and review their rigor, such as its participation in a process to benchmark them to nationally recognized standards;

- Evidence demonstrating that student performance on a state assessment that is aligned with the state content and performance standards is generally comparable with student performance on a rigorous nationally recognized assessment such as NAEP; and

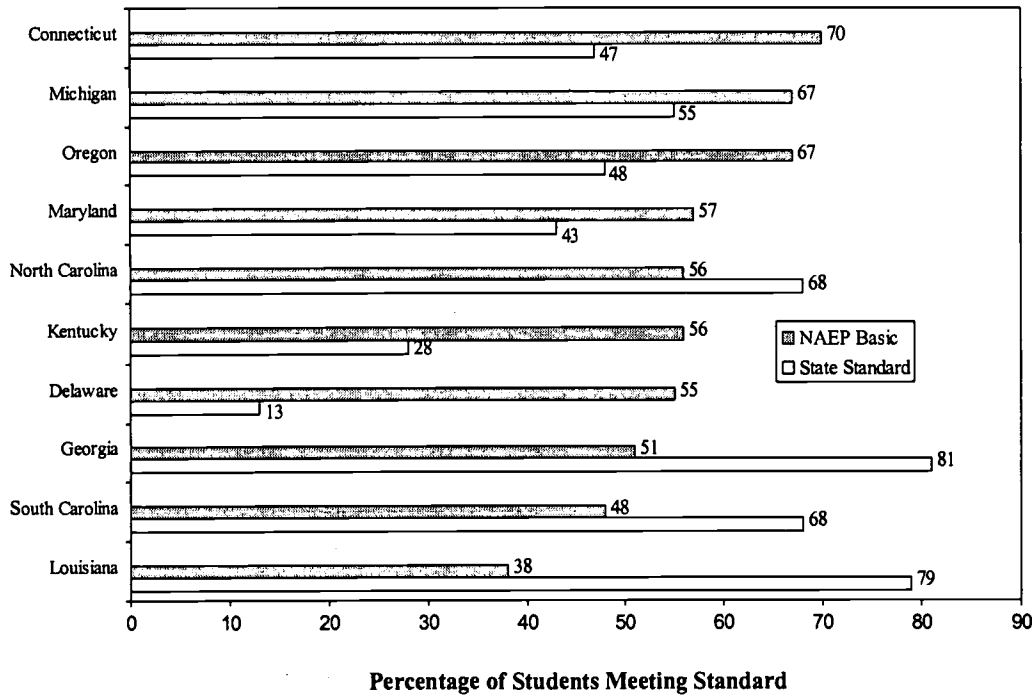
- Alternative satisfactory evidence demonstrating that the state has content and performance standards that are challenging and aligned.

Examining the process states use to develop standards makes it difficult for the Department of Education to evaluate the quality of standards themselves. Independent studies of the quality and rigor of standards reveal different and sometimes contradictory findings on the quality of state standards. A 1998 review of state standards by the American Federation of Teachers shows that the overall quality of state standards is improving, while the Fordham Foundation concluded that "an unacceptably large number of state standards were judged to be of inadequate quality."[15] Although discrepancies across independent reviewers are, in part, the result of the use of different criteria for assessing the standards, the subjectivity of the reviewers, and the timing of reviews, the reviews highlight the fact that state standards vary in organization and content and that no consensus has emerged about what constitutes "challenging" standards and how to measure them.

Few states have benchmarked their standards for quality. According to a 1997 review of state plans, only four states provided evidence that their standards were benchmarked against the National Assessment of Educational Progress (NAEP) or another external assessment.[16]

One method of assessing the rigor of state standards is to compare student performance on state assessments with performance on NAEP. Exhibit 4.4 compares the percentage of eighth-grade students scoring at or above the basic level on the 1996 National Assessment of Educational Progress (NAEP) in math with the percentage of students judged to have met their state standards for the same year.

EXHIBIT 4.4
PERCENTAGE OF EIGHTH-GRADERS SCORING AT OR ABOVE BASIC IN MATH ON NAEP, COMPARED WITH PERCENTAGE MEETING STATE STANDARDS, 1996



This comparison reveals that in some states—such as Connecticut, Michigan, Maryland, Kentucky, and Delaware—state standards may be more rigorous than those used for NAEP, but in other states, a much larger percentage of students are meeting state standards than are meeting the basic level on NAEP. Such large differences in student achievement of proficiency levels suggests that there is wide variance in the rigor and challenge of state standards.

The quality and the rigor of standards are also related to the expectation that all students will be held to standards and participate in state assessment systems.

Most states are establishing policies related to the assessment of students with disabilities and students with limited proficiency in English, but the policies vary across states. Including all students in state standards and assessment systems is an important priority for Title I, which serves approximately 2 million students with limited proficiency in English.[17]

- A review of state practices in 1997 found that 43 states had at least partially developed policies for assessing all students, but only 28 states provided evidence that procedures were being enforced.[18]

- More than half of state administrators responsible for Title I report that their states are having difficulty developing alternative assessments or making other accommodations for students with limited proficiency in English, and a third are having difficulty developing strategies for assessing the performance of special education and migrant students.[19]

Awareness and understanding of standards-based reform are increasing. State and district administrators, teachers, and parents are gaining better awareness and understanding of standards and standards-based reform. The first systematic study of states and school districts regarding the progress they are making in implementing standards-based reforms, *Reports on Reform From the Field* (1997), indicated that:

- Districts with more experience with reform (districts located in states that began reform efforts in the early 1990s) had a more realistic estimate of the extent to which change is needed;

- Districts in such early reform states showed greater progress and understanding in implementing key components of reform and federal programs;

- District and state administrators reported more understanding of standards-based reform and the provisions under ESEA;[20] and

- Districts that had received Goals 2000 subgrants reported greater understanding of the elements of standards-based reform than other districts.[21]

- According to a 1998 survey by *Public Agenda*, teachers and parents are gaining increased understanding of standards-based reform. The survey revealed that a majority of teachers and parents are familiar with efforts to raise standards for their students.[22]

Although awareness and understanding of standards are high, alignment of other components of educational systems with standards remains a challenge. To be effective, standards must be aligned with state, district, and school policies and practices, such as teacher training and certification, and curriculum and instruction.

At the state level:

- Only 6 states have a policy that links or aligns teacher professional development with the state content standards, although an additional 11 states are developing such a policy.

- Nineteen states have policies that link textbook selection to state content standards.[23]

Goals 2000 Program Indicator:
Increasing numbers of principals in states or districts with standards will indicate that schools have curriculum, instruction, professional development and assessments aligned with standards.

At the school level:

- Principals reporting that they use standards to guide curriculum and instruction to a great extent increased from about half in 1995-96 to three-quarters in 1997-98.[24]

- In 1998, 81 percent of public school teachers reported that they had participated in professional development focused on standards in the previous 12 months. However, teachers also report feeling not very well prepared to use standards in the classroom, particularly in high-poverty schools. In 1998, only 38 percent of teachers overall and 30 percent of teachers in high-poverty schools (with 60 percent or more students qualifying for free and reduced-price lunch) reported they felt very well prepared to implement state or district curriculum and performance standards.[25]

Title I Program Indicator: The percentage of teachers who indicate that they are engaged in professional development that is enabling them to teach to challenging standards will increase annually.

Measuring progress of student achievement against standards is difficult, as few states have consistent state assessment data over time. During the transitional period while states are in the process of developing final assessments, which are not required to be in place until the 2000-01 school year, state assessment systems are in flux. Hence it is difficult to evaluate the impact of standards on student performance. The Council of Chief State School Officers reports that only seven states have consistent trend data from their state assessments for three or more years.[26]

Goals 2000 Program Indicator: By 2002, 32 states with two years of assessment data and aligned standards and assessments will report an increase in the percentage of students in schools with at least 50 percent poverty who meet proficient and advanced levels of performance in reading and math on their state assessments.

Although there has been no systematic study of achievement on NAEP related to the quality of state standards and assessments across states, some evidence suggests that standards-based reform is contributing to better student performance in states. A recent report from the National Education Goals Panel attributes significant student achievement gains in Texas and North Carolina on NAEP to efforts in the states to raise standards for all students and to hold schools accountable for performance.[27]

Options for Strengthening the Programs

Although much progress has occurred since 1994, ESEA programs need to be strengthened in the following areas central to the development and implementation of standards:

- Ensure the quality and the rigor of state standards and assessments,
- Align assessments with state and local standards,
- Include all students in state standards and assessments, and
- Align key elements of educational systems with standards

Ensure the quality and the rigor of state standards and assessments. Standards-based reform requires states to develop challenging content and performance standards. However, we have seen that it is difficult to assess the quality and the rigor of state standards. In order to help states raise their standards the Department of Education could:

- Strengthen the peer review process that assesses the development of standards in states by requiring that states benchmark their standards against standards that are nationally recognized as rigorous. Numerous states such as North Carolina, Michigan, and Maine have benefited from benchmarking their state standards.

- Set aside additional funds to help states complete the development and refinement of standards, as well as align state assessments with standards.

Align assessments with state and local standards. Another challenge to the implementation of standards-based reform is the difficulty that many states are experiencing in creating aligned assessments. Maryland, Kansas, Vermont, and other states have been engaged in the difficult process of creating new forms of assessment that are aligned with the advanced skills delineated in state standards. Often new assessments have required students to demonstrate mastery of higher-order thinking skills such as communicating, analyzing situations, and solving problems. Such test items are difficult to develop and score, and therefore present problems in test development for many states.

- What "alignment" means and how it is measured has been defined in a number of ways, and no standard method has yet emerged from research. Because no consensus exists on how to determine or measure alignment, the Department of Education could propose a set-aside or line item to support research in assessments and alignment.

- The Department of Education currently relies on self-reports to determine whether states have aligned assessments linked to accountability systems. The Department needs to develop a process for determining the extent to which states are developing assessments aligned with standards, even if the Department's role is limited by law to review of the alignment process rather than including the review of standards and assessments themselves.

Include all students in state standards and assessments. Related to the issue of rigorous standards is the application of standards to all students. Another important challenge in implementing standards-based reform is the inclusion of students with limited English proficiency (LEP) and students with disabilities in state assessments. Guidelines and criteria for the inclusion of students with special needs are inconsistent across and within states. Currently, most states allow exemptions for some students, including exemptions for time in the United States, time in English as a Second Language classes, and special education status. Although the law requires inclusion of and accommodations for students with disabilities or limited proficiency in English, a host of technical and practical considerations have limited progress in implementing reform.

- To address the inclusion of students in state standards and assessments, the first step might be for states to adopt common statewide policies for which students are to be tested and how they are to be tested. The Department could require that states develop first-language assessments for Spanish-speaking students or for the largest group of students whose first language is not English. Similarly, the Department could hold schools and districts accountable for showing progress among LEP students in the development of English-language skills in addition to the core subject areas.

- The Department should help states move toward including all students in state assessments within a three-year period. This would required technical assistance and resources for states to develop and implement effective accommodations and alternative assessments.

Align key elements of educational systems with standards. Standards-based reform is a long and difficult process. It involves changing the ways of teaching and learning that have been in place for decades. Standards-based reform is not only about making expectations explicit, but also about aligning key components of educational systems with standards.

- ESEA programs should continue to emphasize the need to move standards to the classroom level by supporting strategies to tie teacher certification, professional development, curriculum, and assessments to standards, and should strengthen measures to hold states, districts, and schools accountable for performance against standards.

States, districts, and schools have made a tremendous amount of progress implementing standards-based reform in the past five years. Educators are making fundamental changes in expectations for what all students should know and be able to do. They are retraining teachers, involving parents, and developing systems designed to hold schools and districts accountable for increased academic achievement. The implementation of standards-based reform requires systemic change. Goals 2000 and the ESEA programs created a framework for this type of change.

The development of rigorous academic standards has been the focal point for education reform in the 1990s. Federal programs have been an important force in the development of standards. The challenge now is to hold the course on standards-based reform, expect more from students, and help all students become equipped to reach high standards.

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[13] Allen Schenck and Dale Carlson, "Standards-Based Assessment and Accountability in America: A Report on the States' Progress, as of 1997," in *Implementing the Requirements of IASA, Title I* draft (January 28, 1999).
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[16] Schenck and Carlson, 1999.
[17] U.S. Department of Education, *Title I Performance Reports from the States, 1996-97.*
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[19] U.S. Department of Education, unpublished tabulations from the *Follow-Up State Survey*, 1998.
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[25] Heid and Webber, 1999.
[26] Council of Chief State School Officers, *State Education Indicators with a Focus on Title I: 1998* (Washington, DC: Council of Chief State School Officers, 1999).

[27] David Grissmer and Ann Flanagan, *Exploring Rapid Achievement Gains in North Carolina and Texas* (Washington, DC: National Education Goals Panel, 1998).

5. ARE FEDERAL PROGRAMS SUPPORTING EFFECTIVE PROFESSIONAL DEVELOPMENT FOR TEACHERS?

Key Findings

Title II

- The Eisenhower Professional Development Program is the single largest federal effort funding professional development for teachers. Eisenhower-assisted professional development activities have succeeded in enhancing teachers' knowledge and skills in some areas but not in others. For example, whereas about two-thirds of teachers participating in Eisenhower-assisted activities supported under the district component of the program reported that those activities enhanced their knowledge and skills in instructional methods, only 49 percent reported that participation deepened their knowledge in mathematics and science.

- About half of the teachers who participated in Eisenhower-assisted activities supported under the district component of the program reported that the activities enhanced their capacity to teach in ways consistent with state standards and curriculum frameworks.

- The goal of providing extended, in-depth learning opportunities as part of Eisenhower-assisted professional development has not yet been achieved for teachers participating in district-sponsored activities. Results are more positive for teachers participating in activities sponsored by institutions of higher education/nonprofit organizations.

- Districts are more likely to coplan and cofund Eisenhower activities with the National Science Foundation (NSF) systemic initiatives than with most other federal programs, partly because of the common focus on mathematics and science across Eisenhower and the NSF projects. Case study data suggest that coordination between Title I and Title II may be superficial and that there is room for more improvement in this area.

- Districts that cofund and coplan their Eisenhower Professional Development Activities with other federal programs are more likely to offer Eisenhower activities that are of high quality.

- Eisenhower Professional Development activities are not especially targeted on teachers from high-poverty schools. The proportion of district-level Eisenhower participants who teach in high-poverty schools is not significantly higher than the proportion of teachers across the nation who teach in such schools.

Titles I, VI, VII

- Professional development is an allowable activity under these programs. Varying portions of their funds go to support professional development. Little, however, is known about the quality of the professional development activities supported by these programs or about their outcomes or impact on teacher practice.

Teachers' knowledge and skills contribute significantly to students' learning. In a recent article, "Teaching for High Standards: What Policymakers Need to Know and Be Able to Do," Linda Darling-Hammond comments:

> ...Studies discover again and again that teacher expertise is one of the most important factors in determining student achievement.... Teachers who know a lot about teaching and learning and who work in settings that allow them to know their students well are the critical elements of successful learning.... What teachers know and can do...affects all the core tasks of teaching [and it] shapes how judiciously they select from texts and other materials and how effectively they present material in class.[1]

Teachers' experience and education are associated with increases in student achievement, according to evidence found in a review of 60 studies examining the correlation between school resources and student learning.[2] Although other factors also influence learning, teachers' qualifications in relation to their teaching assignments make an important difference in how well students learn, across all categories of students.

In recognition of the ongoing importance of professional development, the National Education Goals include two goals concerning the quality of the teacher workforce:

- Goal 4 focuses directly on teachers: "By the year 2000, the Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century."

- Goal 5 addresses teacher competence in mathematics and science: "By the year 2000, the number of teachers with a substantive background in mathematics and science will increase by 50 percent."[3]

The Department's current strategic plan also sets the objective (1.4) of:

- "A talented and dedicated teacher is in every classroom in America."

This chapter describes the Department of Education's efforts to support effective professional development for teachers.

Introduction to the Programs and the 1994 Legislative Changes

Federal legislation includes various programs and activities intended to improve teachers' competence and to establish school arrangements that nurture continuous professional learning. The 1991 evaluation of Title II, the Eisenhower program, reported that it funded professional development on a wide scale, but much of it was low-intensity training or conferences.[4] In the 1994 legislation, Congress noted that the lack of intensive and sustained professional development activities for school staff was problematic, in light of the goal of helping all students achieve to high standards.[5]

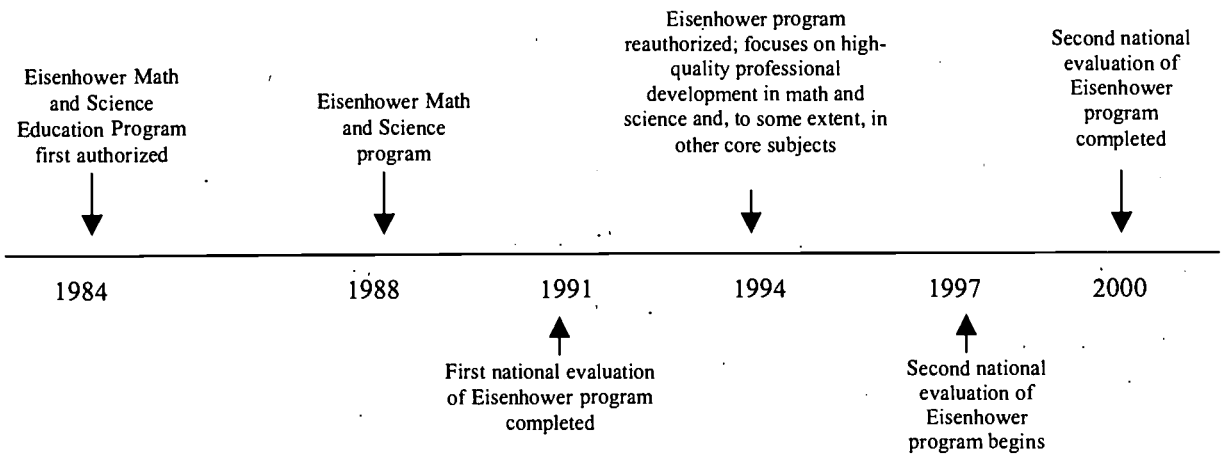
The 1994 reauthorization encouraged recipients of funds to invest in sustained professional development and made it easier to do so by permitting them to pool funds from various programs and required coordination among activities for teachers of the same children. ESEA called for "high quality" professional development focusing on ambitious standards for children and accommodating their diversity as learners more effectively. The Act referred to research-based professional development that spreads out over time and engages expert partners in learning. Teacher and other school community involvement in planning was encouraged for particular programs.

This chapter reports on the activities funded under several laws enacted in 1994, but focuses mainly on Title II of ESEA, the Eisenhower program. This program has the single aim of strengthening the educational experience of America's children by improving the capacity of their teachers to help them achieve to high academic standards. The seriousness of Congress's intent was reflected in the requirement for a comprehensive evaluation of the Eisenhower program, some of the early results of which are reported here. A full report on this evaluation is expected to be published in the summer of 1999. By that time, other data about the extent of funding of professional development by other programs also will be available.

First established in 1984 and reauthorized as Title II of the Elementary and Secondary Education Act, as amended by the 1994 Improving America's Schools Act, the Eisenhower program has undergone a dramatic evolution since its inception.

The program was first reauthorized in 1988. The first national evaluation of Eisenhower occurred in 1991. The 1994 reauthorization not only emphasized high-quality professional development in mathematics and science, but also allowed the use of program funds for professional development in other content areas. It also explicitly provided that funded activities should be designed to improve teacher practice and, ultimately, student performance. Exhibit 5.1 illustrates this brief history of the Eisenhower program.

EXHIBIT 5.1
PROFESSIONAL DEVELOPMENT TIMELINE



Source: U.S. Department of Education.

Federal programs stimulate state and local investment in professional development through leadership, seed money, and program requirements that mandate or recommend professional development for program implementation.

Although teacher professional development is most effectively planned and implemented at the state and local levels, several federal programs support professional development related to their purposes:

- **Title II**, the Eisenhower Professional Development Program, focuses exclusively on professional development, primarily in mathematics and science but also in other core subjects.

Several ESEA programs also typically provide professional development as part of their direct service to children:

- **Title I** funds professional development related to implementing academic standards in schools serving poor children.

- **Title VI**, Innovative Education Program Strategies, is designed to support school innovation, and some of its funds are spent on professional development.

- **Title VII**, Bilingual Education, Language Enhancement, and Language Acquisition Programs, funds professional development for teachers of students with limited English proficiency.

- **Goals 2000** and **School-to-Work Opportunities Act** also encourage investment in professional development.

Other federal agencies also provide professional development programs. For example, the National Science Foundation's Teacher Enhancement Program supports projects that empower "teachers to engage all students in rich and challenging science, mathematics, and technology" lessons and that help develop leadership and organizational arrangements that promote excellence in these areas.[6] NSF's State Systemic Initiatives also promote professional development. The U.S. Department of Health and Human Services supports professional development for Head Start staff, through local projects.

Some ESEA programs that fund professional development are awarded by formula and others by competitive grant. Some support activities at the state level, others at the district or school level or in institutions of higher education. Details of program operation are described below. Exhibit 5.2 summarizes key characteristics of the Department of Education's professional development programs. The highest percentage of professional development is paid for by the Eisenhower program, which pays for about 40 percent of all the professional development supported by the Department of Education.[7]

Title II, The Eisenhower Professional Development Program

The Eisenhower program is the largest of the Department of Education's efforts to develop teachers' competence.[8] Part B, with a 1999 appropriation of about $335 million, awards funds to states and districts on the basis of a formula and to institutions of higher education and nonprofit organizations through state-run competitive grant programs. The funds are earmarked to provide teachers with opportunities to learn more about the content and processes of teaching math and science, with allowable expenditures for work in other content areas when the total exceeds $250 million.[9]

EXHIBT 5.2
PROFESSIONAL DEVELOPMENT PROGRAMS AT A GLANCE

Program Name	FY 1999 Funding for Professional Development	Purpose	Funding and Targeting	Participation	Professional Development Services
Title II: the Eisenhower Professional Development Program	$335 million	Provide sustained and intensive high-quality professional development, primarily in mathematics and science, that is aligned to state content and student performance standards.	States provide formula grants to districts and competitive grants to institutions of higher education	50 states, DC, Puerto Rico, and territories; approximately 14,500 districts; approximately 1,000 institutions of higher education and non-profit organizations	Activities include a wide range of professional development, such as mentoring, workshops, and study groups.
Title I, Part A: Helping Disadvantaged Children Meet High Standards	$191 million (est.)[a]	Support schools to improve learning for students at risk of educational failure.	Formula grants to school districts, based on numbers of poor school-age children	50 states, DC, Puerto Rico, and territories; 13,500 districts; 45,000 schools	Professional development activities for teachers in Title I schools may include workshops, mentoring, and study groups.
Title VI: Innovative Education Program Strategies	$42.8 million (est.)[a]	Support state and local education reform efforts.	Formula grants to states and then to districts, based on population and other factors such as poverty	50 states, DC, Puerto Rico, and territories; approximately 15,000 districts	Wide range of professional development activities
Title VII, Part A, Subparts 1 and 3: Bilingual Education, Language Enhancement, and Language Acquisition Programs	Total appropriation for Subpart 1 is $160 million; percentage used for professional development is not known. Total appropriation for Subpart 3 is $50 million; Subpart 3 is devoted entirely to teacher training.	Improve educational services for limited-English-proficient students through professional development for educators.	Subpart 1: Competitive grants to districts (primary emphasis) Subpart 3: Competitive grants to institutions of higher education (primary emphasis)	Subpart 1: 40 states and DC, 4 territories; 679 grants to districts (a given district can receive more than one grant) Subpart 3: 28 states and DC, 4 territories; 141 grants to institutions of higher education (a given institutions of higher education can receive more than one grant)	Bilingual career ladder programs; in-service and preservice professional development
Title III, Goals 2000: Educate America Act	$187 million (est.)[a]	Support states and districts in developing and implementing systemic, standards-based education reforms focused on raising student achievement.	Formula to states and then competitive grants to districts	48 states, DC, Puerto Rico, territories, Bureau of Indian Affairs, and approximately 5,000 districts in all 50 states, P.R., and territories	Preservice and professional development activities focused on systemic, standards-based reform

Source: U.S. Department of Education.

Note: Funds are not specifically appropriated for professional development.

[a] Estimate based on program year 1997-98 data collected under the Study of Education Resources and Federal Funding (SERFF).

The law specifies that districts and institutions of higher education and nonprofits receiving Eisenhower funds must:

- Provide professional development that emphasizes deep content knowledge and reflection on classroom teaching practice;
- Coordinate Eisenhower activities with other aspects of reform;
- Get teachers who serve Title I students and students from diverse populations involved in Eisenhower activities; and
- Develop and use performance indicators for the program.

Allowable activities are wide-ranging and include workshops and conferences, study groups, professional networks and collaboratives, task force work, and peer coaching. The activities may be sponsored by the district, an institution of higher education, or other nonprofits.

The Eisenhower program requires that efforts supported by its funds reflect appropriate attention to the characteristics of effective professional development, which include the following:

- **Ensuring that high standards are held for all students.** The Eisenhower program incorporates effective strategies for meeting the educational needs of diverse student populations, including females; minorities; and individuals with disabilities, individuals with economic disadvantage, and students with limited English proficiency.
- **Increasing teachers' knowledge and skills.** The Eisenhower program requires that programs reflect solid research on teaching and learning and include strong academic and pedagogical components. The law gives priority to mathematics and science but provides for other core subjects as well.
- **Providing extended, in-depth learning opportunities.** The Eisenhower program specifies that professional development activities be of sufficient duration and intensity to have a positive, lasting impact on teachers' classroom performance.
- **Expanding roles for teachers.** The Eisenhower program requires that professional development activities be incorporated into the everyday life of the school. It further specifies that districts "shall use not less than 80 percent of such funds for professional development of teachers, and, where appropriate, administrators, and where appropriate, pupil services personnel, parents, and other staff of individual schools in a manner that (A) is determined by such teachers and staff" and "(B) to the extent practicable, takes place at the individual school site."
- **Linking to programs and standards.** The Eisenhower program requires that professional development activities be directed to helping students achieve to high academic standards. In addition, Title II requires that states coordinate Eisenhower professional development programs with those supported by other programs.
- **Bolstering accountability for results.** The Eisenhower program requires states and districts to develop and use performance indicators to measure the quality and effects of professional development.

Other Programs That Support Professional Development

Titles I, VI, and VII of ESEA, which target other aspects of education reform, allow the use of funds for professional development related to their purposes, as do Goals 2000 and School-to-Work Opportunities Act.

What Do We Know about Good Professional Development?

Taken together, studies of effective professional development suggest that six characteristics typify high-quality professional development. These characteristics are reflected in the Eisenhower legislation, either as program requirements or as guidelines for good practice to be considered in program design.

High-quality professional development:[10]

1. **Reflects an image of teaching and learning that embraces high standards for all students.** Those who provide professional development must have a clear image of effective classroom learning and teaching. Good professional development is grounded in real and accessible approaches to teaching that help all students achieve to high standards.

2. **Focuses on deepening teachers' knowledge of content and ways that students learn specific content.** Good professional development develops teachers' skill and knowledge regarding the disciplines that they teach and children's ways of learning at different ages and in different contexts. It is rigorous, relevant, and research-based.

3. **Provides extended, in-depth learning opportunities for teachers.** Good professional development promotes learning through, among other things, modeling the methods to be used with students and showing how methods are adapted for different types of students. Like all good teaching, such experiences build on existing knowledge, immerse learners in stimulating processes, allow for teamwork, and spread out over time to permit learners to digest new ideas, try them out, and regroup for critical feedback. Professional learning is embedded in the life of the school whenever appropriate.

4. **Supports expanded roles for teachers as leaders and colleagues.** Good professional development provides opportunities for teachers to serve as mentors, peer coaches, leaders, designers, planners, and facilitators. Such roles encourage collegial relationships in a community of learners. These, in turn, could entail changes in allocations of authority, responsibility, and time in schools.

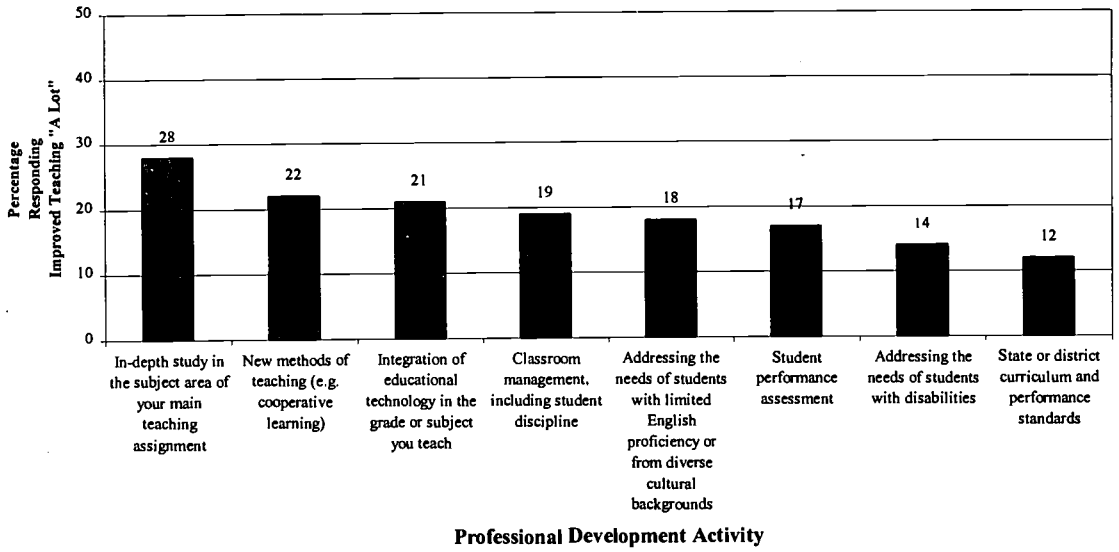
5. **Links to an educational system's programs and standards.** To strengthen the effectiveness of schools, professional development should be linked to other federal, state, or district initiatives. It should be tied to relevant curricula, assessments, and standards.

6. **Is accountable for results.** Professional development should be regularly evaluated for its impact on teaching and learning, and evaluation results should be used to support continuous improvement.

High-quality, content-based professional development is associated with increases in student achievement. A recent study of professional development in California found that teachers who participated in ongoing, curriculum-centered professional development were more likely to report reform-oriented teaching practices in mathematics. In addition, holding student characteristics and school conditions constant, the study found that the more teachers were engaged in such professional development and reform-oriented practice, the higher their students' mathematics achievement on the state assessment.[11] In addition, a review of the research shows that high-quality professional development that helps teachers to understand how students learn specific content is associated with gains in student achievement.[12]

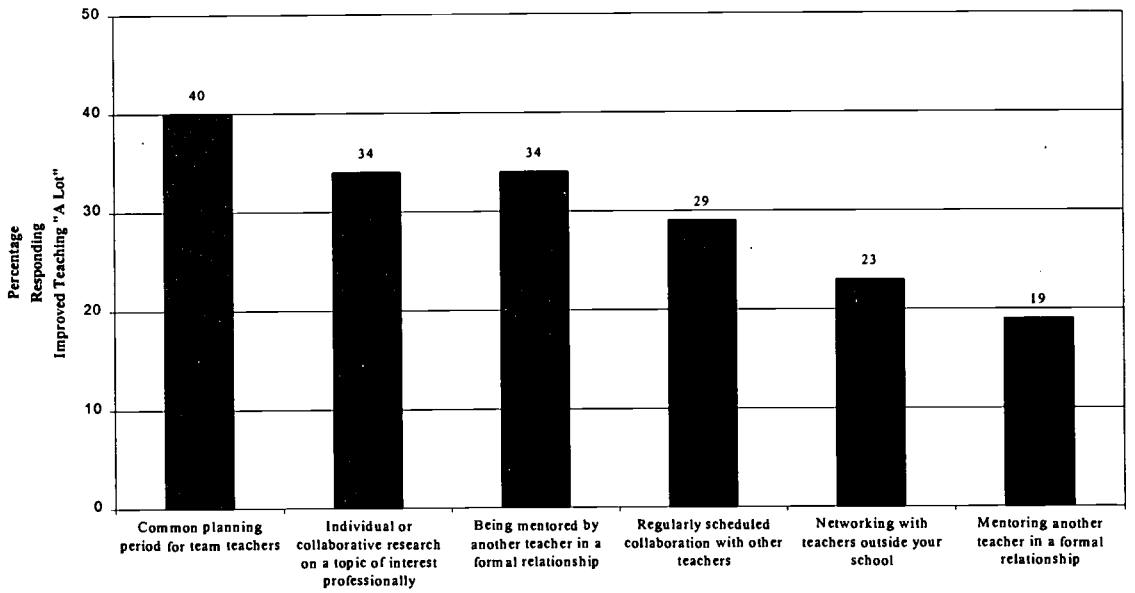
A 1998 national survey found that many teachers believe that job-embedded, collaborative professional activities are more helpful to teachers than are traditional forms of professional development. For example, 19 percent of teachers who participated in traditional professional development on classroom management indicated that it improved their teaching "a lot," while 40 percent of teachers who engaged in common planning with other teachers reported that it improved their teaching "a lot."[13] (See Exhibits 5.3 and 5.4.) These data imply that some of the best professional development activities may be those that involve collaborative work among teachers that is embedded into their work at school.

EXHIBIT 5.3
PERCENTAGE OF FULL-TIME PUBLIC SCHOOL TEACHERS WHO PARTICIPATED IN *TRADITIONAL PROFESSIONAL DEVELOPMENT* ACTIVITIES IN THE PAST 12 MONTHS WHO INDICATED THAT THE ACTIVITY IMPROVED THEIR TEACHING "A LOT" IN 1998



Source: U.S. Department of Education. National Center for Education Statistics. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers.*[14]

EXHIBIT 5.4
PERCENTAGE OF FULL-TIME PUBLIC SCHOOL TEACHERS WHO PARTICIPATED IN *COLLABORATIVE PROFESSIONAL WORK* IN THE PAST 12 MONTHS WHO INDICATED THAT THE ACTIVITY IMPROVED THEIR TEACHING "A LOT" IN 1998



Source: U.S. Department of Education. National Center for Education Statistics. *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers.*[15]

When districts closely follow the provisions of ESEA, they can implement programs that make professional development a powerful tool in reform. One good example, as illustrated below, can be found in rural Alaska, where Chugach School District pooled funds from several sources to build a highly effective, standards-based program taught by staff well equipped for the challenge.

AN EXEMPLARY PROFESSIONAL DEVELOPMENT PROGRAM IN CHUGACH, ALASKA: STUDENT ACHIEVEMENT IS UP, TEACHER TURNOVER IS DOWN

In Chugach School District, where about 25 staff teach 160 students spread out over 22,000 square miles, virtually all indicators of academic success were low and teacher turnover ran as high as 50 percent a year. With the help of one of the Department's Comprehensive Regional Assistance Centers, Chugach learned how to use Title I and other public and private funding to plan comprehensively to incorporate high standards into their curriculum. The district then designed and implemented a staff development program to equip all teachers to help students meet those standards. Ten days of in-service training occur during the school year, providing both regular updates on methods and content and a remedy for cabin fever, a side effect of the isolation of remote village schools inaccessible by road.

In addition, district staff members gather for 20 more days of professional learning during summer break. This "college of colleagues" is held in modest accommodations, such as a church camp or postsecondary dormitory, and engages participants actively in lessons about how best to achieve district goals. The district pays the program costs, and the teachers, many of whom summer in "the lower 48 states," contribute their time. Since this summer institute was started, teacher turnover has dropped to 5 percent annually, and students' standardized test scores have risen from the 33rd to the 62nd percentile.[16]

How Well Is the Nation Meeting Its Goals for Teacher Quality and Professional Development?

We have seen that teacher quality and professional development are central to helping all students achieve high standards. What is known about the qualifications of our nation's teachers and their preparedness to teach to high standards?

Teachers in high-poverty schools. The preparation of teachers is an especially important issue in high-poverty schools. For example, in 1993-94, teachers lacking a major in their primary assignment taught almost a quarter of the classes offered to students in high-poverty schools (compared with less than 15 percent of classes in low-poverty schools).[17] In addition, students in high-poverty schools are more likely than others to be taught for part of the day by teachers' aides with limited education and training.[18,19,20] Furthermore, the number of teachers equipped to serve students who enter school with limited English proficiency is not keeping pace with the demand for services, which is growing annually.[21,22]

Teachers' preparation to teach standards. The 1994 reauthorization emphasized linking professional development to challenging state and district standards. There is some evidence that teachers are coming to understand standards better and that professional development has played a role in this development. **For example, in 1995-96, 42 percent of teachers in a national survey reported that they "understood the concept" of higher standards very well.[23]** However, when surveyed during in the 1997-98 school year, only 36 percent of a national sample of teachers (elementary teachers and secondary teachers of the core academic subjects) said that they felt "very well prepared" to implement state or district standards.[24]

These data imply there is a difference between "understanding" standards and feeling ready to implement standards.

In the 1997-98 school year, 81 percent of teachers of the core academic subjects reported that they had participated in professional development focused on "state or district curriculum and performance standards" sometime within the previous 12 months.[25] However, 50 percent of teachers participated in standards-based professional development that lasted less than 9 hours over the previous year, and only 7 percent participated in such professional development that lasted more than 32 hours over the previous year.[26]

The data also imply that the more time that teachers have to learn about standards, the more confident they feel about implementing them. For example, 38 percent of the teachers who participated in professional development focused on state or district standards reported that they felt "very well prepared" to implement standards, compared with only 20 percent of the teachers who did not participate in such professional development. In addition, teachers with more than 32 hours of standards-based professional development were more likely to feel "very well prepared" to implement state or district standards than were teachers with fewer hours.[27]

How Well Are the Programs Working?

Exhibit 5.5 shows which federal programs encourage or require elements of high-quality professional development. Although there are a number of sources of data on the quality and effectiveness of federally supported professional development, the most detailed data are being collected as part of the national evaluation of the Eisenhower program. Thus the discussion that follows begins with an extended discussion of the Eisenhower program. The remaining sections briefly summarize analyses of data for other federal programs that support professional development.

EXHIBIT 5.5
DO FEDERAL PROGRAMS REQUIRE OR ENCOURAGE ELEMENTS OF HIGH-QUALITY PROFESSIONAL DEVELOPMENT?

Factors in High-Quality Professional Development	Professional Development Program	Other Service Programs, When They Provide Professional Development			
	Eisenhower	Title I	Title VI	Title VII	Goals 2000
High standards, all students	Requires	Requires	Encourages	Requires	Requires
Professional knowledge & skills	Requires	Requires	Encourages	Encourages	Requires
Extended, in-depth learning opportunities	Requires	No reference	Encourages	Encourages	Encourages
Expanded roles	Requires	Requires	Encourages	Encourages	Requires
Linkages	Requires	Requires[a]	Encourages	Encourages	Encourages
Accountability	Requires	Requires	Encourages	Encourages	Encourages

Source: U.S. Department of Education.

[a] Title I encourages some linkages (Sec. 1119(g)) and requires others (Sec. 1119(b)(1)(C)).

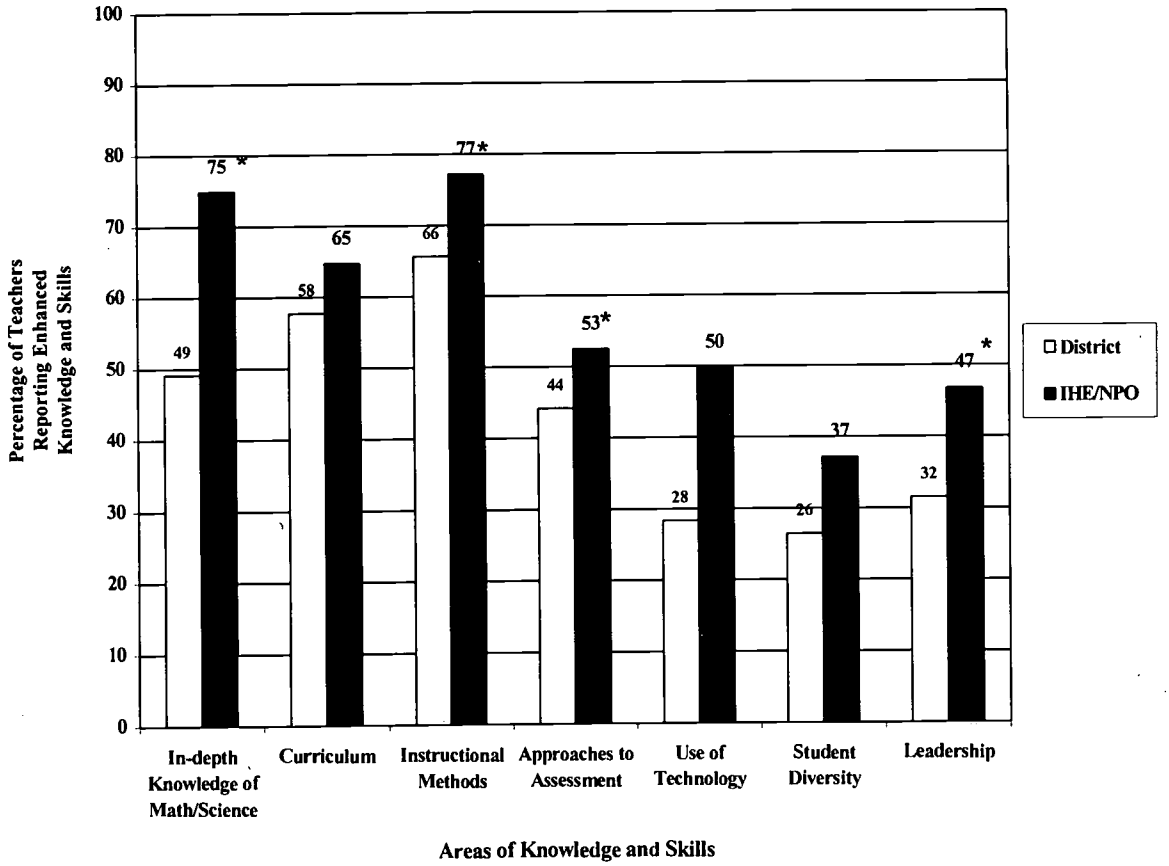
Title II—Eisenhower Professional Development Program

The Eisenhower program has achieved some of the goals established in the Department of Education's performance indicators for the Government Performance and Results Act, and has come close to meeting others.

Program Indicator: By 1998, over 50 percent of a sample of teachers participating in Eisenhower-assisted professional development will show evidence that participation has resulted in an improvement in their knowledge and skills.

Enhancing teachers' knowledge and skills. **Preliminary analyses of survey data show that the program meets the goal of improving teacher knowledge and skills. However, the higher education and nonprofit organization part of the Eisenhower program is producing results comparable to exemplary professional development activities, whereas the district-sponsored part of the Eisenhower program is not.** Sixty-six percent of teachers participating in Eisenhower-assisted activities funded under the district component of the program reported that the activities enhanced their knowledge and skills in instructional methods, and 58 percent reported that participation enhanced their knowledge and skills in curriculum content.[28] (These percentages reflect the percentage of teachers who reported a "4" or a "5" on a five-point scale where "5" means to "a great extent" and "1" means "not at all.") (See Exhibit 5.6.)

EXHIBIT 5.6
PERCENTAGE OF TEACHERS REPORTING ENHANCED KNOWLEDGE AND SKILLS AS A RESULT OF PARTICIPATION IN TWO TYPES OF EISENHOWER-ASSISTED PROFESSIONAL DEVELOPMENT ACTIVITIES



Source: U.S Department of Education, unpublished tabulations from the Evaluation of the Eisenhower Professional Development Program—State and Local Activities, 1999. (Results are based on preliminary analyses and do not include responses from teachers who were late in responding.)

Notes: "District" refers to teachers who participated in Eisenhower-assisted activities provided through the district component of the program.

"IHE/NPO" refers to teachers who participated in Eisenhower-assisted activities supported through the IHE/NPO (institution of higher education/not-for-profit organization) component of the program.

The symbol * indicates that the difference between district and IHE/NPO activities is statistically significant at least at the .01 level.

However, only 49 percent of participants in district-level Eisenhower activities reported that the professional development deepened their knowledge of math or science content. The 49 percent represents teachers who answered with a "4" or a "5" on a five-point scale (1= "not at all," "5" = "to a great extent") when asked to report the extent to which a selected Eisenhower-assisted activity enhanced their knowledge and skills.

In a recent study of exemplary math and science professional development programs sponsored by the National Science Foundation (NSF), 44 percent of participants in outstanding teacher development programs reported that the programs enhanced their knowledge and understanding of science content to "a great extent."[29] If we isolate the percentage of participants in Eisenhower district-level activities who reported that the activity enhanced their math or science knowledge "to a great extent" (value of "5" on the five-point scale), the percentage is reduced to 24 percent. Thus a comparison of the NSF study results with these Eisenhower district-level results indicates that district-level Eisenhower activities are not producing the outcomes exhibited by exemplary professional development programs.

On the other hand, Eisenhower-assisted activities funded through competitive state grants to institutions of higher education (IHEs) and not-for-profit organizations (NPOs) are exhibiting outcomes that are comparable with those exhibited by exemplary professional development programs. For example, 49 percent of teachers participating in activities sponsored by institutions of higher education (IHEs) and nonprofits reported that participation deepened their content knowledge in mathematics and science to a "great extent." (This is even better than the 44 percent of teachers who reported such an outcome as summarized in the NSF study of exemplary programs.) When the percentage of IHE/NPO participants answering with a value of "4" are added to the percentage answering with a value of "5," the total percentage increases to 75 percent.

Preliminary analyses suggest that Eisenhower program activities funded through IHEs and NPOs are more effective than district-sponsored activities because the IHE/NPO activities are more intensive and are more consistent with best practices in professional development activities. The report of the national evaluation to be released in summer 1999 will examine activities sponsored by institutions of higher education and nonprofits and district activities in more detail.

In other areas of teacher knowledge and skill development, less than half of participating teachers in district-administered Eisenhower activities felt that the activities enhanced their knowledge and skills. Only 44 percent of teachers in district-sponsored Eisenhower activities indicated that the professional development improved their approaches to student assessment. Approximately 28 percent of teachers reported that district-sponsored activities improved their use of technology, and 26 percent reported that the professional development helped to improve their strategies for teaching diverse student populations. (These percentages reflect the percentage of respondents who answered a question about enhanced knowledge and skills with a value of "5" or "4" on the five-point scale.)

It should be emphasized that these results are based on teachers' self-reported data collected at one point in time, and it is possible that teachers may overstate the degree to which professional development has enhanced their knowledge and skills. The national evaluation of the Eisenhower program also collected longitudinal data on classroom teaching practices for a sample of teachers. When these data are analyzed, they will permit a more rigorous assessment of the extent to which participation in professional development has enhanced teaching skills. Results from this longitudinal study will be available early in 2000.

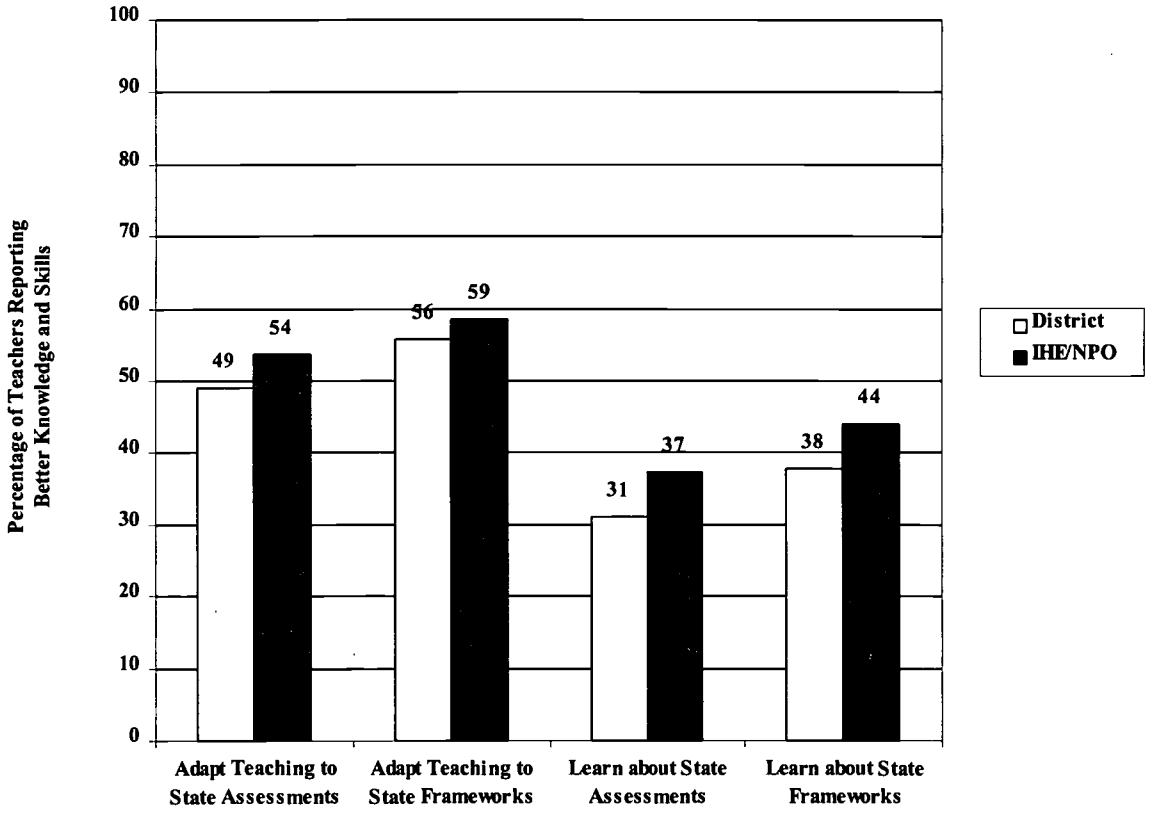
The Department's goal of having over 50 percent of Eisenhower program teachers participate in activities aligned with high standards is being met. Exhibit 5.7 shows that the alignment of professional development with standards can take a variety of forms.

Program Indicator: By 1998, over 50 percent of teachers participating in district-level or higher education Eisenhower-assisted professional development will participate in activities that are aligned with high standards.

- Fifty-six percent of teachers who participated in district Eisenhower-assisted activities reported that the activities enhanced their capacity to teach in ways consistent with state standards and curriculum frameworks, and 49 percent reported that the activities enhanced their capacity to meet state assessment requirements.

- The degree of alignment with high standards is similar for district activities and activities sponsored by institutions of higher education and nonprofits.

EXHIBIT 5.7
PERCENTAGE OF TEACHERS REPORTING ENHANCED KNOWLEDGE AND SKILLS CONCERNING STATE ASSESSMENTS AND FRAMEWORKS AS A RESULT OF PARTICIPATION IN EISENHOWER-ASSISTED PROFESSIONAL DEVELOPMENT ACTIVITIES



Source: U.S Department of Education, unpublished tabulations from the Evaluation of the Eisenhower Professional Development Program—State and Local Activities, 1999. (Results are based on preliminary analyses and do not include responses of teachers who were late in responding.)

Notes: "District" refers to teachers who participated in Eisenhower-assisted activities provided through the district component of the program.

"IHE/NPO" refers to teachers who participated in Eisenhower-assisted activities supported through the IHE/NPO (institution of higher education/nonprofit organization) component of the program.

There are no statistically significant differences between district and IHE/NPO activities.

Surveys of districts corroborate the extent of alignment. For example, a national survey of district administrators found that 56 percent of districts reported spending Eisenhower funds on professional development focused on district or state content or performance standards and 45 percent on assessments linked to those standards.[30] (The 56 percent of districts represent 76 percent of students, and the 41 percent of districts represent 54 percent of all students.) Virtually all Eisenhower project coordinators surveyed by the national evaluation of Title II report that their activities are aligned with state mathematics and science standards, and most district coordinators report that activities are aligned with state mathematics and science assessments.[31]

Program Indicator: By 1998, over 50 percent of teachers participating in district-level Eisenhower-assisted activities will participate in activities reflecting best practices, including a focus on continuous improvement.

Providing professional development that emphasizes deeper content knowledge and reflection on practice. **Approximately 50 percent of teachers participating in district activities reported that the Eisenhower–assisted activities placed a major emphasis on deepening content knowledge**, and 67 percent of teachers participating in activities sponsored by institutions of higher education and nonprofits reported a major emphasis on content knowledge. A recent research synthesis of professional development in mathematics and science conducted for the national evaluation of Title II, as well as a study of professional development and student mathematics achievement in California, indicate that professional development that focuses on subject-matter content and ways to teach it is more effective in boosting student achievement than professional development that focuses on general classroom practices.[32]

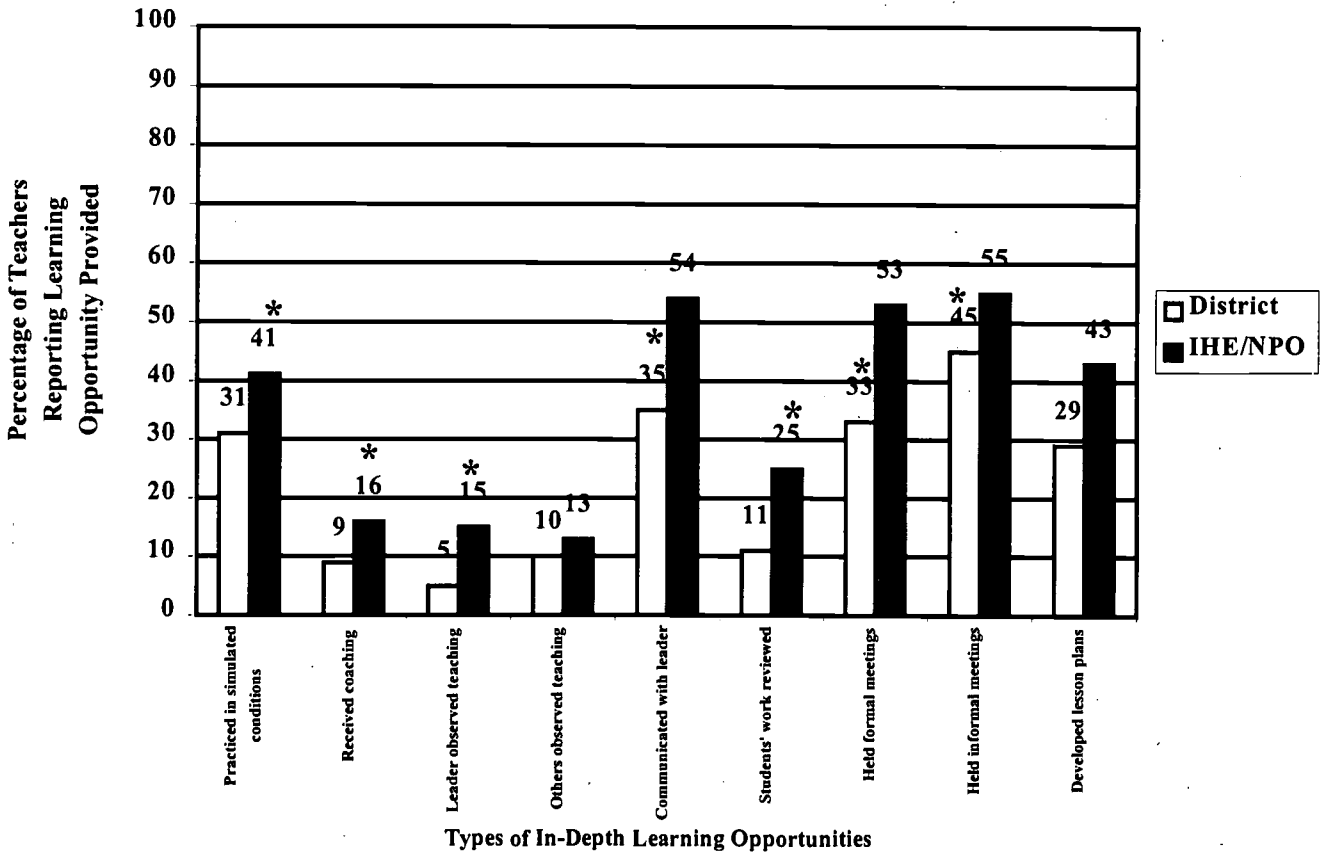
Exhibit 5.8 shows that Eisenhower-assisted activities are more likely to give teachers an opportunity to discuss the implementation of new teaching approaches than to give teachers an opportunity to practice new methods in their classrooms and receive feedback on the quality of implementation. For example, about 33 percent of teachers reported that the activities provided an opportunity to meet with other participants to discuss classroom implementation, but just 9 percent received coaching or mentoring in the classroom.

The institutions of higher education and nonprofits component of the program tends to provide more extensive opportunities for teachers to practice new methods.

The district-administered part of the Eisenhower program has not yet met the goal of providing at least 35 percent of participants with a professional development activity that is a component of professional development extended over an entire school year. Results are much more positive for the institutions of higher education and nonprofits component. About 31 percent of teachers participating in district Eisenhower-assisted activities reported that the activity extended more than one month, while about 61 percent of activities sponsored by institutions of higher education and nonprofits extended for more than one month.

Program Indicator: By 1998, 35 percent of teachers participating in district-level Eisenhower-assisted activities will participate in activities that are a component of professional development that extends over the school year.

EXHIBIT 5.8
PERCENTAGE OF TEACHERS REPORTING THAT SPECIFIC LEARNING OPPORTUNITIES WERE PROVIDED AS PART OF EISENHOWER-ASSISTED PROFESSIONAL DEVELOPMENT ACTIVITIES



Source: U.S. Department of Education, unpublished tabulations from the Evaluation of the Eisenhower Professional Development Program—State and Local Activities, 1999. (Results are based on preliminary analyses and do not include teachers who were late in responding.)

Notes: "District" refers to teachers who participated in Eisenhower-assisted activities provided through the district component of the program.

"IHE/NPO" refers to teachers who participated in Eisenhower-assisted activities supported through the IHE/NPO (institution of higher education/nonprofit organization) component of the program.

The symbol * indicates that the difference between district and IHE/NPO activities is statistically significant at least at the .01 level.

Similar differences between district activities and those sponsored by institutions of higher education and nonprofits can also be observed in the total number of hours of instruction provided. During the 1997-98 school year, district Eisenhower-assisted activities lasted an average of 27.4 hours, while activities sponsored by institutions of higher education and nonprofits lasted an average of 59.2 hours. The number of hours of instruction provided as part of district-level, Eisenhower-assisted activities appears to have more than doubled since 1988-89, when an earlier evaluation of the Eisenhower program was conducted.[33]

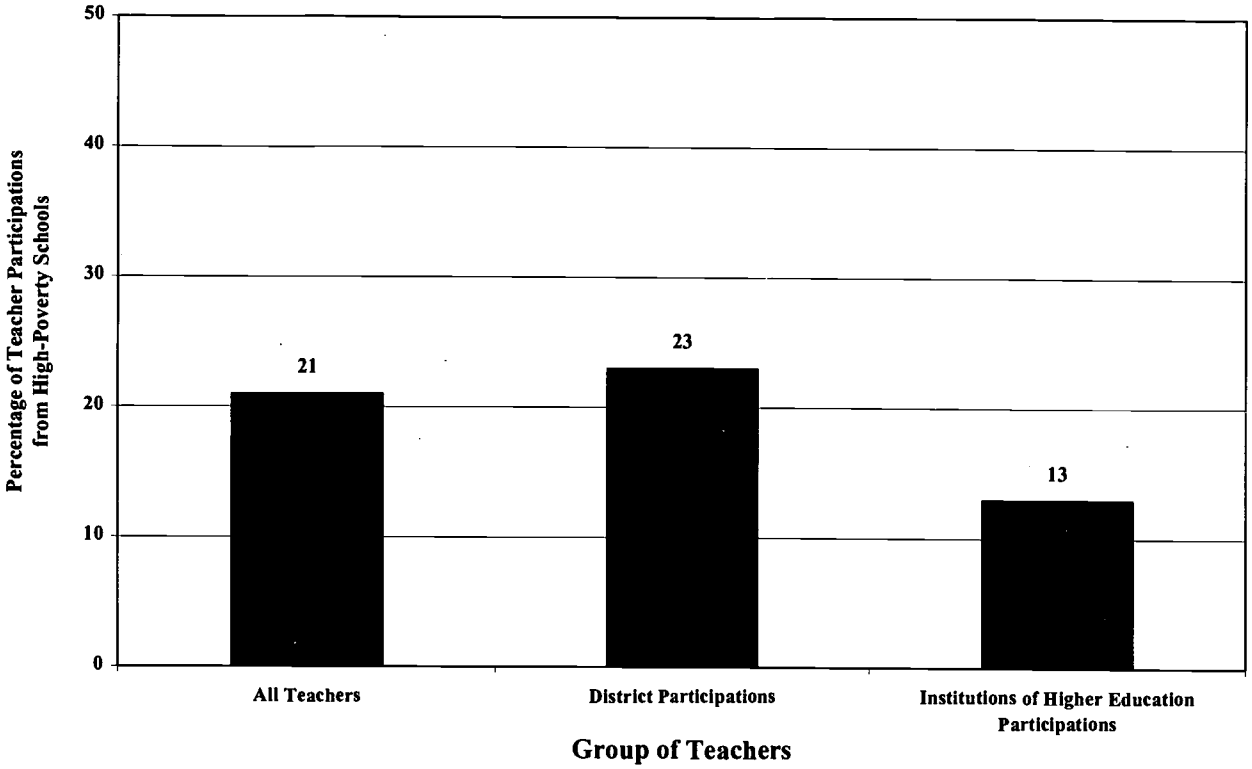
The national evaluation also asked teachers about the extent to which Eisenhower-assisted activities built explicitly on earlier professional development and were followed up by activities that extended what teachers learned. About 33 percent of teachers who participated in district Eisenhower-assisted activities reported that the activities built on earlier activities, and 54 percent indicated that Eisenhower-assisted activities were followed up with other professional development. The latter differs substantially between institutions of higher education and nonprofits and districts: About 69 percent of teachers in activities sponsored by institutions of higher education and nonprofits reported follow-up professional development.

Involving teachers who serve Title I students and others from diverse populations in Eisenhower activities. **The law encourages districts to make special efforts to provide Eisenhower activities to teachers from high-poverty schools.** Forty percent of teachers are in districts that strongly emphasize recruiting teachers of low-income students, and about 18 percent of teachers are in districts that give some emphasis to recruiting teachers of low-income students. Approximately 30 percent of teachers are in districts that strongly emphasize recruiting teachers from Title I schools, and 28 percent of teachers are in districts that place some emphasis on recruiting teachers from Title I schools.[34]

Program Indicator: The proportion of teachers participating in Eisenhower-assisted activities who teach in high-poverty schools will exceed the proportion of the national teacher pool who teach in high-poverty schools.

However, preliminary analyses of survey data show that Eisenhower Professional Development activities are not especially targeted on teachers from high-poverty schools. The proportion of district-level Eisenhower participations that represent teachers who teach in high-poverty schools is not significantly higher than the proportion of teachers across the nation who teach in such schools. Exhibit 5.9 shows that 23 percent of Eisenhower district-level participations represent teachers who teach in high-poverty schools, and 21 percent of teachers across the nation teach in such schools.[35] Eisenhower-assisted activities sponsored by institutions of higher education (IHEs) and nonprofit organizations (NPOs) are even less targeted on teachers who work in high-poverty schools. Only 13 percent of the participations in the Eisenhower activities sponsored by IHEs and NPOs represent teachers who work in high-poverty schools.

EXHIBIT 5.9
PERCENTAGE OF TEACHER PARTICIPANTS FROM HIGH-POVERTY SCHOOLS IN EISENHOWER–SPONSORED ACTIVITIES

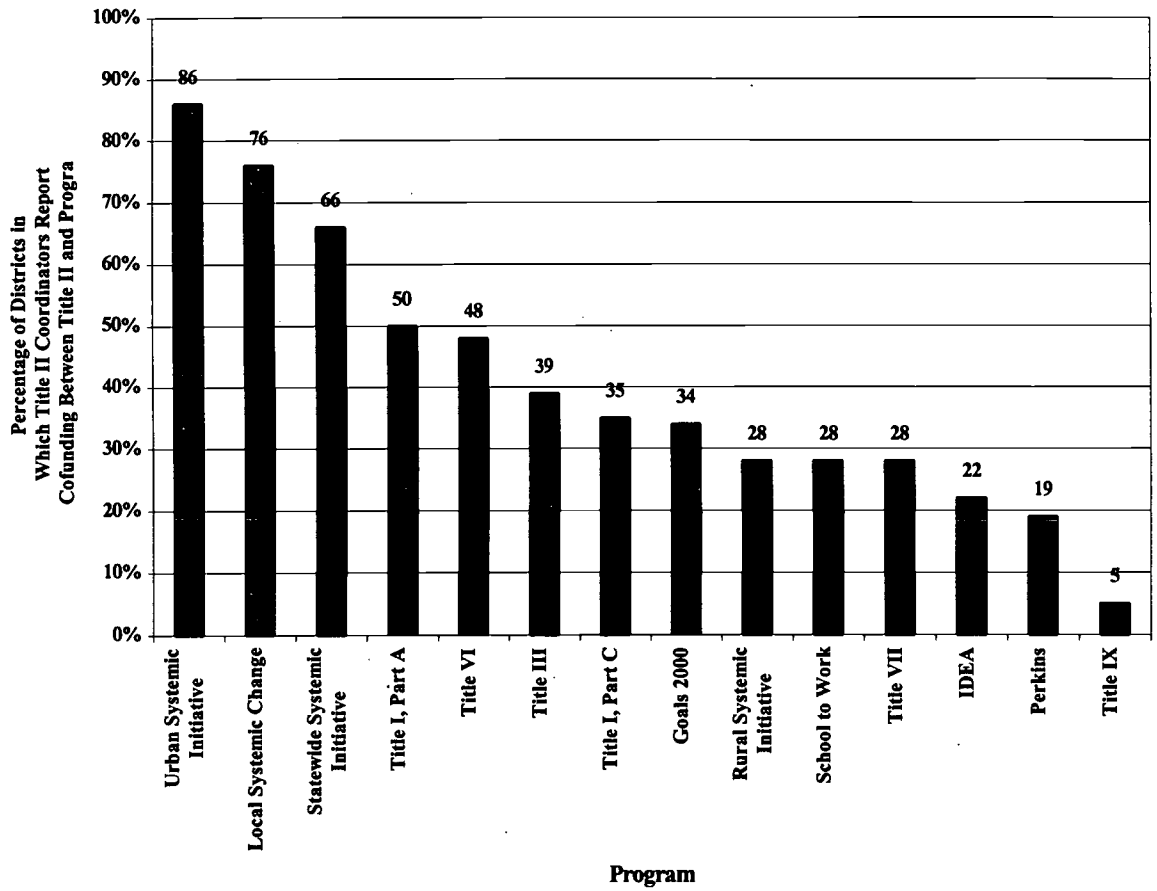


Source: US Department of Education, unpublished tabulations from the Evaluation of the Eisenhower Professional Development Program—State and Local Activities, 1999.

Coordinating Eisenhower activities with other aspects of reform. Overall, among teachers who work in districts that receive both Eisenhower and Title I funds, more than 80 percent are in districts where the Eisenhower coordinators report that they work closely with the Title I staff. Among teachers who work in districts that receive both Eisenhower and Title I funds, 50 percent work in districts where Eisenhower coordinators report that they have cofunded activities with Title I.

Among teachers who work in districts that receive both Eisenhower and Title III, VI, VII, or Goals 2000 funds, 60 to 80 percent are in districts that report coordination among activities sponsored by Title II and these programs.[36] More than 80 percent of teachers in districts that receive NSF Local Systemic Initiative or Urban Systemic Initiative funds report coordination among activities supported by Eisenhower and these NSF projects.

EXHIBIT 5.10
PERCENTAGE OF DISTRICT TITLE II COORDINATORS REPORTING COFUNDING WITH OTHER FEDERAL PROGRAMS



Source: U.S. Department of Education, unpublished tabulations from the Evaluation of the Eisenhower Professional Development Program—State and Local Activities, 1999.

Note: These data are conditional on the program operating in the district.

Although most programs are coordinating Eisenhower professional development funds with funds from other programs, case study data suggest that some coordination activities may be superficial and that there is room for growth in this area. Evaluation case study data indicate that districts are more likely to coplan and cofund Eisenhower activities with the NSF systemic initiatives than with most other federal programs. This is partly because of the common focus on mathematics and science across Eisenhower and the NSF projects.

Program Indicator: By 2000, over 80 percent of states will report that they coordinate and collaborate with Title I state coordinators when they develop their plans for professional development.

Districts that cofund and coplan their Eisenhower Professional Development Activities with other federal programs are more likely to offer Eisenhower activities that are of high quality.

Developing and using performance indicators for the program. The 1994 reauthorization required the development of performance indicators for professional development. Thus far, only 30 states have done so for Title II.

By the fall of 1998, 30 states had developed performance indicators for the Eisenhower program, but only 8 states had developed these indicators jointly with other programs.[37] For the purpose of comparison, Exhibit 5.11 provides information on the percentage of states that have developed indicators for other programs. The legal requirement for states to have indicators has, not surprisingly, had the intended effect: The Eisenhower program tends to have indicators, while other programs that are not legally required to have indicators do not. The quality of the Eisenhower state indicators, however, remains uneven.

Program Indicator: By 1998, 50 percent of all states will have developed performance indicators for integrated professional development across programs (including Eisenhower) in order to support systemic reform and will have data collection systems in place.

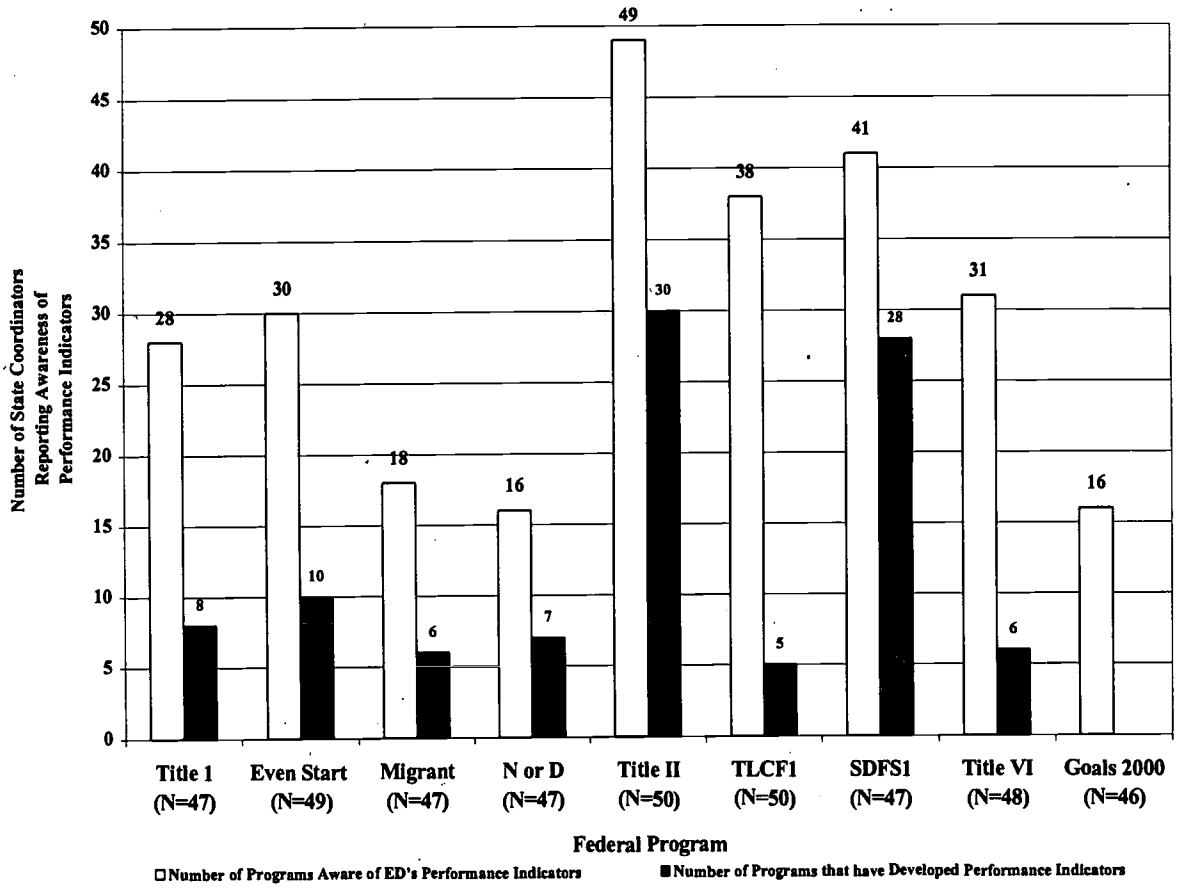
The Eisenhower program also requires that *districts* set performance indicators for improving teaching and learning through professional development.[38] Less than one-third of sampled teachers are in districts with Title II projects that have developed performance indicators. In addition, only about 19 percent of teachers work in Eisenhower districts that are collecting data for Eisenhower performance indicators. It appears that many districts are unaware of the requirement that they do so.[39]

Limited information is available on the other Department programs that provide professional development as part of their services to children. Available information is summarized below:

Title I

Most Title I schools use Title I funds to support professional development. Almost 80 percent of Title I principals report using their Title I funds to help teachers learn how to help all students achieve to high standards, although no information is available on the quality of these activities.[40]

EXHIBIT 5.11
NUMBER OF STATE PROGRAM ADMINISTRATORS WHO REPORT DEVELOPING OR BEING AWARE OF PERFORMANCE INDICATORS



Source: Follow-up Study of State Implementation of Federal Elementary and Secondary Education Programs

Title VI: Innovative Education Program Strategies

Only 24 percent of districts said they used Title VI funds for professional development. However, these tend to be the larger districts, and they enroll approximately 57 percent of all students.[41] In addition, 44 percent of the districts that use Title VI for professional development "a great deal" report that the Title VI professional development is focused on "district or state content or performance standards." [42]

Title VII: Bilingual Education, Language Enhancement, and Language Acquisition Programs

The Department has set the following target for Title VII: Each year, the numbers of teachers in Title VII systemwide and comprehensive school grants receiving high-quality professional development in the instruction of LEP students will increase by 20 percent. Data are expected next year on whether or not the Department of Education's target has been met.

Goals 2000

Goals 2000 funds are being used to improve teachers' knowledge and skills. For example, according to 1997 state reports, more than 60 percent of Goals 2000 grantee districts sponsored activities to improve the specific skills or content knowledge of teachers and student teachers.[43] In 1998, 89 percent of Goals 2000 grantee districts reported spending Goals 2000 funds for professional development linked to standards.[44] Staff in about 41 percent of public schools in the country have participated in standards-based professional development funded through Goals 2000 grants.[45]

Options for Strengthening the Programs

The national evaluation of the Eisenhower program shows that many Eisenhower-assisted activities reflect some of the characteristics of high-quality professional development, and program administrators show an awareness of what it takes to provide high-quality professional development. However, a substantial portion of Eisenhower-assisted activities—especially activities supported through the district formula grant component of the program—do not yet provide the kinds of in-depth, extended learning opportunities that research suggests will lead to important improvements in teaching practice and student achievement. Furthermore, the requirement for integrated planning, monitoring, and continuous improvement of Eisenhower-supported professional development in conjunction with other professional development is only beginning to take hold.

Given the ambitious professional development initiatives in the 1994 amendments to ESEA, federal programs appear to have established a strong foundation for future development. At the same time, the available evidence to date suggests six strategies that should be followed to sustain and improve the influence and effectiveness of federally funded professional development.

1. Federal professional development policies must continue to emphasize the importance of professional development that focuses on subject matter content and ways to teach it. The national evaluation of Title II indicates that, in many districts, the decade-long focus of the program on mathematics and science has helped foster the capacity to deliver effective professional development in these disciplines. One indication of this discipline-based capacity is the widespread coplanning and cofunding of Eisenhower activities with the NSF State, Urban, and Rural Systemic Initiatives, as well as the NSF Local Systemic Change Program.[46] As federal efforts to improve professional development expand, federal guidance and reporting requirements should ensure that this content focus is sustained and deepened. In particular, if federal support of professional development expands to include additional core subjects beyond mathematics and science, it is critical to ensure that content specialists are involved at the district, state, and federal levels.

2. Federal professional development programs should focus more on collaborative, "active learning" opportunities. Data from the evaluation of the Eisenhower program indicate that teachers perceive collaborative, "active learning" opportunities—observing instructional practices, being coached on new instructional practices, practicing in simulated conditions, developing lesson plans, and reviewing student work—to lead to greater improvements in knowledge, skills, and classroom practice. Therefore, these practices should become a priority in all federal professional development programs.

3. State and local indicator reporting systems should be strengthened through technical assistance and increased resources. Because of the requirement that states and districts develop indicators, the Eisenhower program has more and higher-quality indicators than other federal programs, but these state and local indicators are still inadequate. State and local agencies lack the capacity to develop sophisticated indicator systems. This is partly due to a lack of expertise, but it is also a direct

result of a lack of funds for developing and reporting on indicators. Another important factor is the uneven condition of state and local data collection and reporting systems and the fragmented nature of education data at the local, state, and federal levels.

4. Grantees should be required to use data on the quality and effects of their professional development activities for both continuous improvement and accountability purposes. They should be encouraged to collect and analyze data on quality and effects in order to identify areas that need improvement. Grantees should also be accountable for their use of professional development funds, and should thus be required to track and report on the quality and effects of professional development more carefully without constraining local options. Given the limited funds available for professional development and the evidence that these funds are often spent on activities that research suggests have limited results, adding accountability provisions to the reauthorized legislation might lead to greater productivity.

Accountability provisions should encourage grantees to:

- **Measure changes in teaching practice.** For example, because teaching practice is the target of professional development, one direct way to assess the impact of professional development activities funded by federal programs is to measure changes in teacher classroom behavior. This practice would provide evidence about whether methods, arrangements, and materials held to be beneficial for students are being used as a result of expenditures for professional development. Evaluations of professional development targeting classroom practices could include follow-up measures of the extent to which they are used as intended and adapted in the recommended ways.

- **Measure the extent to which schools incorporate time for classroom observation, reflection, and the analysis of teaching.** In addition, given the evidence that Eisenhower-assisted activities frequently do not provide teachers with the kinds of in-depth learning opportunities required to practice and reflect on new skills, it may be useful to encourage districts to report explicitly on the degree to which such opportunities are offered. For example, one could evaluate the impact of extended interventions, such as those funded by Eisenhower, that are intended to improve teachers' capacity to observe teaching, coach each other in new methods, and participate in study groups related to effective teaching, by collecting data on changes in school schedules that provide time explicitly for such activities. Many dimensions of impact may be difficult to measure, but some may be readily observed. Although any federally supported comprehensive plan ought to have better achievement for all students as its goal, a useful way to demonstrate the effectiveness of professional development is to show that it led to better teaching.

5. Federal professional development programs should place a much greater emphasis on serving teachers who work in high-poverty schools and teachers who would not necessarily volunteer to participate in professional development. The Eisenhower Professional Development Program has not especially targeted teachers from high-poverty schools. In addition, most districts serve many teachers who volunteer to participate in the Eisenhower program rather than targeting teachers who may be less inclined to want to improve their content knowledge and pedagogical practices. If federal programs are to increase educational equity and excellence, they must reach teachers of the most disadvantaged students and teachers who are most in need of improving their practice.

6. New strategies should be developed to encourage districts and institutions of higher education and nonprofits to collaborate in the design and provision of professional development. Given the evidence that Eisenhower-assisted professional development funded through the institutions of higher education and nonprofits component of the program tends to be of higher quality and greater intensity than professional development funded through the district formula grant component, it may be helpful to

encourage districts to provide explicit plans for collaboration with institutions of higher education and nonprofits as one element of a district application.

[1] Linda Darling-Hammond and Deborah Ball, *Teaching for High Standards: What Policymakers Need to Know and Be Able to Do* (Philadelphia, PA: CPRE Joint Report Series, 1998) 1.
[2] R. Greenwald, L. Hedges, and R. Laine, "The Effect of School Resources on Students' Achievement," *Review of Educational Research* 66 (1996, Fall): 361-96.
[3] The National Education Goals Panel, *The National Education Goals Report* (Washington, DC: National Education Goals Panel, 1997) xv-xvi.
[4] Michael Knapp, Andrew Zucker, Nancy Adelman, and Mark St. John, *The Eisenhower Mathematics and Science Education Program: An Enabling Resource for Reform* (Washington, DC: U.S. Department of Education, 1991) 35.
[5] P.L. 103-382, section 1001(c)(5), (6).
[6] National Science Foundation, *Guide to Programs, FY 1997* (Arlington, VA: National Science Foundation, 1997) 19.
[7] The exact percentage is not known because of uncertainty about the expenditure of Title VII, Subpart 1, funds.
[8] Beatrice Birman, Alison Reeve, and Cheryl Sattler, *The Eisenhower Professional Development Program: Emerging Themes from Six Districts* (Washington, DC: U.S. Department of Education, 1998) i.
[9] States and districts may apply to the federal government for waivers from most ESEA provisions, including the requirement that the grantee's share of the first $250 million be spent on math and science professional development.
[10] Birman et al., 1998, 16; United States Department of Education, *Principles of High-Quality Professional Development* (Washington, DC: U.S. Department of Education, no date).
[11] David K. Cohen and Heather C. Hill, *Instructional Policy and Classroom Performance: The Mathematics Reform in California* CPRE Report Series RR-39 (Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania, 1998).
[12] Mary Kennedy, *Form and Substance in Inservice Teacher Education* (Madison, WI: National Institute for Science Education, University of Wisconsin, 1998).
[13] Laurie Lewis, Basmat Parsad, Nancy Carey, Nicole Barfai, Elizabeth Farris, Becky Smerdon, and Project Officer: Bernie Greene, *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* NCES1999-080 (Washington, DC: U.S. Department of Education, National Center on Education Statistics,1999) 27-31.
[14] Lewis et al., 1999.
[15] Lewis et al., 1999.
[16] U.S. Department of Education, *Implementing Schoolwide Programs: Volume 1, An Idea Book for Planning* (Washington, DC: U.S. Department of Education, 1990) 41, 49. Richard Dilorenzo, telephone communication with author, November 11, 1998.
[17] Kati Haycock, "Good Teaching Matters: How Well-Qualified Teachers Can Close the Gap," *Thinking K-16* 3 Issue 2 (1998, Summer): 7-9.
[18] Camilla Heid and Ann Webber, *School-Level Implementation of Standards-Based Reform: Findings from the Follow-up Public School Survey on Education Reform* (Washington, DC: U.S. Department of Education, 1999).
[19] Heid and Webber, 1999.
[20] Mary S. Leighton, Eileen O'Brien, Karen Walking Eagle, Lisa Weiner, George Wimberly, and Peter Youngs, *Roles for Education Paraprofessionals in Effective Schools: An Idea Book* (Washington, DC: U.S. Department of Education, 1997).
[21] H. Fleischman and P. Hopstock, *Descriptive Study of Services to LEP Students: Volume II, Survey Results* (Washington, DC: U.S. Department of Education, 1993).
[22] J.D. Ramirez, *Longitudinal Study of Structured English Immersion Strategy: Early Exit and Late Exit Transitional Bilingual Programs for Language Minority Children* (Washington, DC: U.S. Department of Education, Planning and Evaluation Service, 1992).

[23] U.S. Department of Education, National Center for Education Statistics, *Status of Education Reform in Public Elementary and Secondary Schools: Teachers' Perspectives* (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 1999) 4.
[24] U.S. Department of Education, National Center for Education Statistics, *Teacher Quality*, 1999. In addition, it is important to note that 41 percent of teachers surveyed felt that they were "moderately" prepared to implement state or district standards in their classrooms.
[25] U.S. Department of Education, National Center for Education Statistics, *Teacher Quality*, 1999, 23.
[26] U.S. Department of Education, National Center for Education Statistics, *Teacher Quality*, 1999, B-24.
[27] U.S. Department of Education, National Center for Education Statistics, *Teacher Quality*, 1999.
[28] American Institutes for Research, *Evaluation of the Eisenhower Professional Development Program*, unpublished tabulations, March 1999.
[29] Nancy Carey, Joy Frechtling, Westat, Inc., *Best Practice in Action: Followup Survey on Teacher Enhancement Programs* (Washington, DC: National Science Foundation, March 1997) 32.
[30] U.S. Department of Education, unpublished tables from the *Study of Education Resources and Federal Funding*, February 17, 1999, Table 28.
[31] American Institutes for Research, *Evaluation of the Eisenhower Professional Development Program*, unpublished tabulations, March 1999.
[32] Mary Kennedy, *Form and Substance in Inservice Teacher Education* Research Monograph No. 13 (Madison, WI: National Institute for Science Education, University of Wisconsin, 1998); David K. Cohen and Heather C. Hill, *Instructional Policy and Classroom Performance: The Mathematics Reform in California* CPRE Report Series RR-39 (Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania, 1998).
[33] The 1988-1989 evaluation collected data on duration from districts rather than teachers, so a comparison of results from the 1988-89 and 1997-98 years should be interpreted as providing an indication of the general magnitude of the change in hours of instruction rather than a precise numerical estimate. The 1988-89 evaluation reported that, in the median district, activities supported by Eisenhower funds provided an average of 6 hours of instruction per participant. Preliminary data from the current evaluation indicate that the median duration of Eisenhower-supported activities was about 14 hours in 1997-98. The average of 27.4 hours reported in the text is a mean. See Michael S. Knapp, Andrew A. Zucker, Nancy E. Adelman, and Mark St. John, *The Eisenhower Mathematics and Science Education Program: An Enabling Resource for Reform* (Washington, DC: U.S. Department of Education, 1991) 109.
[34] American Institutes for Research, *Evaluation of the Eisenhower Professional Development Program: Preliminary Tables*, unpublished tabulations, March 1999.
[35] A high-poverty school is defined as a school in which 50 percent or more of the students enrolled are eligible for a free lunch, as reported in the Common Core of Data.
[36] American Institutes for Research, March 1999.
[37] U.S. Department of Education, *Follow-up Survey of State Implementation of Federal Elementary and Secondary Education Programs,* unpublished tabulations, 1998.
[38] P.L. 103-382, section 2208(a)(2).
[39] American Institutes for Research, unpublished tabulations, March 1999.
[40] Heid and Webber, 1999.
[41] Jay Chambers, Joanne Lieberman, Tom Parrish, Daniel Kaleba, James Van Campen, and Stephanie Stullich, *Study of Education Resources and Federal Funding: Preliminary Report* (Washington, DC: U.S. Department of Education, 1999).
[42] Chambers et al., 1999.
[43] Policy Studies Associates, *Goals 2000: Supporting State and Local Educational Improvement* (Washington, DC: Policy Studis Associates, December 1997) 10.
[44] Chambers et al., 1999.
[45] Heid and Webber, 1999.

[46] Data from the current evaluation indicate that districts are more likely to coplan and cofund Eisenhower activities with the NSF systemic initiatives than with most other federal programs.

6. IS THE SAFE AND DRUG-FREE SCHOOLS AND COMMUNITIES ACT SUPPORTING EFFECTIVE PREVENTION OF SCHOOL DRUG USE AND VIOLENCE?

Key Findings

National Trends

- ***Drug and Alcohol Use***. For the nation as a whole, in grades 8, 10, and 12, the use of alcohol and drugs continues at much lower rates in school than they do overall. Overall, while the use of alcohol remains high (with a recent slight decrease for grades 8 and 10), 1998 results indicate that the aggregate use of other illicit drugs may finally be heading downward after six years of steadily climbing (due primarily to increases in marijuana use).

- ***School Violence***. Schools nationally are comparatively safe places, and students in school today are not significantly more likely to be victimized than in previous years. Crime in or on the way to school has fallen, and most school crime is theft, not serious violent crime. However, a small proportion of schools experience serious crime and violence.

Safe and Drug-Free Schools Program

- ***Local Prevention Efforts***. Nearly all elementary and secondary school principals report that their schools have formal, written rules about drugs (95 percent) and weapons (94 percent). Elementary and secondary principals report implementing a variety of activities at school that are intended to prevent or reduce problem behavior.

- ***Problems with Implementation***. Although the flexibility that the Safe and Drug-Free Schools and Communities Act (SDFSCA) provides may be a boon to districts seeking to tailor program activities to local needs, districts may not necessarily select activities to match their needs assessments or goals, and they may seldom use activities that are based on research.

- ***Performance Indicators***. The statute requires states to develop goals and objectives for their SDFSCA program, and all states have met this requirement. However, the quality of these goals and objectives varies.

- ***State Leadership***. Many SDFSCA state coordinator offices have very small staffs; in some cases, only one or two persons are responsible for hundreds of school districts. As a result, intensive technical assistance to districts and oversight of district activities are very difficult.

- ***Principles of Effectiveness***. The Department has established these Principles to strengthen the quality of drug and violence prevention programs implemented with SDFSCA funds.

- ***Targeting***. To target a greater percentage of program funds on high-quality programs in areas of significant need, the Department will expand National Programs activities in FY 1999 by investing more than $95 million in competitive grants designed to meet that goal.

The importance of providing safe havens for learning—schools that are free of drugs and violence—cannot be overstated. Schools, communities, and families must work together to provide effective programs to prevent drug use and violence, and to establish and maintain safe, orderly, and drug-free learning environments. The seventh National Education Goal provides that by the year 2000, all schools in America will be free of drugs and violence and the unauthorized presence of firearms and alcohol, and will offer a disciplined environment conducive to learning. Similarly, one of the objectives of the U.S. Department of Education's Strategic Plan is that schools be strong, safe, disciplined, and drug free.

Federal efforts to prevent and reduce youth drug use and violence involve many different agencies including the Departments of Transportation, Defense, and Labor. Primary responsibility, however, rests with the Departments of Education, Health and Human Services, and Justice, and the Office of National Drug Control Policy, which oversees and coordinates all federal efforts to combat drug trafficking and to prevent and treat drug use. The Department of Education participates in the efforts of other agencies to prevent youth drug use and violence through joint planning and review of policies, plans, and reports, and through support for interagency data collection efforts and grants, such as the new "Safe Schools, Healthy Students" coordinated grant initiative of the Departments of Education, Justice, and Health and Human Services.

Introduction to the Program and the 1994 Legislative Changes

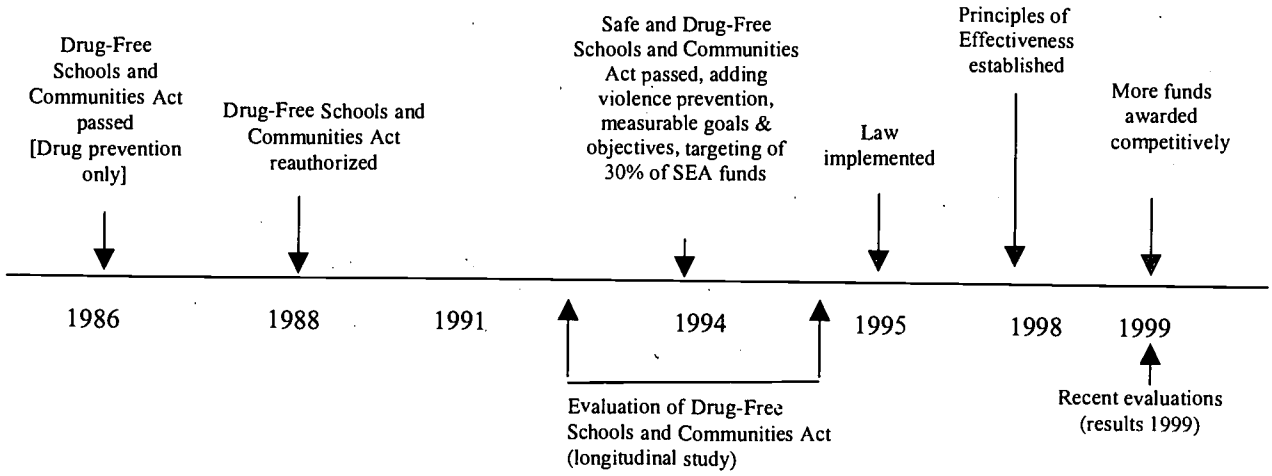
At the Department of Education, the Safe and Drug-Free Schools and Communities Act is the primary federal program that supports school-based drug prevention activities in schools nationally. Congress enacted the Drug-Free Schools and Communities Act (DFSCA) in 1986 to establish, operate, and improve drug and alcohol abuse education and prevention programs throughout the nation. When the program was reauthorized in 1994, it was expanded to include violence prevention efforts and renamed the Safe and Drug-Free Schools and Communities Act (SDFSCA). Through this Act, Congress sought to support the seventh National Education Goal by preventing violence in and around schools and by strengthening programs that prevent the illegal use of alcohol, tobacco, and drugs.

Other major legislative changes in 1994 were the addition of a requirement that states and districts develop measurable goals and objectives for their SDFSCA programs, and a new provision targeting a percentage of program funds to districts that have the greatest need for additional funds to carry out drug and violence prevention programs.

The Gun-Free Schools Act of 1994 (enacted in response to concern about handgun-related youth violence) requires that each state have in effect a law requiring districts to expel for not less than one year any student found to have brought a firearm to school. In addition, districts receiving ESEA funds must adopt a policy that requires any student who brings a firearm to school to be referred to the criminal justice or juvenile delinquency system. Expelled students may be referred to an alternative educational setting, and administrators may modify expulsions on a case-by-case basis.

Exhibit 6.1 traces the Safe and Drug-Free Schools legislation from 1986 to the present.

EXHIBIT 6.1
SAFE AND DRUG-FREE SCHOOLS AND COMMUNITIES ACT TIMELINE



Source: U.S. Department of Education.

SDFSCA is the primary source of federal funds to support school-based education to prevent drug use and violence. It has two major programs, the State Grants program and the National Programs. The majority of funds go to the State Grants program, with separate allocations for the state education agency (SEA) and the Office of the Governor. SEA funds flow to districts, primarily by a formula based on enrollment, with some funds targeted based on need for prevention programming. Governors' program funds go to local grantees, mainly community groups and organizations.

The average state award approaches $10 million; 59 percent of districts receive grants of less than $10,000. The average grant for all districts is approximately $6 per student (except in the 10 percent of districts in each state that share the 30 percent of state funding targeted to districts with the greatest needs, where the average per-pupil expenditure is greater).

Some states have been able to supplement SDFSCA funds with their own funds, but in many school districts, the program is the only source of prevention funding. Some districts supplement their SDFSCA grants with local funds. For example, a 1998 audit by the Office of the Inspector General (OIG) found that of the 26 districts studied, the 12 small ones (which received grants of $10,000 or less) used local funds to supplement program expenses, such as paying coordinators' salaries or substitute teachers while regular teachers attend meetings.[1]

SDFSCA requires that when districts apply to SEAs for funds, they include in their application "a detailed explanation of the local educational agency's comprehensive plan for drug and violence prevention," including what the district's goals for its program are, how the district plans to use its funds, and how it will coordinate with community prevention efforts and with projects supported by other federal, state, and local sources.

In the Department's 1998 national survey of school districts, "Study on Educational Resources and Federal Funding," most districts reported that their SDFSCA program expenditures fell into one of three categories: (1) drug, alcohol, and violence prevention programs, (2) other strategies, and (3) professional development. Expenditures for parental and community involvement, extended-day programs, school security, and program administration accounted for a small percentage of the total. In addition, 83 percent of districts reported emphasizing activities aimed at affecting student attitudes toward drug use and violence. Just over half emphasized responding to needs of students at high risk for drug use and violence, and just under half reported emphasizing improving staff knowledge and skills for preventing violence and use of alcohol, tobacco, and other drugs, and for reduction of bias-related incidents.

Preliminary data from a 1997-98 national study[2] provide information from school administrators in a nationally representative sample of schools on the extent of school efforts (not necessarily funded by SDFSCA) to prevent problem behavior. Elementary and secondary schools offer a large number and great variety of activities to prevent problem behavior in school.

- **Nearly all elementary and secondary school principals reported that their schools have formal, written rules about drugs (95 percent) and weapons (94 percent).** A large number also reported having formal, written rules about carrying items or wearing clothing in which drugs or weapons could be concealed. The percentage of middle and junior high schools reporting such rules (62 percent) is higher than the percentage of elementary schools (39 percent) or high schools (42 percent) doing so.

- Elementary and secondary principals reported implementing a variety of activities at school that are intended to prevent or reduce problem behavior. Principals were asked to identify whether or not their schools used activities in any of 14 distinct categories of prevention efforts. On average, they reported using prevention efforts that fell into 9 of the 14 different categories (such as prevention curriculum/instruction/training and behavioral programming/behavior modification). The average number of categories implemented was higher for middle/junior high schools (10) than for high schools (8).

As Exhibit 6.2 shows, half of elementary and secondary school principals reported that their schools engaged in 14 or more different activities intended to prevent or reduce problem behavior. For example, on average, schools used 2 activities from the prevention curriculum/instruction/training category and 1.7 activities from the recreation/enrichment/leisure category. Hence, while schools employed an average of 14 different activities, these activities, on average, fell into 9 categories. The median number of unique activities was higher for middle and junior high schools (16) than for high schools (11). Large percentages of elementary and secondary school principals reported employing activities in the following categories: prevention curriculum/instruction/training activities (76 percent); counseling/social work/psychological/therapeutic activities (75 percent); and use of external personnel in classrooms (72 percent).

EXHIBIT 6.2
NUMBER OF DISTINCT ACTIVITIES UNDERTAKEN BY SCHOOLS TO PREVENT PROBLEM BEHAVIOR OR TO PROMOTE A SAFE AND ORDERLY SCHOOL ENVIRONMENT, BY SCHOOL LEVEL

School level	Median
All schools	14
Elementary	14
Middle/junior high	16
High	11

Source: U.S. Department of Education/U.S. Department of Justice, unpublished preliminary data from National Study on School Violence and Prevention/National Study of Delinquency Prevention in Schools (see Endnote 2).

Note: "Median" is the median number of distinct (unduplicated) activities named (i.e., each activity is counted only once regardless of the number of times it was named by a respondent). Includes all schools, whether or not receiving SDFSCA funds or services.

The SDFSCA National Programs support a range of activities designed to help elementary and secondary schools and institutions of higher education prevent drug use and violence, such as identifying model programs and approaches to prevention, disseminating information about effective programs and strategies, providing technical assistance, and developing and implementing interagency initiatives that promote coordination and collaboration among federal agencies for drug and violence prevention. To target a greater percentage of program funds on high-quality programs in areas of significant need, the Department will expand National Programs activities in FY 1999 by investing more than $95 million in competitive grants designed to meet that goal. In this way, the Department seeks to focus limited resources on high-quality programs and enlarge the available pool of strategies of demonstrated effectiveness.

Exhibit 6.3 summarizes the key provisions of SDFSCA and briefly describes how the programs function.

EXHIBIT 6.3
DEPARTMENT OF EDUCATION'S PROGRAMS FOR SCHOOL SAFETY AND PREVENTION OF DRUG USE AT A GLANCE

Program Name	1999 Appropriation[a]	Purpose	Funding and Targeting	Participation	Services
SEA Programs	$344 million	Assist school districts in implementing comprehensive drug and violence prevention programs.	Formula grants to states based on the school-age population of the state and the state's Title I, Part A, allotment 80% of the total amount allocated to the state Suballocations to school districts based on enrollment (70% of funds) and greatest need (30% of funds)	52 states (including the District of Columbia and Puerto Rico) 97% of all school districts	Student instruction, curriculum development, student assistance (e.g., counseling, mentoring), after-school programs, parental involvement and other activities
Governors' Programs	$86 million	Support community-based drug and violence prevention activities, with a focus on youth who have special needs or who are not normally served by schools.	20% of the total amount allocated to the state Discretionary grants or contracts to community and nonprofit entities targeting children and youth who are not normally served by schools or who need special services	52 Governors Over 4,000 grants to community and nonprofit entities in 1995-96 and 1996-97 Over 15 million students served from 1995-96 to 1996-97	Dissemination; training parents, law enforcement officials, and community members; linking community resources with schools; and other activities
National Programs	$90 million[b]	Support drug and violence prevention activities for students (preschool through postsecondary) with a focus on unmet and emerging national needs.	Discretionary grants, contracts and cooperative agreements with federal agencies, SEAs, districts, schools, institutions of higher education, and nonprofit organizations	24 new awards, 18 continuation awards in 1998	Identification of model programs, dissemination, technical assistance, data collection, interagency initiatives, evaluations, and other activities

Source: U.S. Department of Education.

[a] For FY 1999, the total SDFSCA appropriation was $566 million, including $35 million for a special initiative to support middle-school prevention coordinators, and funds reserved for the outlying areas, Bureau of Indian Affairs, Programs for Native Hawaiians and program evaluation.

[b] Includes $60 million for competitive grants to LEAs for programs to create safe and orderly learning environments.

What Do We Know about Successful Efforts to Prevent Drug Use and Violence?

To strengthen the quality of programs aimed at preventing drug use and violence and implemented with SDFSCA funds, the U.S. Department of Education recently established the Principles of Effectiveness for SDFSCA. These Principles of Effectiveness derive primarily from the requirements in SDFSCA, but they are also based on ideas, drawn from theory and practice, about how to encourage high-quality program planning, implementation, and improvement.

Effective July 1, 1998, all recipients of SDFSCA State and Local Grants Programs funds are required to abide by the following Principles:

1. A grant recipient shall base its program on a thorough assessment of objective data about the drug and violence problems in the schools and communities served.

2. A grant recipient shall, with the assistance of a local or regional advisory council that includes community representatives, establish a set of measurable goals and objectives, and design its activities to meet those goals and objectives.

3. A grant recipient shall design and implement its activities based on research or evaluation that provides evidence that the strategies used prevent or reduce drug use, violence, or disruptive behavior.

4. A grant recipient shall evaluate its program periodically to assess its progress toward achieving its goals and objectives and use its evaluation results to refine, improve, and strengthen its program and to refine its goals and objectives as appropriate.

The Principles are closely related to district application requirements in Section 4115 of the statute. This section requires school districts to conduct an objective analysis of their current drug and discipline problems, create measurable goals for prevention of drug use and violence, and report on progress toward attaining those goals.

The Principle requiring the use of research-based approaches was developed largely in response to the findings of a Department study of programs in 19 school districts supported by the Drug-Free Schools and Communities Act (that is, the program prior to the 1994 reauthorization). That study found that few districts seemed to know about or consider research findings when planning their prevention programs, and that prevention approaches that have been shown to be effective were not widely used.[3] Although the statute does not expressly require the adoption of research-based prevention programs, a focus on such programs is in accordance with the purposes of SDFSCA. The Department has convened an Expert Panel to identify, validate, and recommend to the Department those school-based programs that have proved effective, when judged against rigorous criteria, in promoting safe, disciplined, and drug-free schools. Once the Expert Panel designates programs as exemplary or promising, the Department will disseminate information about them and encourage their use.

The Principles of Effectiveness are an important part of the Department's efforts to improve and strengthen the SDFSCA program. Because the Principles were recently developed, the Department does not have current data on their implementation. The Department is now collecting information on state and local implementation of the Principles from a variety of sources. Data generated from these studies will be available beginning in the spring of 1999.

How Well Is the Nation Meeting Its Goals for School Safety and Drug Prevention?

Given the many factors that affect student behavior and attitudes related to violence and drug use, it is not clear how much effect SDFSCA has had on national trends. However, an examination of these trends provides valuable information on the context within which the program operates as well as some indications of the effects the program may be having.

Drug Use: **For the nation as a whole, an annual survey of students in grades 8, 10, and 12 demonstrates that alcohol and drug use continue at much lower rates in school than at any location. Overall, while the use of alcohol remains high (with a recent slight decrease for grades 8 and 10), 1998 results indicate that the aggregate use of other illicit drugs may be finally heading downward after six years of steadily climbing (primarily because of increases in marijuana use).**

Information on long-term trends is available only for students in grade 12. Rates of use (see Exhibits 6.4 and 6.5) declined sharply from peak rates in the mid-1970s to about 1991. Since that low point, overall rates have been higher, although except for marijuana use, substance use rates have been relatively stable throughout the 1990s—and as previously stated, the most recent data show a decrease in use rates.

- The percentage of high school seniors in 1998 reporting use of alcohol in school during the preceding year (8 percent) was the same as for 1994. For marijuana, the percentage reporting use in school during the preceding year is now also the same as for 1994 (8 percent), reflecting a reversal of recent increases that had reached as high as 10 percent.

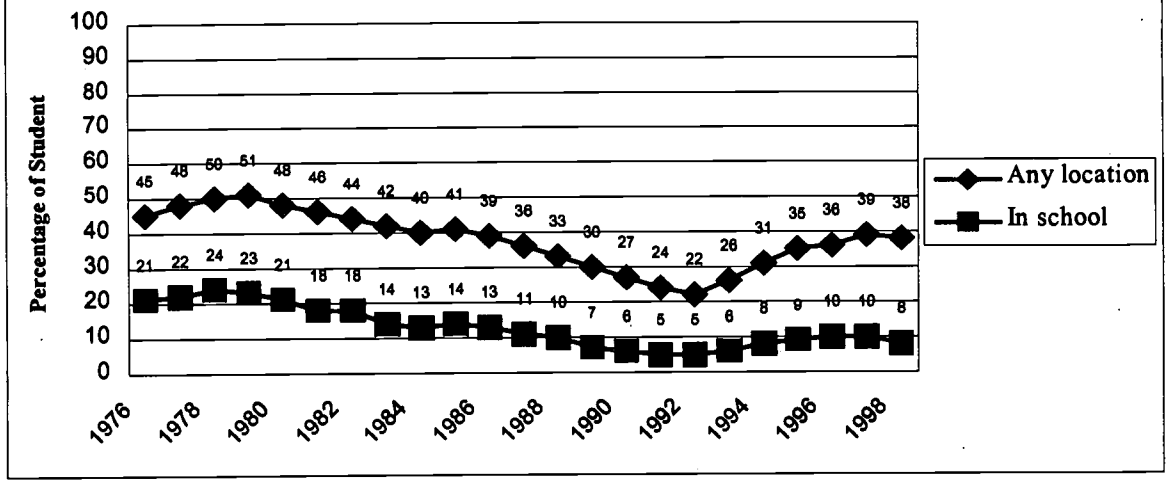
- In comparison, for substance use at any location in 1998, about three-quarters of high school seniors reported using alcohol and about two-fifths reported using marijuana in the preceding year.

National Indicators:

Drug use in schools. By 2001, rates of annual alcohol use in schools will decline to 4 percent for eighth-graders and 7 percent for tenth- and twelfth-graders; rates of annual marijuana use in school for the same time period will decline to 3 percent, 9 percent, and 7 percent for eighth-, tenth-, and twelfth-graders.

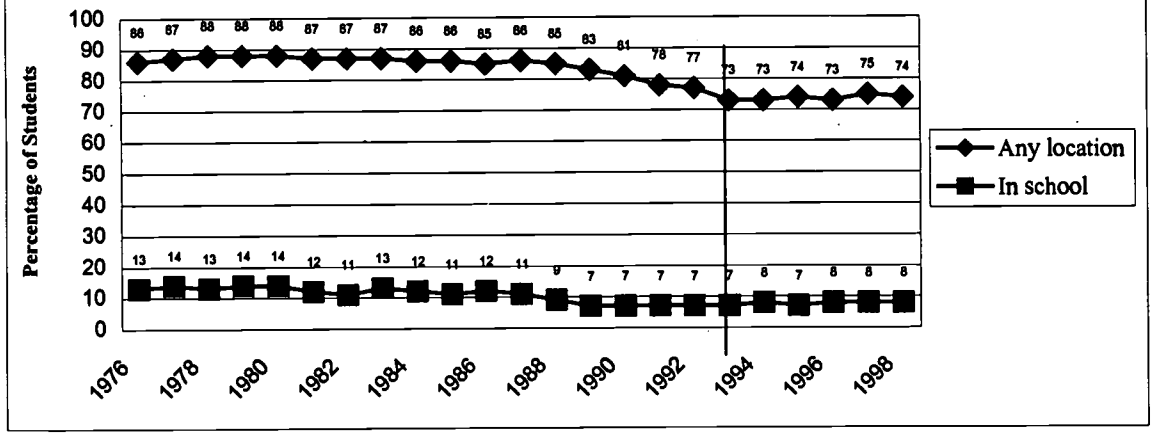
Drug use by school-age children. By 2000, rates of 30-day prevalence of alcohol use will decline to 21 percent for eighth-graders, 32 percent for tenth-graders, and 41 percent for twelfth-graders; rates of 30-day prevalence of illicit drug use will decline to 12 percent for eighth-graders, 19 percent for tenth-graders, and 20 percent for twelfth-graders.

EXHIBIT 6.4
PERCENTAGE OF TWELFTH-GRADERS REPORTING THE USE OF MARIJUANA IN THE PAST YEAR, IN SCHOOL AND AT ANY LOCATION



Source: University of Michigan, Survey Research Center, Institute for Social Research, Monitoring the Future Study, 1976 to 1998.

EXHIBIT 6.5
PERCENTAGE OF TWELFTH-GRADERS REPORTING THE USE OF ALCOHOL[a] IN THE PAST YEAR, IN SCHOOL AND AT ANY LOCATION



Source: University of Michigan, Survey Research Center, Institute for Social Research, Monitoring the Future Study, 1976 to 1998.

[a] In 1993, the wording for this item changed to indicate that "alcohol use" was "more than a few sips."

Violence: Findings from studies of school violence and disorder vary with the way the data are collected. Data collected from school administrators, who may not be aware of all incidents that occur on school property, differ from data collected directly from students; and data collected from students vary according to whether the information is collected via a household survey (in the presence of parents) or at school (in the environment asked about). Because of their differences, a combination of these data sources presents a more accurate picture of school safety than any single source.

The *Annual Report on School Safety 1998*[4] examined a range of different sources of data, and concluded that **schools nationally are comparatively safe places, and students in school today are not significantly more likely to be victimized than in previous years. Crime in or on the way to school has fallen, and most school crime is theft, not serious violent crime. However, a small proportion of schools experience serious crime and violence.**

National Indicators:

Serious violent incidents in schools. By 2001, the proportion of high school students in a physical fight on school property will decrease to 12 percent and the annual rate of students aged 12 to 18 who report experiencing serious violent crime, in schools or going to and from school, will decrease to 8 per 1,000.

Weapons in schools. By 2001, the proportion of high school students carrying weapons (including firearms) to school will decrease to 6 percent.

School-related homicides. For the two-year period ending in 2001, the number of school-related homicides will decline to 64.

- A 1996 household survey of students found that per 1,000 students aged 12 to 18, about 26 were victims of serious violent crimes away from school, while about 10 were victims of such crimes at school or going to and from school.[5]

- During the 1996-97 school year, 10 percent of all public schools reported one or more serious violent crimes to the police. Another 47 percent of all public schools reported at least one less serious or nonviolent crime to police, but did not report any serious violent crime. The remaining 43 percent of public schools did not report any of these crimes to the police.[6]

Preliminary data from two ongoing, linked studies, the "Study on School Violence and Prevention" and the "National Study of Delinquency Prevention in Schools," provide some information on the extent of problem behavior in schools. These studies, which are being jointly funded by the U.S. Department of Education, the National Institute of Justice, and the Bureau of Justice Assistance, surveyed a nationally representative sample of schools, and included data collected from students via in-school surveys.[7] Nearly 1 in 7 secondary school students reported being physically attacked in school during the 1997-98 school year, and 1 in 20 secondary students reported being threatened with a weapon in school during that year.

- A total of 14 percent of secondary school students reported that they were physically attacked this year in school. The percentage of students physically attacked was higher in middle and junior high schools (19 percent) than in high schools (10 percent).

- A total of 5 percent of secondary school students reported that they were threatened with a gun or knife this year in school and 19 percent reported that they were threatened with a beating. The percentage of students threatened with a beating was higher in middle and junior high schools (22 percent) than in high schools (16 percent).

Targeting of funds. Exhibit 6.6 shows the extent to which states used various factors to allocate the 30 percent of funds that are targeted to districts with the greatest need for additional funding to prevent drug use and violence. These funds may be allocated to five districts or to 10 percent of districts in each state (whichever is more). Approximately two-thirds of the states based their "high-need" allocation decisions on rates of student alcohol and drug use, arrests, expulsions or suspensions from school, and rates of school violence or vandalism. Rates of violence or criminal victimization and levels of district poverty figure in the allocation decisions of just over 60 percent of states.

EXHIBIT 6.6
FACTORS USED TO ALLOCATE STATE FUNDS TO DISTRICTS WITH GREATEST NEED: SCHOOL YEARS 1995-96 AND 1996-97

Factor	Percentage of States Citing Use[a]	
	1995-96[b]	1996-97[c]
Rates of alcohol/drug use	74	72
Arrest rates	74	68
Student expulsions/suspensions from school	70	68
Rates of school violence/vandalism	64	66
Rates of violence or criminal victimization	64	62
Level of district poverty	60	61
Incidence of child abuse and domestic violence	57	58
Rates of school dropout and absences	60	58
Referrals to juvenile court	49	50
Illegal gang activity	47	44
Participation in alcohol/drug treatment	40	42
Other factors	43	40

Source: U.S. Department of Education, unpublished data from state performance reports.

[a] For both school years, includes Washington, D.C., Puerto Rico, and Virgin Islands.
[b] 53 states reporting.
[c] 50 states reporting.

State goals and objectives. **The statute requires states to develop goals and objectives for their SDFSCA program, and all states have met this requirement. However, the quality of these goals and objectives varies.** The Department reviewed the state goals and objectives contained in state applications and performance reports, and Exhibit 6.7 describes their characteristics. These goals were sometimes poorly articulated, or they lacked a reference to a baseline data source or to the methodology to be used to assess the outcomes. The majority of states addressed either student outcomes or program outcomes, but not both.

EXHIBIT 6.7
CHARACTERISTICS OF STATE EDUCATION AGENCY AND GOVERNORS' PROGRAM GOALS AND OBJECTIVES

Characteristic	SEA	Governors
Goals and objectives submitted[a]	53	53
Measurable goals and objectives submitted	19	18
Student outcome goals and objectives submitted	28	25
Program outcome goals and objectives submitted	30	24
Both student and program goals and objectives submitted	15	10
Process goals and objectives submitted	19	27
Outcome and process goals and objectives submitted	12	13

Source: U.S. Department of Education, unpublished data from state performance reports, 1996-97.

Note: Totals include Washington, D.C., Puerto Rico, and Virgin Islands.
[a] Four states submitted the same goals for the SEA and the governors' program.

State reporting of prevalence rates. One of the reporting requirements under the statute is that states report on the prevalence of drug use and violence in schools and communities. Exhibit 6.8 shows the surveys that states used to provide this information for their program performance reports. Most states use the Youth Risk Behavior Survey.

EXHIBIT 6.8
TYPES OF PREVALENCE SURVEYS USED BY STATES, SCHOOL YEARS 1995-96 AND 1996-97

Prevalence Survey	1995-96			1996-97		
	Grade 8	Grade 10	Grade 12	Grade 8	Grade 10	Grade 12
Number of states reporting	53	53	53	51	50	51
Youth Risk Behavior Survey	11	37	36	12	40	39
PRIDE Survey	1	1	1	2	2	2
State/Local	16	12	15	15	11	12
Other	4	3	4	5	5	5
Total[a]	32	53	56	34	58	58

Source: U.S. Department of Education, unpublished data from state performance reports.

Note: Totals include Washington, D.C., Puerto Rico, and the Virgin Islands.
[a] Some states did not survey eighth-graders. Some states used more than one type of survey.

State leadership and district response. Because SDFSCA is primarily a formula grant program, with districts applying to states for funds and making their progress reports to states, responsibility for overseeing the quality of local activities rests with state education agencies. Indeed, the statute requires these agencies to consider the quality of districts' comprehensive plans in determining whether to approve their applications. The statute specifically gives states the authority to disapprove local applications and to withhold, limit, or place restrictions on the use of district funds. States thus have both the statutory authority and the responsibility to set standards for district programs and to insist, when necessary, that districts improve the quality of programs.

The extent to which states are making use of their authority to carry out their responsibilities is not clear. Anecdotal evidence obtained through monitoring and other sources suggests that although most districts are complying with program requirements (such as the requirement that they conduct a needs assessment and establish measurable goals and objectives), many districts are having trouble developing coordinated prevention plans that link their goals and objectives with the findings from their needs assessment. **Moreover, although the flexibility that the law provides may be a boon to districts seeking to tailor program activities to local needs, districts may not necessarily select activities to match their needs assessments or goals and may seldom use activities that are based on research.**

Many SDFSCA state coordinator offices have very small staffs; in some cases, only one or two persons are responsible for hundreds of school districts. As a result, the staff find it very difficult to provide intensive technical assistance to districts and to conduct oversight of district activities. Data from the State Follow-up Study substantiate these concerns: Of 48 state SDFSCA administrators surveyed, 24 report being able to provide monitoring visits to fewer than one-fourth of their districts in the previous year. Of 25 states that conduct program-specific monitoring visits, 18 SDFSCA administrators strongly or somewhat agreed that they were no longer able to visit as many districts as in the past because of a lack of staffing or funds. Of 34 state SDFSCA administrators who responded to a question on technical assistance problems, 28 cited insufficient staff size, 9 cited lack of program funds, and 9 cited lack of knowledge or expertise among state-level staff as barriers to meeting districts' technical assistance needs. Elsewhere, state officials may be reluctant to interfere with local autonomy, which may result in less rigorous review of applications.

Findings from a recent Office of the Inspector General (OIG) audit, which examined implementation of the program in 4 states and 26 districts, illustrate some of these concerns. The OIG report indicates that states' application review processes generally complied with SDFSCA, and funds were properly distributed. In the 26 districts visited, OIG found that the expenditures reviewed were "supported and consistent with the applications and program objectives."[8] However, OIG expressed concern that one of the states visited "did not require the LEAs (local education agencies) to prepare a comprehensive plan for drug and violence prevention, including a description of how the SDFS funds would be spent to meet its measurable goals and objectives. As a result, LEAs visited that did not have a comprehensive plan appeared to be unclear as to the direction of the SDFS program and the best use of the funds."[9] Moreover, three out of four states reviewed "have not assured that LEAs have outcome-based performance indicators," and in many cases, district goals focused on outputs, such as the number of staff trained, that "show the quantity of work activity completed and do not measure the effectiveness of the program."

The role of SDFSCA in prevention. Preliminary data from a 1997-98 national study[10] provide some information on the role SDFSCA plays in prevention. This study surveyed a nationally representative sample of schools. Elementary and secondary school principals reported that, after the school district's own budget allocation for the school, the SDFSCA program was the most frequent source of resources for practices related to schoolwide discipline. SDFSCA funding was cited as a source much more frequently (52 percent) than other government funding, private funding, or local fund-raisers.

In addition, elementary and secondary schools regard the resources provided by SDFSCA as important for schoolwide discipline, and schools have considerable discretion in how they use SDFSCA funds.[11] When asked about the importance of resources in improving or maintaining the safety and orderliness of the school or in preventing problem behavior, 77 percent of the elementary and secondary school principals in schools that received SDFSCA funds reported that these funds make a difference, make a big difference, or are essential. Twenty-five percent of the principals indicated that SDFSCA funds are essential. Elementary and secondary school principals reported that they had a fair amount of discretion in how they used SDFSCA program funds. For example, 80 percent of the principals in schools receiving

these funds indicated that their school was permitted to select from a menu of options provided by the district, or that the school was otherwise permitted to decide how it used the SDFSCA funds.

Until the 1999 evaluations[12] are completed, the best available program-specific information is a 1991-95 study by Research Triangle Institute (RTI) of 10,000 students in 19 school districts, which examined the program prior to its 1994 reauthorization. This study showed that some programs to prevent drug use improved student outcomes but the effects were small. Student outcomes were somewhat better in districts meeting two conditions. The first is in districts where the prevention programs had greater stability over time, a definition that included being in place for a long period, with continuity of staff, planning, and leadership. The second is in districts with more extensive program components, defined as targeting both the general student population and high-risk students, and including a range of student support services such as student assistance programs, student support groups, individual and group counseling, mentoring projects, and conflict mediation. The stability of the prevention program was statistically associated with more antidrug attitudes and better recognition of the consequences of drug use by students. The extensiveness of the prevention program was statistically associated with benefits for students: lower lifetime use of drugs, more antidrug attitudes, and better recognition by students of the consequences of drug use. While these findings were statistically significant, they represented quite small differences in student outcomes.[13]

Problems with local implementation. **It is more difficult to influence local policy and improve the quality of local implementation through a formula grant program like SDFSCA State Grants than through a discretionary program.** Any federal initiatives for a state-administered formula grant program depend on state action to implement them. State awareness, capacity, and willingness vary widely. Moreover, local factors influence the effective implementation of any effort to prevent youth drug use and violence. These factors include societal and parental attitudes; activities of organized crime and gangs (and law enforcement response); individual, family, and community risk and protective factors; and advertising and other media images of drug use and violence.

The RTI study,[14] which examined the program prior to reauthorization, highlighted problems at the local level with the quality and consistency of program services. The concerns raised by this study were a major factor in the Department's development of the Principles of Effectiveness.

The strongest theme to emerge from the study was the tremendous variability in local programming. Even within districts that were attempting to deliver consistent programs, the amount and the content of prevention activities varied greatly from classroom to classroom and from school to school. There was variability in the amount, method, and content of classroom instruction related to prevention, and in the availability of support services for students. Implementation was inconsistent because teachers and counselors simply did not have enough time, support, training, or motivation to provide all the instruction or other activities that they had planned to provide.

The 1991-95 RTI study illustrates other problems with local program implementation as well:

- Districts rarely implemented approaches that, according to current research, have the greatest potential for making a difference for students. These approaches include teaching children how to resist and deal with powerful social influences that may promote drug use, and correcting misperceptions about peer drug use. The probable reason is the higher cost of these approaches, particularly in terms of teacher training and staff time.

- More recent information indicates that this is still a concern. For example, preliminary data from a 1997-98 national study[15] of schools (not all of which may be receiving SDFSCA-funded services) indicate that D.A.R.E. (Drug Abuse Resistance Education) is among the most common programs—48 percent of elementary schools, 21 percent of middle schools, and 8 percent of high schools reported using the D.A.R.E. program. Longitudinal studies of D.A.R.E.'s effectiveness using rigorous methodology have found few short-term and no long-term positive effects.[16]

- Although all school districts periodically conducted informal assessments of their programs, fewer than half conducted more formal evaluations or responded to the evidence from such evaluations in selecting or altering their programs.

Helpful implementation factors. In the RTI study,[17] an examination of the case studies revealed that certain factors appear to improve program implementation. These include commitment on the part of the program implementors, leadership provided by the prevention program coordinator, community involvement in the program, and a sense of shared responsibility for drug prevention. Other helpful factors are district-level reinforcement of school-level commitment to prevention through the use of school-based coordinators and emphasis on staff training in prevention.

Options for Strengthening the Program

Through reauthorization, the Department and Congress can take several steps to strengthen the program. Some possibilities include:

- **Make the Principles of Effectiveness a legislative requirement**. Future legislation could require grant recipients to use research-based prevention approaches and engage in coordinated, comprehensive planning, including a thorough needs assessment, the establishment of goals and objectives that respond to needs assessment findings, and the use of evaluation data for program planning and improvement.

- **Target funds on the bases of need for services and quality of programming, with a focus on research-based approaches**. While continuing to provide a small amount of funding to all districts would have the benefit of requiring all districts to engage in coordinated, comprehensive planning for their drug and violence prevention efforts, this strategy does not go far enough to encourage the widespread use of high-quality programming. Because research-based approaches are often more intensive, and therefore more expensive, than other approaches, school districts may not be able to afford them, given the average level of resources now available. Future legislation would need to find a way to balance the need for improvement in quality, represented by a focus on research-based approaches, with the understandable desire to spread resources as far as possible and to continue existing prevention efforts. The Department continues to explore ways to improve program quality, including targeting program funds more effectively and furthering the development of competitive grants.

- **Balance the program's flexibility with increased accountability for results**. In particular, this could be accomplished by encouraging states and districts to use outcomes-based performance measurement, with more emphasis on outcomes related to changes in student behavior and attitudes, along with better performance reporting by states.

- **Increase coordination within states between SEA and Governors' programs.** This could be done by encouraging joint planning, implementation of activities, and assessment, such as through requirements for joint applications and joint provision of technical assistance, as well as an increased focus within the Governors' program on coordination of grantees' activities with school-based prevention efforts.

To improve local implementation, the Department can stress the Principles of Effectiveness through dissemination of information on effective approaches, technical assistance, and monitoring. Broader social and cultural factors can be addressed through interagency cooperation such as coordinated research and development, continuing efforts to identify effective programs, and technical assistance, including technical assistance with performance measurement.

[1] U.S. Department of Education, *Safe and Drug-Free Schools: Increasing Accountability and Preserving Flexibility: Final Audit Report* (Washington, DC: U.S. Department of Education, Dec. 1998).

[2] This project was supported in part by Grant No. 96-MU-MU-0008 awarded by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. Points of view in this document are those of the author and do not necessarily represent the official position or policies of the U.S. Department of Justice. Additional support was provided by U.S. Department of Education Contract No. 96-055001.

[3] E. Suyapa Silvia, Judy Thorne, and Christene Tashjian, *School-Based Drug Prevention Programs: A Longitudinal Study in Selected School Districts: Final Report* (Washington, DC: U.S. Department of Education, 1997).

[4] U.S. Department of Education and U.S. Department of Justice, *Annual Report on School Safety 1998* (Washington, DC: U.S. Department of Education and U.S. Department of Justice, 1998).

[5] Serious violent crime includes murder, rape or other types of sexual battery, suicide, physical attack or fight with a weapon, and robbery.

[6] Serious violent crime includes murder, rape or other types of sexual battery, suicide, physical attack or fight with a weapon, and robbery. Less serious or nonviolent crime includes vandalism, theft or larceny, and physical attack or fight without a weapon.

[7] See Endnote 2 above.

[8] U.S. Department of Education, *Safe and Drug-Free Schools*, 1998.

[9] Texas responded that "the Texas application for SDFSCA contains the LEA's comprehensive plan for drug and violence prevention. . . . Texas further wrote that in an effort to ensure that the LEA's comprehensive plan activities align with LEA program goals, objectives, and activities, the Texas application will be revised to specifically reflect an alignment between the LEA's program activities, needs assessment, and the Principles of Effectiveness. They stated that . . . LEAs are currently required to identify specific drug prevention and violence prevention goals in the Safe and Drug-Free Schools and Communities Annual Evaluation Report." U.S. Department of Education, *Safe and Drug-Free Schools.*

[10] See Endnote 2 above.

[11] See Endnote 2 above.

[12] Three evaluations and data collections are under way but not yet completed: (1) "Study on School Violence and Prevention" (Westat) [survey of schools, case studies]; reports: interim report, 1999; case study report, 2000; final report, 2001. (Preliminary data are available.) (2) "Study of Local Educational Agency Activities under SDFSCA (Westat) [survey of districts] report: 1999. (3) "Performance Indicator System for the SDFSCA" (Westat) [state performance reports] report: 1999.

[13] R^2 values for multiple regression analyses for these variables range from .24 to .49, significant at $p<.01$ or lower. As an example of effect size, the proportion of students who in year 1 of the study had never used drugs or alcohol and who reported trying drugs or alcohol by year 4 of the study ranged from a high of 74 percent to a low of 43 percent. For details of study findings, see E. Suyapa Silvia, Judy Thorne, and Christene Tashjian, *School-Based Drug Prevention Programs.*

[14] Silvia et al., 1997.

[15] See Endnote 2 above.

[16] Lawrence W. Sherman, Denise Gottfredson, Doris MacKenzie, John Eck, Peter Reuter, and Shawn Bushway, *Preventing Crime: What Works, What Doesn't, What's Promising. A Report to the United States Congress prepared for the National Institute of Justice* (College Park, MD: Department of Criminology and Criminal Justice, University of Maryland, 1997).

[17] Silvia et al., 1997.

7. IS FEDERAL SUPPORT STRENGTHENING ACCESS TO AND USE OF TECHNOLOGY TO SUPPORT LEARNING?

Key Findings

Access to Technology

Classroom access to modern computers and the Internet is growing rapidly. The ratio of students to modern multimedia computers in the nation's classrooms was cut by almost half between 1997 and 1998. More than half of all public school classrooms have access to the Internet, compared with almost none in 1994.

The "digital divide" between students in high- and low-poverty schools has been nearly eliminated in terms of access to instructional computers. Gaps remain in classroom access to modern multimedia computers, in Internet access, and in access outside school, but the gaps are closing.

Federal Programs

Federal funds paid for a quarter of all computers received by schools last year. Federal funds paid for half of all new computers in high-poverty schools, and they paid for more computers in high-poverty schools than in low-poverty schools.

Districts report that long-term district plans, such as the education technology plans required by the Technology Literacy Challenge Fund, are important factors in influencing their educational technology activities.

States and subgrantees vary widely in their allocation of the Technology Literacy Challenge Funds to high-need areas.

Star Schools and the Technology Innovation Challenge Grant programs are demonstrating effective uses of educational technology, but are not providing a clear focus for federal leadership in developing the knowledge base.

Many states and other grantees have not devoted sufficient effort to evaluating the effectiveness of their programs. They also collect very different data, making it difficult to monitor performance and impact across districts and states.

Challenges in Integrating Technology in Instruction

Priority should be given to effectively targeting high-need students and schools, and concentrating efforts in critical areas such as professional development and technical support. Effective use of educational technology depends on ongoing professional development and technical support. At least half of all schools—including both high- and low-poverty schools—cite lack of teacher awareness, software, training, and technical assistance as barriers to the integration of technology into classroom instruction. The rapid evolution of educational technology requires continuing research on how to most effectively design and use these technologies.

While access to computers and the Internet is growing rapidly in our nation's schools, effective use depends on professional development and continuing research on how best to integrate these technologies with broader reforms to improve teaching and learning.

One of the goals in the U.S. Department of Education's Strategic Plan is to make educational technology part of a broader education reform that will provide new learning opportunities and raise educational achievement for all students.

For two decades, technology has held the promise of radically transforming the quality and very nature of education. Comparatively primitive technology, scant access, and limited know-how restricted the effective use of these technologies. This situation is changing. Computer chips, which continue to double in power every 18 months, together with advances in telecommunications, have simplified the use of technology and reduced costs, and are now able to support complex learning in ways previously unachievable.

Technological literacy is a skill that all students will need in order to compete in the future. Moreover, when linked to broader school improvement, educational technology can increase educational access, improve teaching and learning, and open new vistas of learning.

Among key policy issues that need to be addressed to fulfill the potential of educational technology for improving teaching and learning are these:

- How to make technology accessible to all students, regardless of family income;
- How to help teachers develop the skills to use technology effectively in the classroom;
- How to identify, develop, test, and widely implement promising technology interventions; and
- How to fully integrate educational technology with broader school improvement.

In response to these and other issues, the legislation enacted in 1994 expanded the federal role in support of educational technology. Recognizing the importance of stimulating state and local efforts to acquire and effectively use educational technology, it expanded the federal government's responsibility and encouraged states to set priorities, target funds to high-poverty schools and districts, and conduct other activities to catalyze national action.

Introduction to the Programs and the 1994 Legislative Changes

Title III, Parts A and B of the reauthorized Elementary and Secondary Education Act of 1965, recognized that technology could provide greater opportunities for all students to achieve to high academic standards. It envisioned that increased use of technology would enhance the ongoing professional development of teachers and administrators by giving them access to current research about teaching and learning. It also considered it essential that teachers receive adequate training in the use of technology for effective instruction. Prior to the 1994 reauthorization, the federal role was limited primarily to the Star Schools program, which funded the development and use of distance education to support increased access and equity.

The 1994 legislation requires that the Secretary of Education develop a National Long-Range Technology Plan that sets out how the Department and other agencies will promote the use of technology to support

educational reform.[1] It authorizes four programs that are intended to work together to improve technology access and integration in schools:

1. **The Technology Literacy Challenge Fund** (TLCF) provides states and districts with flexibility and leverage to more effectively plan, coordinate, support, and use educational technology to improve teaching and learning. States receiving grants and districts receiving subgrants must have educational technology plans that include all sources of support, not just TLCF supported activities. State plans outline long-term strategies for financing technology and plans for assistance so that school districts with the greatest need and highest poverty are not left behind. Local educational agencies must submit a 3- to 5-year technology plan with their applications for subgrants.

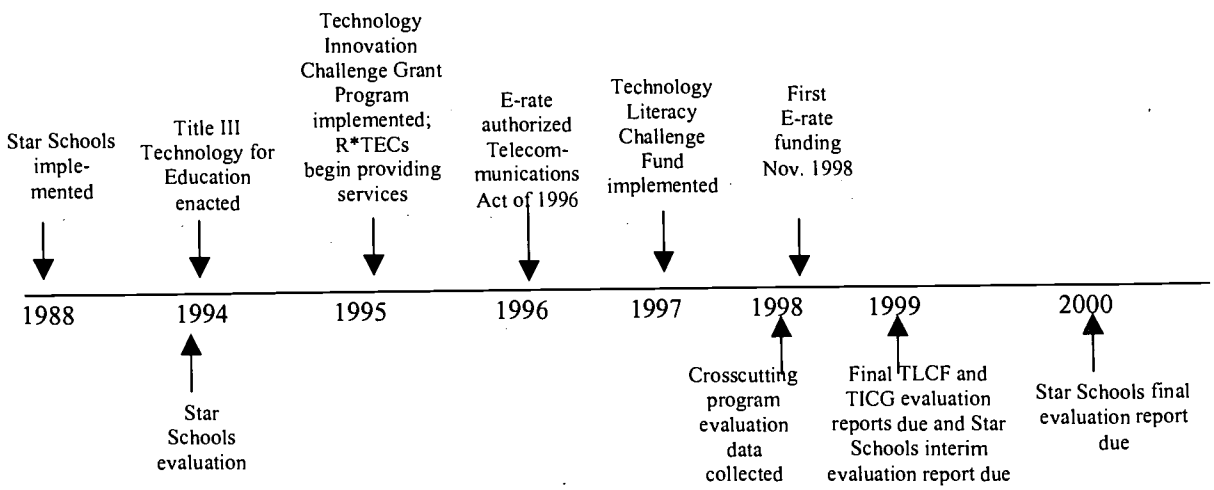
2. **The Technology Innovation Challenge Grants** (TICG) program provides competitive grants to consortia that include at least one low-income school district for innovative uses of educational technology to improve teaching and learning.

3. **The Star Schools program** supports partnerships to provide distance learning services, equipment, and facilities. Applicants must now demonstrate how they will assist state and local school reform, help meet the National Education Goals, and provide opportunities for students to meet high standards.

4. **Regional Technical Support and Professional Development** (R*TECs) provides funds to consortia to work in alliance with states, provide information to school districts, offer professional development, and disseminate information about resources for educational technology. They target many of their products to serve administrators, teachers, and parents of students who have traditionally had little access to educational technology.

Program roles and linkages continue to evolve. For example, the Technology Innovation Challenge Grant program was planned to operate until appropriations reached the $75 million threshold set for state formula funding. The program was retained as a catalyst for innovation and knowledge-base building when appropriations for the Technology Literacy Challenge Fund passed this threshold.

EXHIBIT 7.1
TIMELINE OF FEDERAL EDUCATIONAL TECHNOLOGY PROGRAMS



Source: U.S. Department of Education.

EXHIBIT 7.2
TECHNOLOGY-FOCUSED PROGRAMS AT A GLANCE

Program Name	1999 Appropriation	Purpose	Funding and Targeting	Awardees	Services
Technology Literacy Challenge Fund	$425 million	Leadership and leverage to support wide-spread, effective use of educational technology	State formula, with competitive local subgrants to LEAs based on high need for technology or high poverty	All states, with competitive subgrants affecting about 2,500 LEAs serving over 15 million students[2]	Integration of technology into instruction, connectivity, acquisition of hardware and software, and professional development
Technology Innovation Challenge Grants	$115 million	Develop the knowledge base for effective use of educational technology	Competitive 5-year grants to consortia based on the significance and feasibility of the proposed projects with an emphasis on need	82 current grantees, including 20 new grants in 1998, working with partners in 150 school districts, 100 businesses and 80 colleges and universities, serving about 1 million students	Results, products, or benefits that can be replicated; integrating technology into curriculum. Support for acquiring hardware, software and professional development.
Star Schools	$45 million	Distance education support, including expanding hardware and professional development	Competitive 5-year grant to partnerships including at least one LEA or SEA	12 continuation grants, with 4 to 5 new grants to be made in 1999	Support of distance education, including hardware and professional development
R*TECs	$10 million	Technical assistance	Competitive 5-year grants to regional entities and consortia	6 awardees (continuation grants to projects initiated in 1995)	Professional development, information and resource dissemination, facilitating alliances
E-Rate	$2.25 billion annually from interstate telecom-munications providers (capped at $1.925 billion for 1998 and the first six months of 1999). Not an appropriation.	Universal access to telecom-munications for schools and libraries	Need-based discounts to schools and libraries for use of telecom-munications	Over 30,000 applications for the $1.9 billion of funding available through June 1999. By March 23, 1999, $1.7 billion had been committed.[3]	Discounts for telecommunications services and connectivity costs

Source: U.S. Department of Education.

In addition to the technology-focused programs enacted in the 1994 ESEA, two other authorities provide major sources of technology support:

- **The "E-rate" program** established in the Telecommunications Act of 1996 requires telecommunications carriers that provide interstate service to contribute to a universal service fund. Part of this fund provides discounts to schools and libraries for telecommunications service. Schools and libraries located in rural and low-income areas receive the highest discounts.

- **Title I of ESEA** provides funds to schools in low-income areas to improve services for low-achieving students. Many districts and schools have chosen to improve services through technology.

Other federal programs that state and local school authorities may choose to use for instructional technology to support the program purpose are Goals 2000, Eisenhower, Title VI, migrant education, vocational education, and special education. This chapter does not deal extensively with the E-rate because it is not part of the 1994 ESEA legislation.

In total, federal assistance for technology in school year 1997-98 provided an estimated $646.5 million from five major education programs and up to $1.9 billion by June of 1999 in telecommunications subsidies for schools and libraries. Federal funding for technology comes directly from programs dedicated to supporting technology as well as from programs in which technology is an allowable expense. As Exhibit 7.3 shows, in FY 1998, about two-fifths of federal education funding for technology was from dedicated sources, primarily from the Technology Literacy Challenge Fund.[4] Among programs allowing support for technology, Title I, Title VI, and Goals 2000 were major sources.

EXHIBIT 7.3
FINANCIAL CONTRIBUTION OF FIVE EDUCATION DEPARTMENT PROGRAMS TO TECHNOLOGY IN THE 1997-98 SCHOOL YEAR

	Amount	Total from Five Department of Education Programs
Total estimated federal support for technology from five Department of Education programs	**$646,535,000**	**100%**
U.S. Education Department of Education dedicated technology programs		
• Technology Literacy Challenge Fund	$200,000,000[a]	30%
• Technology Innovation Challenge Grants	$56,965,000[b]	9%
Subtotal:	**$256,965,000**	**39%**
Estimated spending for educational technology from other selected federal education programs.		
• Title I	$236,937,000	37%
• Goals 2000	$83,995,000	13%
• Title VI	$68,638,000	11%
Subtotal for other federal education programs:	**$389,570,000**	**61%**
E-Rate (FCC, universal service telecommunications subsidy. First discounts to districts in November 1998).[5]	**$1,925,000,000[c]**	

[a] TLCF appropriations were $200 million for FY 1997;$425 million for FY 1998, and $425 million for FY 1999.

[b] TICG appropriations were $ 57 million for FY 1997, $106 million for FY 1998, and $115 million for FY 1999.

[c] After the current cap expires in June 1999, the amount annually available under the E-rate is scheduled to return to $2.25 billion a year.

Source: Funding for federal technology programs is based on FY 1997 appropriations; funding for other federal programs is based on school district reports of program expenditures collected in the *Study of Education Resources and Federal Funding*, (See endnote 4).

What Do We Know about Good Practice?

Technology is a rapidly evolving field. For example, when Congress reauthorized the ESEA in 1994, the Internet had little relevance to most school activities. Today, the Internet is a major resource for schools, offering instructional and professional development activities that were previously not possible. Continuing to build—and continually update—the knowledge base is crucial for educators and policymakers.

Research has shown that technology, when well implemented, can help all students—including poor students and students with disabilities—to master basic and advanced skills. [6] The research base is strongest for older technologies, such as drill-and-practice computer programs; the knowledge base is still

emerging for many of the newer technologies, such as programs that emphasize development of higher-order skills through simulations, large-scale Internet-based instruction, and other techniques. Computer-assisted instruction (CAI) can individualize instruction, provide instant feedback, and drill students on specific topics for which they need extra help. A decade-long series of studies found that students in classes that used CAI outperformed their peers on standardized tests of basic skills by 30 percent, on average. (However, not all applications of CAI have been found to be so successful in all settings.) Video and audio technologies can significantly enhance students' recall of basic facts and their understanding of complex systems. Distance learning can be at least as effective as traditional instruction. Research suggests that well-used educational technology can improve student motivation.

At the classroom and school levels, educational technology has the potential to contribute to schoolwide changes that improve teaching and learning. Technology makes possible modes of instruction for learning of complex skills that are not otherwise possible, including complex simulations for learning mathematical, scientific, and other concepts, and large-scale activities such as Project Globe, which links students across the nation to study environmental science, and students and scientists for actual scientific work and enhanced learning.[7] Technology can not only increase access to high-quality curriculum and skilled instruction, and provide increased time on task, but can also fundamentally change the role of instructors from the "sage on the stage," to free up teachers to work more intensively with individual students in the class when they most need it. Technology also has the potential to transform links between home and school for more effective parental involvement in their children's learning to support learning outside of school.[8]

Research and classroom experience show that the impact of educational technology depends on how it is used. Effective integration with instruction requires adequate access. Experts suggest a ratio of at least one computer for every five students and at least one Internet connection in a classroom.[9] Educational technology, like most instructional tools, works best when it supports high standards and high-quality curriculum, and includes software and other content aligned with the curriculum and instruction.[10]

Evaluations of technology practices have shown that access to equipment is only one prerequisite to effective use. It is important for staff to know how to use technology and to have the instructional materials to support integration of technology in the classroom.

In January 1996, the President set forth the "four pillars" of the Technology Literacy Challenge to govern federal initiatives on technology:

1. All teachers in the nation will have the training and support they need to help students learn through computers and the Information Superhighway.

2. All teachers and students will have modern computers in their classrooms.

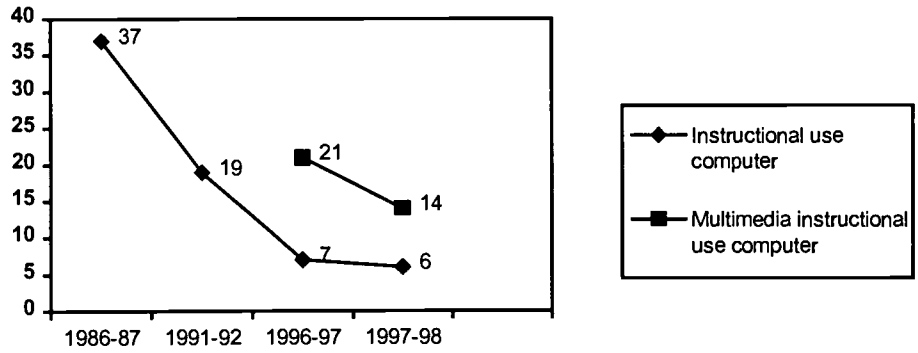
3. Every classroom will be connected to the Information Superhighway.

4. Effective and engaging software and on-line learning resources will be an integral part of every school's curriculum.[11]

How Well Is the Nation Meeting Its Technology Goals?

Although access to technology is increasing, our schools are still at an early stage in learning how to effectively use the full potential of educational technology for improved teaching and learning. Identifying and encouraging effective practice, and providing the necessary leadership and supports, are vital.

EXHIBIT 7.4
NUMBER OF STUDENTS PER COMPUTER



Source: U.S. Department of Education: FY 2000 Annual Plan, Vol. 1, February 25, 1999, Figure 43, p. 65.

Access: **Student access to modern multimedia computers has increased greatly in the last two years.** The number of students for every modern computer dropped from 21 in 1997 to about 14 in 1998. The number of students per instructional computer fell from 37 in 1987 to 6 in 1998.

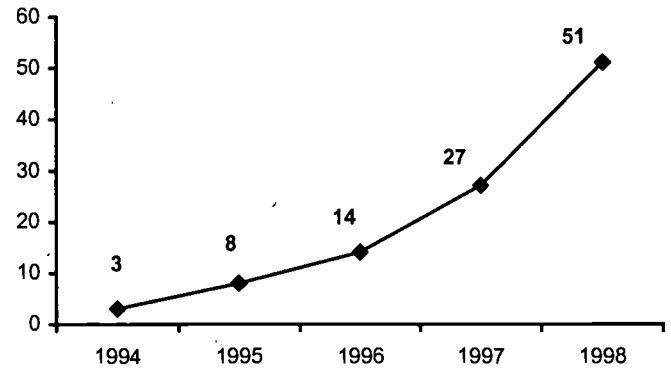
National Indicator: The ratio of students per modern multimedia computer in public schools will improve to five students per modern multimedia computer by the year 2000.

The number of public schools connected to the Internet grew from 35 percent in 1994 to 89 percent in 1998. Exhibit 7.5 shows that the percentage of instructional rooms connected to the Internet grew from 3 percent in 1994 to 51 percent in 1998. **We expect a rapid increase in classroom access following the availability of E-rate funds, which began in November 1998.**

National Indicator: The percentage of public school instructional rooms connected to the Information Superhighway will increase from 14 percent in 1996 to 25 percent in 1998, and higher percentages thereafter.

While the ratio of students per instructional computer is approaching the ratio recommended by the President's Committee of Advisors on Science and Technology, the ratio of students to computers with Internet access is more than double the recommended student-to-computer ratio.

EXHIBIT 7.5
PERCENT OF INSTRUCTIONAL ROOMS WITH INTERNET ACCESS IN THE CLASSROOM



Source: NCES, *Internet Access in Public Schools and Classrooms:* 1994-1998 (Feb. 1999).

Although high- and low-poverty schools had similar student-to-instructional computer ratios, low-poverty schools had better Internet access than high-poverty schools. For schools with less than 11 percent of their students eligible for free or reduced-price school lunch, 62 percent of the instructional rooms have Internet access, whereas the proportion falls to 39 percent in schools with over 70 percent of their students eligible for free or reduced-price school lunch.

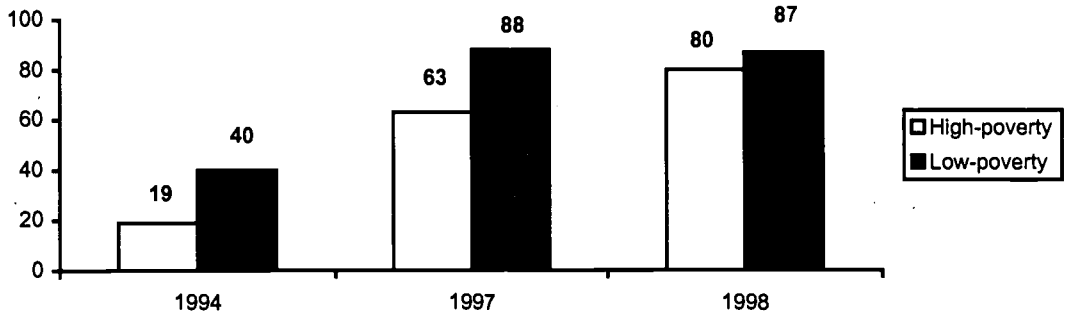
***Integration with Instruction*: Most teachers have not yet fully integrated computers into their classroom instruction.** Most teachers report that their lessons require students to use computers, but relatively few (17 percent) incorporate computers into instruction on a daily basis. Seventy percent of classroom teachers say that their lessons require students to use computers at least once or twice a month. One-third of teachers report that their lessons required students to use the Internet no more than once or twice a month.[12]

National Indicator: Increasing proportions of teachers will have the professional development and the administrative, technical, and local financial support they need to help students learn through modern multimedia computers and the Internet.

***Professional Development*: Half of public school teachers had participated in professional development activities on the integration of educational technology in the grade or subject they teach during the previous 12 months—and 38 percent of these teachers had participated in more than 8 hours of such training.[13]**

Teachers with over 8 hours of professional development in educational technology in the past year were three times as likely as those with no hours, and almost twice as likely as those with between 1 and 8 hours, to report they were very well prepared to integrate educational technology into the grade or subject taught.[14]

EXHIBIT 7.6
PERCENTAGE OF HIGH- AND LOW-POVERTY SCHOOLS WITH INTERNET ACCESS

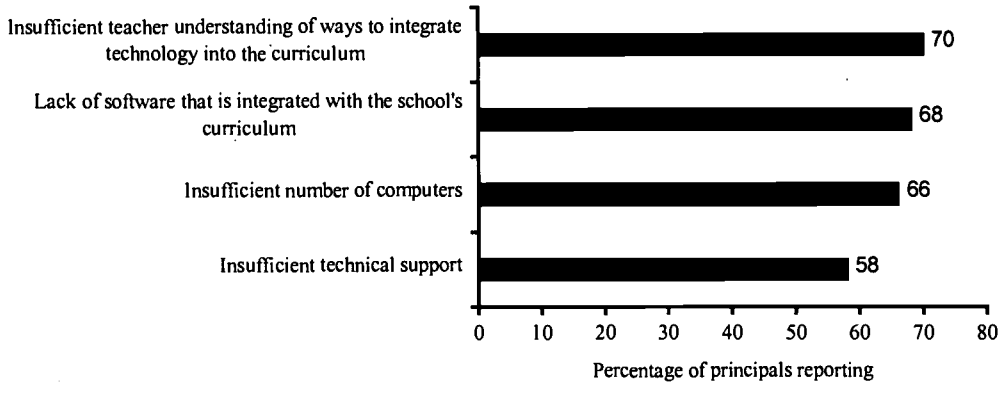


Source: U.S. Department of Education: FY 2000 Annual Plan, Vol. 1, Feb. 25, 1999, Figure 46, p. 68.

Note: High-poverty schools: 71% or more low-income student enrollment.
Low-poverty schools: 11% or less low-income student enrollment.

While access to computers and the Internet is improving, teachers and principals report that lack of professional development, high-quality software linked to the curriculum, and technical support remain major barriers to effective use of technology. Exhibit 7.7 shows that over half of the principals report that teachers lack the knowledge to integrate educational technology into the curriculum, lack software integrated with the curriculum, lack staff training, and lack technical support.[15]

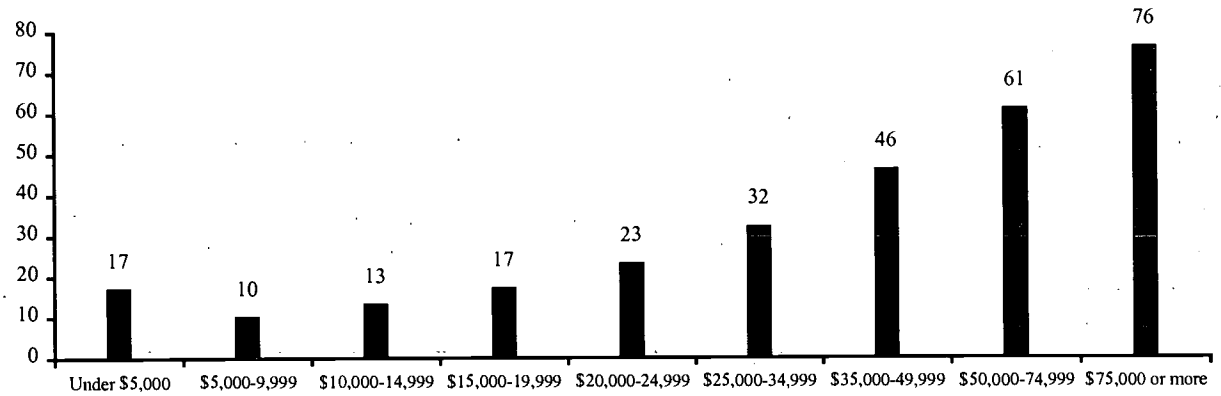
EXHIBIT 7.7
BARRIERS TO EFFECTIVE USE OF TECHNOLOGY IN SCHOOLS (PERCENTAGES OF PRINCIPALS REPORTING, SPRING 1998)



Source: Chambers, Lieberman, Parrish, Kaleba, Van Campen, and Stullich, *Study of Education Resources and Federal Funding: Preliminary Report*, 1999.

Home access to computers: **There are important differences in students' access to educational technology in the community and at home**. These differences are rooted in family income, parental education, and other factors. Families with a college degree were almost 10 times as likely to own a computer as those with no high school diploma. Thirty-five percent of families with a college degree have home access to the Internet, compared with 10 percent of those with a high school diploma and 2 percent of those without a high school diploma. Although the number of black and Latino households with computers has grown rapidly in recent years, the "digital divide" has also grown. For example, between 1994 and 1997 the difference in the percentage of black and white households that own a computer grew from 17 percent in 1994 to 22 percent in 1997.[16]

EXHIBIT 7.8
PERCENTAGE OF HOUSEHOLDS WITH A COMPUTER, BY INCOME



Source: U.S. Department of Commerce, *Falling through the Net II: Perspectives for the 21st Century,* Table 13.

How Well Are the Programs Working?

Federal education support is having an important impact on increasing access to educational technology, particularly in high-poverty schools. By 1998, there was little or no difference in student-to-computer instructional ratios in high- and low-poverty schools.[17]

National Indicator: The access to educational technology in high-poverty schools will be comparable to that in other schools.

- Federal funds paid for about a quarter of the computers schools acquired in the 1997-98 school year. Of the 16 additional computers that, on average, each school purchased that year, 4 were obtained with federal funds, 10 with state and local funds, and 2 with private sources.[18]
- Federal funds had an important equalizing effect on the distribution of new computers, providing half of the new computers in high-poverty schools (6 computers, compared with 2 computers in low-poverty schools).[19]

- Federal funds are playing an important role in supporting professional development in the use of educational technology. For example, Title I funds are used by 34 percent of districts for developing teachers' skills in using educational technology, and by 21 percent of districts for professional development in integrating technology into instruction.[20]

Technology Literacy Challenge Fund

The Technology Literacy Challenge Fund (TLCF), the Department of Education's major source of dedicated support for technology, provides formula assistance to states in accordance with their share of ESEA Title I allocations. Within states, funds are competitively awarded to local school districts and are targeted on the bases of poverty and need. The Department encouraged states to use these funds strategically and to take into account other available sources of funding. Data for 1997 obtained from states prior to the end of the funding period provides a preliminary look at in-state allocations.

- Fifteen percent of all school districts (about 2,500 districts) participated either by directly receiving a subgrant from their state or by belonging to a consortium that received a subgrant. Thirty percent of the applications to states were funded, with district grants averaging about $100,000.[21]

- The Technology Literacy Challenge Fund (TLCF) supports leadership and leverage for the effective use of educational technology. Accordingly, different states use this funding in very different ways. The resulting diversity of state policies is reflected in differences among states in the proportion of school districts receiving grants, which ranged from 2 percent to 93 percent of a state's districts.[22]

- Technology Literacy Challenge Funds grants are well targeted on rural districts, which often have special technology needs, but there is wide variation among states on the degree of targeting on urban districts. TLCF local grants are targeted by poverty and need. Exhibit 7.9 shows that TLCF local grants are somewhat more likely to go to suburban districts than are Title I funds. In addition, funding of districts serving the largest cities tended to be below their share of total enrollment.[23] Of the school districts serving the 19 largest cities, 7 districts directly received TLCF funding at or above their share of enrollment. Funding for the other big city districts was considerably below their share based on enrollment, or they received no funds at all.

EXHIBIT 7.9
DISTRIBUTION OF TECHNOLOGY LITERACY CHALLENGE FUND ENROLLMENT AND FUNDS BY URBANICITY (FY1997)

	Percentage of total enrollment	Percentage of Title I funding	Percentage of TLCF funding[a]
Urban center	26	45	25
Suburban	46	29	35
Rural	28	27	35

Source: U.S. Department of Education, Goals 2000 and Technology Literacy Challenge Fund: Subgrantee Data Base.

[a] Urbanicity information was unavailable for sites receiving 5 percent of the TLCF program funds.

While the program is competitive and there is no requirement that funding be proportionate to enrollment, disparities in funding for large urban districts with concentrations of poor children prompted the Department's action. The Department contacted several states where urban districts received small or no awards and found that the causes for the disparities varied. Some districts did not submit proposals; others did not compete successfully, or otherwise failed to meet state criteria or requirements for technology plans. In a number of cases, large urban areas participated indirectly via a consortium or regional center. The Department subsequently asked states to examine their requirements and outcomes from the first year's competition and to increase funding to high-need and high-poverty districts during subsequent cycles if the outcomes warranted action.

All states have satisfied the Technology Literacy Challenge Fund requirement to have a state plan. Plan specifics differ considerably across states. Differences reflect state technology priorities, previous use of educational technology in the state, and differing state agency roles. Key findings about the state plans are drawn primarily from the TLCF formative evaluation and a review by *Education Week*:[24]

- All states have a technology plan, and most have a schedule for revising it to keep it current in the fast changing technology area. Forty-six states report updating their plans.
- All states have outlined financial strategies. However, only 21 state plans include cost estimates, which may change considerably with technology improvements.
- All but eight states supplemented federal funds with state funds for educational technology.
- Thirty-eight states have some form of technology requirements for entering teachers, which range from professional development to proficiency assessment.
- Thirty-eight states have requirements for student knowledge of technology, although only North Carolina will be requiring students to demonstrate proficiency.

Local districts that receive the program grants are required to have an educational technology plan. Districts and schools report that long-term district plans are important in determining how to use federal program funds. **Fully 85 percent of districts report that technology plans are important in influencing funding decisions.**[25]

States vary greatly in their collection of data related to education-technology-related program implementation and performance.[26]

- The states focus more on inventory questions than on computer use or teachers' professional development in instructional technology. State surveys most commonly addressed the extent of Internet access, the availability of computer hardware, and the type of computers. Measures of the use of the Internet, classroom use of technology, teacher skill level, and the quality of professional development in technology were rarely topics in state surveys.[27]

Technology Innovation Challenge Grants

The Technology Innovation Challenge Grant program provides competitive grants for a wide variety of innovative uses of technology to improve teaching and learning. These include working as partners with businesses and communities to provide technology to schools, linking classrooms via electronic networks, empowering teachers with the technology skills to customize student learning, integrating technology with curriculum reform, using technology to meet the needs of at-risk youth,

preparing students for the workforce, building new learning communities, and connecting classrooms to homes for effective parental involvement.

A formative case study evaluation found that some projects were using Challenge Grant resources to develop and test new ideas. For example, in launching the Virtual High School, the Hudson, Massachusetts, Public Schools and the Concord Consortium were working with ideas and even some technologies that were very new. In fact, much of the server software used to host the learning environment on the World Wide Web was barely out of beta testing. The project is a collaboration of high schools across the United States. For the 1998-99 school year, 33 high schools from 11 states offered Internet courses. In addition, more than 60 teachers from over 50 schools took part in the Teachers Learning Conference, a graduate-level Internet course on Web-based instruction. The Virtual High School is initiating a new and cutting-edge concept, and was applying it for the first time in an educational context.

There is confusion, rooted in the statute, regarding the program's purpose--whether it should be a demonstration program that develops the knowledge base for effective use of educational technology, or a funding source to support the use of educational technology. The TICG program has increasingly worked to provide a knowledge base for effective use of educational technology and has encouraged its integration with teaching and learning.

National Indicator: An increasing number of teachers will integrate high-quality technology-based curriculum into their instruction.

The most recent cycle of grants focuses on use of technology in professional development. These grants for 20 school district partnerships in 17 states provide support for preparing new and current teachers to use technology effectively. These school district participants work with partners in 150 school districts, 100 businesses, and 80 colleges and universities. The grants are intended to serve about 1 million students and provide additional training opportunities for thousands of teachers in these communities. They range from $789,000 to $2 million a year for five years, and are intended to leverage business and community matching commitments valued at more than $90 million.[28]

The formative evaluation's reviews of previously funded projects documented that that although the projects were innovative at the local level, relatively few involve radically new technology or uses.

- Projects generally met the application criteria, although in different ways. Some were innovative in design and others in demonstrating ways to expand the number of customers served by a technology resource.

- It was too early to gauge the sustainability of most projects, although some projects had begun to build a mechanism for sustainability after the grant ended.

Many of the site evaluations assessing their effectiveness are deficient. A formative evaluation of the program reviewed 10 of the program's 82 projects during the 1997-98 school year. Evaluators examined several dimensions, including whether projects were truly innovative, promoted sustainability, and were guided by evaluation evidence. A second wave of case studies is planned for 1999. The formative evaluation found that:[29]

- A number of project evaluators had difficulty in designing and executing project evaluations.

- Budgets for evaluation were generally low, from 1 to 7 percent of the grant.
- Several projects had no evaluator at all or had not met with an evaluator.
- Evaluators and project directors reported a sense of confusion over conflicting messages they had received from the program office. In particular, some projects felt they had been initially required to use a portfolio approach (i.e., compile examples of activities) when the projects began, but were now being asked to provide outcome data for GPRA and other purposes that portfolios would not support.

To address these issues, the Department of Education has taken steps to strengthen project implementation and evaluation. In the first four years of the program's operation, application guidelines did not include evaluation as a criterion for assessing the merits of applications and the application guidelines provided little specific information about this activity. The new application guidelines add evaluation as one of the criteria for selecting applications beginning in 1999. Draft guidelines for project evaluations suggest that resources for project evaluation be increased to 15 percent of project funds. Finally, evaluation workshops are being conducted at project directors' national meetings and national conferences to build capacity. Together these activities are designed to provide guidance and technical assistance to provide grantees with clear expectations regarding required program performance measures for annual performance reports and other purposes, as well as helping projects use site evaluation data to strengthen program implementation.

Star Schools

The Star Schools program supports distance learning projects designed to increase student access to high-quality curricula and instruction. Through the use of satellite, cable, Internet, and other advanced telecommunications and computing applications, Star Schools projects make it possible for students to take courses, such as foreign languages or Advanced Placement mathematics, that might not otherwise be available in their schools. Teachers also use Star Schools projects to supplement their courses with content modules intended to enhance what the teachers are able to provide locally.

Star Schools projects are operated as consortia that can include local education agencies, postsecondary institutions, public broadcasting companies, and telecommunications providers such as telephone companies, cable television companies, and satellite companies. The consortia cover many states and territories. Recent funding cycles have focused on multiple and cutting-edge technologies.

Since its inception the program has served more than 6,000 schools across the country. Nearly three-quarters of these schools are rural. More than 2 million students have benefited from its instructional programming, and more than 30,000 teachers and many administrators have completed Star Schools professional development courses and workshops.[30] In 1997, Star Schools offered more than 150 full-credit courses, up from 30 in 1994. In 1998 Star Schools projects provided services to 279,000 learners in nontraditional settings (community centers, correctional facilities, etc.), up from 194,000 in 1997.[31] An example of such activities is the Pacific Star Schools Partnership, which is developing interactive courses for obtaining education through GED certification and retraining displaced workers.

National Indicator: The number of learners in nontraditional settings (community centers, correctional facilities, etc.) who participate in distance education will increase annually.

An ongoing evaluation of the Star Schools program found that the Star Schools program, like other education technology programs, is being heavily influenced by technological change and the

availability of other funding sources.[32] The result of these changes is evident in projects that blend technologies and communication modes in delivering distance education services. For example, a mathematics course taught via satellite is likely to be complemented by Web-page learning activities. It allows students to ask questions by sending e-mail to their teachers or to share examples of their work with other students on electronic bulletin boards. In addition, Star Schools projects offer enrichment modules that allow students, for example, to take a virtual tour of the Philadelphia Museum of Art, or to see practical applications and speak with experts in the chemistry topics they are studying.

The growing role of dedicated technology programs (such as Technology Literacy Challenge Fund and E-rate), the emergence of the Technology Innovation Challenge Grant in knowledge building, and the funding of educational technology through broader-purpose programs such as Title I mean that the program's role must continue to adapt. Questions to consider include the following:

- How can more adequate professional development be provided? The 1994 Star Schools evaluation found that at many schools that use Star Schools programs, professional development to appropriately integrate Star Schools offerings with ongoing curriculum was often of limited duration and not tightly integrated with the school's curriculum and broader school improvement efforts. The evaluation of the Star Schools program now under way is finding that many Star Schools projects offer distance learning modules for teachers, and some focus on helping teachers use technology more effectively. However, the projects acknowledge a need for more professional development.[33] Monitoring through program reports, site evaluations and other means has been increased, but remains an area for more effective program management. Information beyond that available from program records is necessary in some areas. For example, for materials provided by satellite or cable, the program has information only on the participation of students who register through the school for the program, whereas in many cases many more students may be using the materials at those schools.

- With the rapid growth in Internet access, is it effective to support other modes of distance learning?

- Is support for Star School grantees the most effective way to develop new curriculum and professional development packages? Should they be tested more rigorously?

- Can Star Schools activities be supported by other authorities that allow for even greater flexibility and effective monitoring?

R*TECs

The six Regional Technology in Education Consortia (R*TECs) are designed to help school districts integrate technology into the curriculum by identifying and disseminating promising practices, providing professional development and support in integrating technology into curricula, and helping to support cutting-edge uses of technology.

R*TECs are consortia that establish alliances with schools, institutions of higher education, school districts, state education agencies, and others to develop and disseminate products and to deliver services. Some 212 such alliances of organizations working with R*TECs were operating in FY1998.[34]

Examples of R*TEC activities include the following:

- **The Kansas Exemplary Educators Network** (KEEN) is a Web-based resource designed by an R*TEC and its partners to build and maintain a network of exemplary teachers who are leaders in the improvement of schools, student performance, and the teaching profession. This network disseminates resources on professional development opportunities and recognizes exemplary teachers in the region. A Kansas technology coordinators' network was also established to help technology coordinators pool their contacts, share vendor information, and help each other respond to technical assistance issues. This regional activity led to the establishment of a professional organization for school technology coordinators.

- **The NetTech** Web site supports a collaborative initiative among the R*TEC, American Association of Colleges for Teacher Education (AACTE), and the National Council for Accreditation of Teacher Education (NCATE) to help teacher education programs in the region enhance their use of technology. This effort includes Deans' Forums to explore how states in the region can work together to promote the use of technology in teacher education, special interest groups, and Web-based discussions about the use of technology in teacher education.[35]

R*TEC customer satisfaction surveys indicate that general satisfaction with R*TEC services is high, although no information is available about the impact of R*TEC services on practice:[36]

National Indicator: An increasing proportion of recipients of R*TEC services and products—including those developed and produced through the Consortia, collaboration among R*TECs, and strategic alliances—will indicate that those products and services are of high quality and meet their needs.

- The R*TECs target many of their products and services to communities that have traditionally had limited access to technology. An analysis of R*TEC services and products in FY 1998 found that 60 percent of their services and 39 percent of their products were specifically designed to benefit underserved populations.

- Although there is no information available on the number of schools and districts the R*TECs have served, over 268,000 clients received products and over 146,000 clients received services from R*TECs from October 1997 through September 1998. Almost half of R*TEC customers are teachers; most of the rest are administrators, students, and parents.

- More than 80 percent of all R*TEC clients surveyed in 1997-98 agreed or strongly agreed that R*TEC services were "useful," "relevant," or "high-quality" and that they facilitate learning.

- Working through alliance networks is rated as helpful by the R*TECs' alliance members. More than 70 percent of participants in regional, statewide, or schoolwide alliances facilitated by the R*TECs rated the alliance work "high" in terms of increasing access to resources, supporting school reform, and addressing educational concerns.[37]

- Analysis of customer surveys administered from October 1997 through September 1998 showed improvements in the levels of customer satisfaction with R*TEC services.

Questions to consider include these:

- Why should there be regional organizations if services can be provided electronically?
- How can these activities be integrated most effectively with other technical assistance providers?

Options for Strengthening Program Support for Educational Technology

Since the pioneering creation of the Star Schools program to provide national leadership in educational technology a decade ago, the context for federal policy in educational technology has changed in fundamental ways. This includes rapidly growing and widespread access to computers and the emergence of the Internet, the E-rate, and a growing understanding of how these technologies can be used to improve teaching and learning.

With this progress come important challenges to current programs. While access remains crucial, these changes make federal leadership in other areas increasingly important. Challenges include strengthening the capacity to use these technologies effectively through professional development, more effective monitoring of program performance, and an initiative of rigorous cumulative research to strengthen the knowledge base, particularly for emerging technologies.

The following options can help ensure that this investment in technology works to increase equity and excellence in our nation's schools:

- **Focus the Technology Literacy Challenge Fund on professional development.** When the 1994 Amendments were enacted, TLCF was the primary dedicated source of federal support for technology. Access to the E-rate is providing other funding sources for telecommunications. In addition, given the rapid rate of growth in the total number of school computers, increasing access through education programs is no longer as important as strengthening teachers' ability to use these technologies effectively to improve teaching and learning.
- **Target Technology Literacy Challenge Fund resources** to ensure that, in combination with state and local resources, high-poverty and high-need schools receive adequate resources to effectively use educational technology.
- **Clarify the purposes of the Technology Innovation Challenge Grants** as to whether they are simply a funding source for educational technology or are focused on developing the knowledge base and demonstrating strategies for effective use of educational technology. If the purpose is to develop the knowledge base, the program may need to focus not only on encouraging stronger project evaluations but also on encouraging the submission of more innovative proposals.
- **Strengthen the role of project evaluation and project monitoring** to provide meaningful performance information. These grants are a source of support for potentially innovative projects, but without meaningful evaluation, little will be learned about their usefulness. The program needs to build in evaluation as a high priority from the start of grant competitions, in order to provide information on whether the projects are effective in promoting technological literacy and learning. Independent national evaluations should also validate the most promising among the funded projects.

- **Adopt a uniform set of core performance indicators in the legislation for states to use in preparing their technology performance reports for the Technology Literacy Challenge Fund, the Technology Innovation Challenge Grants, Star Schools, and other relevant programs**. Where appropriate, the same indicators should be used for all programs supporting the acquisition and use of educational technology. Adopting a uniform set of indicators would address states' highly uneven reporting on improvements in educational technology and its role in school improvement. These performance indicators should also be used to monitor equity in access and use of educational technology in high- and low-poverty schools. Some possible core indicators are as follows:

  - Percentage of students at selected grade levels, including at high school graduation, who demonstrate proficiency in using multimedia computers and the Internet.
  - Percentage of teachers who regularly use technology in the classroom.
  - Percentage of teachers who are adequately trained or demonstrate proficiency in instructional use of technology.
  - Percentage of schools, broken out by percentage of low-income children, with access to modern computers and the Internet.
  - Percentage of students with ready access to computers and the Internet at home and at other sites outside of school.
  - Percentage of projects providing new knowledge about how to use technology to improve schooling, teaching, and learning.

- **Launch rigorous evaluations of strategies that can optimize technology's potential to improve teaching and learning**.

- **Develop and implement a national research agenda to field-test educational technology innovations to improve teaching and learning.** This option includes finding out more about the relationship between educational technology and student performance, and on student technological literacy, particularly for high school seniors. **A sustained strategy for rigorous and cumulative research to help teachers use technology to improve teaching and learning** should identify, develop, test, and widely implement promising technology interventions. The Educational Technology Research Agenda should be aligned with state technology plans, and should ensure that the needs of low-income communities will be addressed.

- **Consider consolidating Technology Innovation Challenge Grants with Star Schools** to provide clear federal leadership in developing the knowledge base and demonstrating large-scale application of educational technology to improve teaching and learning. This option includes research on how to fully integrate educational technology with broader school improvement. The purpose would be to expand what is known about the use of educational technology to improve student learning by supporting projects that address questions of national significance and that develop models of innovative and effective uses of educational technology for wide-scale adoption by states and school districts.

- **Continue to develop and strengthen dissemination of information and technological assistance through R*TECs** as part of the Department's broader information dissemination and technical assistance services.

In sum, the 1994 legislation has clearly increased the federal resources to strengthen educational technology. Technology programs and other federal program funds, in combination with nonfederal funds, are expanding schools' access to educational technology. However, schools are at the initial stage in reaping the potential benefits from educational technology. Continued federal leadership and leverage can help states and districts remove barriers to effective use of educational technology for improved teaching and learning.

[1] The Improving America's Schools Act of 1994, (PL 103-382), sections 3101-3604.
[2] From the U.S. Department of Education's Technology Literacy Challenge Fund Subgrantee Data Base, conducted for program office on Feb. 3, 1999. The figure, 15,098,815 students, includes consortia members.
[3] The $1.7 billion of commitments is through the 10th wave of applications. The data are from the FCC Web site (www.slcfund.org/Reference/1998/national.asp).
[4] Jay Chambers, Joanne Lieberman, Tom Parrish, Daniel Kaleba, James Van Campen, and Stephanie Stullich, *Study of Education Resources and Federal Funding: Preliminary Report* (Washington, DC: U.S. Department of Education, 1999).
[5] The E-rate provides discounts—no direct funding—to schools and libraries; those in rural and low-income areas receive the highest discounts. Funding for the E-rate is capped at $2.25 billion annually. In June 1998, the FCC extended the first funding period to 18 months and adjusted the amounts that could be collected and spent during 1998 and the first 6 months of 1999 at $1.925 billion. Departmental support for educational technology is estimated at the district level; proportions may vary at the school level.
[6] U.S. Department of Education, *Getting America's Students Ready for the 21st Century: Meeting the Technology Literacy Challenge* (Washington, DC: U.S. Department of Education, 1996) 15-25. See also J.D. Fletcher, Institute for Defense Analysis, "*Does This Stuff Work? Some Findings from Applications of Technology to Education and Training*," Proceedings of Conference on Teacher Education and the Use of Technology-Based Learning Systems, Society for Applied Learning Technology, Warrenton, VA, 1996.
[7] See, for example, Barbara Means, "Melding Authentic Science, Technology, and Inquiry-Based Teaching: Experiences of the GLOBE Program," *Journal of Science Education and Technology* Vol. 7 No. 1 (1998): 97-104. Erik Fatemi et al., "High-Tech Pathways to Better Schools: Ten Ways That Technology Can Advance the Cause of Reform," *Education Week* "Technology Counts" issue (Oct. 1, 1998): 23-66.
[8] See, for example, B. Means and K. Olson, *Technology's Role in Education Reform: Findings from a National Study of Innovating Schools* (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, 1997); Thomas K. Glennan and Arthur Melmed, *Fostering the Use of Educational Technology: Elements of a National Strategy,* (Santa Monica, CA: Rand Corporation, 1996); Kathleen Fulton, *Learning in a Digital Age: Insights into Issues: The Skills Students Need for Technological Fluency* (Santa Monica, CA: Milken Exchange on Education Technology, 1997).
[9] U.S. Department of Education, *Getting America's Students Ready*, 1996.
[10] President's Committee of Advisors on Science and Technology, Panel on Educational Technology, *Report to the President on the Use of Technology to Strengthen K-12 Education in the United States* (Washington, DC: President's Committee of Advisors on Science and Technology, March 1997). See also The CEO Forum, *School Technology and Readiness Report. Professional Development: A Link to Better Learning*. Year 2, (Washington, DC: The CEO Forum, Feb. 22, 1999).
[11] U.S. Department of Education, *Getting America's Students Ready,* 1996, 5.
[12] Chambers et al., 1999.
[13] U.S. Department of Education, National Center for Education Statistics, *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers* NCES 199-080 (Washington, DC: U.S. Department of Education, National Center for Education Statistics, January 1999).
[14] Chambers et al., 1999. The study reports that 11 percent of teachers with no professional development in educational technology last year, 17 percent of those with 1 to 8 hours, and 33 percent of those with more than 8 hours felt well prepared to teach with educational technology.
[15] Camilla Heid and Ann Webber, *School-Level Implementation of Standards-Based Reform: Findings from the Follow-up Public School Survey on Education Reform* (Washington, DC: U.S. Department of Education, 1999).

[16] U.S. Department of Commerce, "Falling through the Net II: New Data on the Digital Divide National Telecommunications and Information Administration," 1998; Hoffman and Novak, "Bridging the Digital Divide: The Impact of Race on Computer Access and Internet Use," and "Bridging the Racial Divide on the Internet," *Science* (April 17, 1998).

[17] .U.S. Department of Education, National Center for Education Statistics, *Internet Access in Public Schools and Classrooms: 1994-98* Issue Brief NCES 99-0017 shows no difference in access to instructional computers. Other sources, such as MDR, show small differences, which are within the range of sampling error. There are larger differences in other areas. For example, the NCES study also reported that the ratio of students to classroom computers with Internet connections was 10 in low-poverty schools and 17 in high-poverty schools.

[18] Chambers et al., 1999.

[19] Chambers et al., 1999.

[20] Chambers et al., 1999.

[21] U.S. Department of Education, unpublished tables from the *Technology Literacy Challenge Fund Framework Study*, Jan. 1999. These figures are for responding districts. Figures for proportion of grants funded and average size of grants are from preliminary data presented by the program office prior to collection of performance reports. See *Technology Literacy Challenge Fund, Initial Program Data*, Sept. 23, 1998.

[22] U.S. Department of Education, unpublished tables from the *Technology Literacy Challenge Fund Framework Study*, Jan. 1999.

[23] U.S. Department of Education, Goals 2000 and Technology Literacy Challenge Fund Subgrantee Data Base, Jan. 1999. The Title I figures are from *The Distribution of Federal Education Funds in FY 1995: A Biennial Report Mandated Under GEPA 424* third draft (Jan. 1999). The measure of urbanicity is from the Common Core of Data. Based on Census metropolitan statistical area codes, it provides a broad measure but does not consider many areas typically thought of as urban.

[24] Mary Ann Zehr, "The State of the States," *Education Week* XVIII/5 (Oct. 1, 1998): 69-101. See also Rita Kirshstein et al., *The First Year Implementation of the Technology Literacy Challenge Fund in Five States* draft (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, 1999).

[25] Chambers et al., 1999.

[26] Review of selected state performance reports by the U.S. Department of Education, Planning and Evaluation Service.

[27], American Institutes for Research, *State-by-State Profile of Technology Data Collection* (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, June 1998).

[28] "Technology Challenge Grants for Professional Development Awarded to 20 Partnerships," *U.S. Department of Education News* (Sept. 22, 1998); and Shirley A. Steele, *Meeting the Technology Challenge: Building New Learning Communities* (Washington, DC: U.S. Department of Education, Oct. 1998).

[29] U.S. Department of Education, Office of Educational Research and Improvement, *Formative Evaluation of the Technology Innovation Challenge Grants Program* draft (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, Sept. 1997) and review of program files.

[30] U.S. Department of Education, *Budget Justification* (Washington, DC: U.S. Department of Education, 1999) V-19.

[31] U.S. Department of Education, Star Schools program records.

[32] Naida C. Tushnet et al. and the South West Regional Laboratory, *Evaluation of the Star Schools Program Final Report*, unpublished report prepared for the U.S. Department of Education, Office of Educational Research and Improvement, Dec. 1994.

[33] U.S. Department of Education, unpublished tables from the *Evaluation of the Star Schools Program*, 1999.

[34] U.S. Department of Education, *Regional Technology in Education Consortia Program Performance: Draft Report Fiscal Year 1998* (Washington DC: R*TEC Program, U.S. Department of Education, Jan. 1999).

[35] The examples are from *Regional Technology in Education Consortia Highlights of the Program's First Two Years*, R*TEC section of the Department's Web site (http://www.rtec.org).

[36] U.S. Department of Education, *Regional Technology in Education Consortia Program Performance*, 1999.

[37] U.S. Department of Education, *Regional Technology in Education Consortia Program Performance: Preliminary Report Fiscal Year 1998* (Washington, DC: R*TEC Program, U.S. Department of Education, 1998) 13.

8. ARE FEDERAL PROGRAMS CONTRIBUTING TO GREATER CHOICE IN PUBLIC SCHOOLS?

Key Findings

Charter Schools

- Almost three-quarters of the roughly 1,100 charter schools in existence have received at least one subgrant from the federal Public Charter Schools Program (PCSP) to help with planning and start-up costs.
- A lack of access to start-up funds continues to be the largest single barrier to the successful implementation of charter schools.
- The amount of funds that charter schools received from the PCSP in 1997 was, on average, $60,000 each, roughly 6 percent of the total costs these schools incur.
- States, other charter granting entities, and charter schools are finding it a challenge to implement mechanisms that hold charter schools accountable for improving student outcomes.
- Preliminary findings and anecdotal evidence suggest that results for student achievement have been mixed, reflecting in part the vastly different charter school compositions within and across states and their relatively new status as a reform mechanism.
- Nationally, students who attend charter schools have demographic characteristics similar to those of students who attend other public schools; however, these national averages mask significant state-by-state variability.

Magnet Schools

- The number of magnet schools has grown substantially, quadrupling between the early 1980s and today. The number of magnet schools is now estimated to exceed 5,200, serving approximately 1.5 million students.
- Nationally, tenth-grade students attending urban magnet schools in 1990 performed better in reading, science, and social studies than did students in public comprehensive high schools or private high schools.
- Half of the districts that received MSAP grants in 1991-93 met their two-year desegregation targets. Schools were generally more successful in moving in the general direction described by their desegregation objectives than in meeting the specific enrollment targets called for in their desegregation plans.
- Progress in achieving desegregation objectives is still unknown for the 1998 grantees; however, preliminary data show that these grantees have a greater ability to specify their desegregation objectives than the 1991-93 grantees did.

Public school choice can be a key component of comprehensive school reform strategies by improving access to a high-quality education, heightening parental engagement in their children's education, and providing models of best practice. Choice in public schools can promote change in a number of ways consistent with the overall tenets of improving access to educational opportunity and promoting high standards for all children. First, because choice enables families to select public schools with the academic philosophy, program emphasis, or setting that is best suited to their children's needs, choice is a mechanism for improving access to a high-quality education for all children. Second, the very act of choosing a public school can promote a strong sense of shared purpose and involvement in the school that fosters a positive learning environment and heightens parental engagement. Indeed, a consistently large majority of parents would like to have the opportunity to choose which public school their children attend instead of being assigned to a public school according to where they live. Finally, public school choice can be used to bring about change in other schools, by creating schools that serve as models of best practice for all schools in a community and by encouraging schools to provide a safe and thriving learning environment so that parents elect to keep their children in the school. All of these potential outcomes can be strong forces for fostering better student achievement.

Choices available to students within the public school system are charter schools, magnet schools, programs in which families and students are permitted to choose among public schools within or across districts, postsecondary options for high school students to earn credit at local colleges and universities, and "programs within schools," where schools offer students opportunities to participate in one or more specialized activities within their school building. The federal government has provided financial support to students and districts primarily to establish charter schools and magnet schools.

Introduction to the Programs and the 1994 Legislative Changes

The Improving America's School Act of 1994 contained several provisions designed to expand parents' opportunity to choose among public schools. These programs and provisions are as follows:

- **The Public Charter Schools Program (PCSP)**: To provide start-up funds for charter schools and to evaluate the effects of charter schools on schools and students;

- **The Magnet Schools Assistance Program (MSAP)**: To help school districts establish new or significantly revised magnet schools to promote school desegregation by creating programs that attract students from different backgrounds;

- **Title I**: A provision that allows school districts to use Title I funds, in combination with other funds, to implement programs that allow Title I parents to select an appropriate public school for their children;[1] and

- **Title I**: A provision that allows states to permit children in failing schools to transfer to another public school.[2]

The remainder of this chapter deals with the two main vehicles for promoting public school choice in the 1994 reauthorization: the PCSP and the MSAP. Although they were originally enacted at different times and for different purposes, these two programs are based on a similar concept. Because the congressional intent for the two programs differed in a number of important ways, each is addressed separately.

Exhibit 8.1 provides information about the scope and nature of the PCSP and the MSAP.

EXHIBIT 8.1
THE DEPARTMENT'S PUBLIC SCHOOL CHOICE PROGRAMS AT A GLANCE

Program Name	1999 Appropriation	Purpose	Funding and Targeting	Participation (1998)	Public School Choice Services
Public Charter Schools Program	$100 million	(1) Provide financial assistance to charter schools; (2) evaluate their effectiveness; (3) establish more high-quality charter schools.	Discretionary grants with a maximum 3-year duration made to states with charter school authorizing legislation. SEAs make competitive subgrants to charter schools in partnership with a public charter granting entity.	31 states (including D.C. and Puerto Rico) Funds provided directly to several schools in AR, AZ, HI, MS, NH, NM, and NV. Since 1994 enactment, nearly three-fourths of all operating charter schools have received at least one subgrant.	Planning and program design, and dissemination grants
Magnet Schools Assistance Program	$104 million	(1) Help reduce, eliminate, or prevent minority group isolation; (2) promote systemic reform; (3) implement innovation programs; and (4) improve student performance.	Discretionary grant with a maximum 3-year duration made to districts with approved desegregation plans.	57 districts Typically there are 5 schools in each district; over half of these serve elementary school children.	Planning, materials, staff, and instructional programs

Source: U.S. Department of Education.

Public Charter Schools Program

Charter schools are public schools that are allowed to operate under a negotiated agreement—or charter—in which they are granted exemptions from state and local regulations in exchange for meeting a set of performance-based goals. The PCSP legislation provides for a program that awards grants to state educational agencies (SEAs) or other eligible applicants in states where SEAs elect not to participate. The PCSP funds are then distributed to schools. The amount of funds that a PCSP grantee receives depends on the amount of funds available, the quality of the application as determined by peer reviewers, the grantee's need based on the projected number of subgrantees/schools to be supported, and the amount that the SEA has decided it will provide to each subgrantee.

The PCSP's explicit purpose is to meet charter schools' need for initial financial support by providing start-up funds for up to three years. A second program purpose is to evaluate the effects of charter schools on schools and students, focusing on how these schools contribute to the improvement of learning. Congress cited charter schools as promising new educational models for helping children achieve to high standards as well as for promoting reform generally. Recognizing mounting evidence of a lack of access to start-up funding to get these schools off the ground, the PCSP was enacted as the first federal program specifically targeted for charter schools.

The charter schools model clearly reflects the overarching principles of the 1994 reauthorization. Specifically, charter schools (1) are required to set the same high standards that states require of all of their schools; (2) are given flexibility in designing and implementing their educational program; (3) are directly accountable for student performance because their charters could be revoked if they fail to reach those standards; and (4) get parents involved in their children's education by giving them the opportunity to open their own school or to choose a school for their children.

The PCSP was reauthorized in October 1998. In this reauthorization, several changes were made to diminish the barriers to establishing effective charter schools. The main changes are as follows:

- ***Flexibility***: Many state laws do not allow charter schools to have real autonomy from state and local regulations. The reauthorized PCSP sets a funding priority for states that allow schools to control their budgets and expenditures.[3]

- ***Accountability***: In exchange for flexible operations, schools are held accountable for student performance. To encourage accountability, the reauthorized PCSP sets a funding priority for states and schools that have clear and measurable objectives for student performance. In addition, funding priority is given to states that renew their charter schools regularly, at least every five years.[4]

- ***Dissemination grants:*** Charter schools can be thought of as laboratories for school reform efforts that help inform other public schools of innovative ways to overcome barriers to improving student performance. In order to facilitate this process, states may reserve up to 10 percent of their grant award to make dissemination subgrants. These grants can be made to charter schools that have been open for at least three consecutive years and have demonstrated overall success, including improving student achievement, maintaining high levels of parent satisfaction, and providing the management and leadership necessary to overcome initial start-up problems. Dissemination grant funds can be used to help other schools adapt the charter school's program or to disseminate information about the charter school through such activities as technical assistance, partnerships, curriculum materials, and evaluations that document the successful practices of the charter school program.[5]

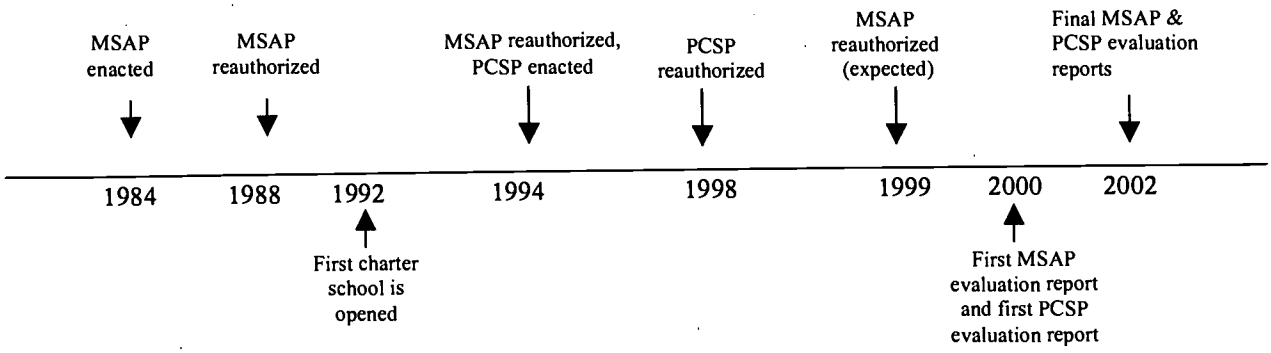
Magnet Schools Assistance Program

Magnet schools are designed as a voluntary tool for desegregating schools by establishing educational programs that draw together students of different racial, ethnic, social, and economic backgrounds. The MSAP legislation provides for a program of grants to local education agencies (LEAs), which then fund predesignated schools. MSAP funds may be used for planning, promotional activities, and for making the expenditures necessary to manage programs in magnet schools that are directly related to the improvement of students' reading, knowledge, or skills in mathematics, science, history, geography, English, foreign languages, art, music, or improving vocational skills. MSAP grantees are prohibited from using MSAP funds for transportation.

Federal support for magnet schools dates back to 1972, when President Nixon established the Emergency School Assistance Program by Executive Order. In 1976, Congress enacted the Emergency School Assistance Act (ESAA), which, in 1981, was eliminated as a separate program and consolidated with other programs as a part of the Chapter 2 block grant under the Omnibus Budget Reconciliation Act of 1981. In 1984, Congress enacted the Magnet Schools Assistance Program to provide financial assistance to LEAs that had lost federal funds because of the repeal of the ESAA. When Congress reauthorized the MSAP statute in 1994, it strengthened its support for the development of magnet schools that help reduce racial isolation in elementary and secondary schools and that enable students to achieve to high standards. It also enhanced support for magnet school programs to serve a wide range of students, rather than an elite group. Congress also stated that magnet schools receiving MSAP funding should design innovative educational programs and prepare students for future careers, clearly linking them to the overall framework of reform in the 1994 reauthorization.

Exhibit 8.2 shows the timeline of the Magnet Schools Assistance Program and Public Charter Schools Program.

EXHIBIT 8.2
PUBLIC SCHOOL CHOICE TIMELINE



Source: U.S. Department of Education.

What Do We Know about Good Practice?

In enacting the PCSP and the MSAP in 1994, Congress recognized that in order to be equitable and effective, public school choice must be integrated within the context of local reform and the framework of higher standards for all children. Research suggests both the characteristics of "good" public school choice and the undesirable effects caused by poorly designed choices.[6] Thus, public school choice programs should be carefully crafted according to the following set of standards:

- **Choice programs should apply only to public schools that offer equal access to all students.** Public schools are open and free to all children, regardless of their religion, race, educational needs, or family income. They do not charge tuition and do not operate to make a profit. Voucher programs that allow the use of public funds for private education do not adhere to this critical principle.

- **Like other public schools, schools of choice should maintain high standards for all of their students, and should hold the students accountable for achieving those standards.** Schools of choice should be accountable not only to the families they serve but also to the public as a whole. Providing regular information to the public about their performance is essential for schools of choice to remain accountable to their communities for serving the best interests of all children.

- **Choice programs should promote variety and innovation in public schools.** Central to the promise of choice is its potential to expand the options available to all children, particularly those who have been historically underserved. Recognizing that there is no one model that successfully serves all the needs of all students, public school choice programs must promote real options for families.

- **Choice programs should help families overcome factors that restrict their choices, especially lack of information about schools.** To give all parents equal opportunity to take advantage of the options available to them, targeted and sustained efforts must be made to reach out to all families, especially those in disadvantaged areas. Two barriers that can drastically reduce the capacity of families to exercise choice are a lack of information and lack of access to transportation; these kinds of issues must be addressed within local contexts to ensure that choice is contributing to the improvement of all children.

How Well Are the Programs Working?

On balance, both the PCSP and the MSAP support the public school choice standards just described. Both programs support the development of new or significantly revised public schools that are open and accessible to all students. Less is known about the extent to which schools with PCSP or MSAP funds deal with barriers to choice for all students, such as access to complete information, or are truly accountable to the public for student performance, although there is some anecdotal evidence that grantees are promoting these goals.

Public Charter Schools Program

As described earlier in this chapter, the Public Charter Schools Program was enacted to meet the goal of helping a large number of charter schools defray the costs of starting a new school, as well as to evaluate the effect that charter schools have on students, student achievement, staff, and parents. A National Study of Charter Schools, a four-year research study to document and analyze the charter school movement, began collecting data in 1995-96 and will present its final report in the fall of 1999. In addition, a comprehensive evaluation of the PCSP that began in the fall of 1998 will continue to inform Congress on the program's effectiveness in the coming years.

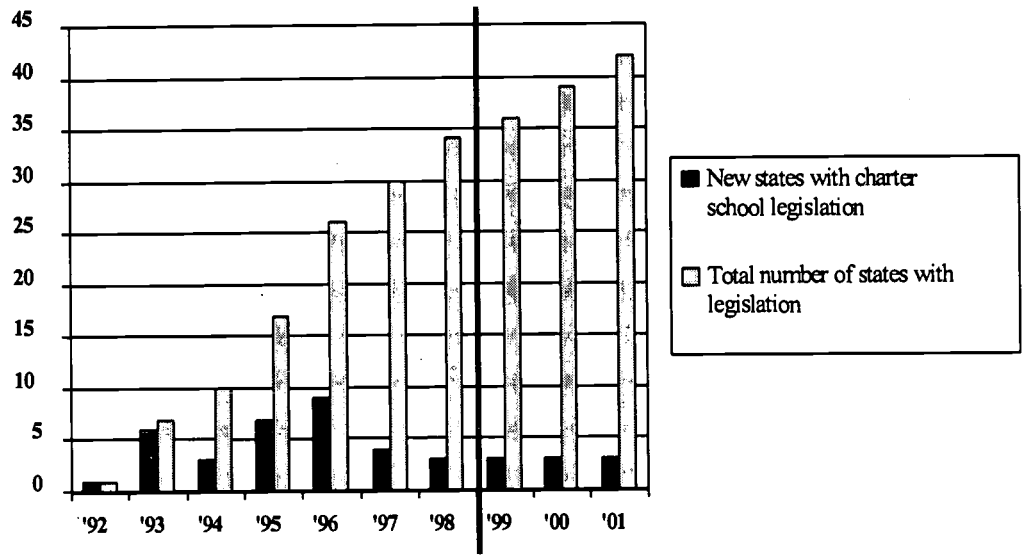
Program Indicators: By the year 2000, 40 states will have charter schools legislation.

By the year 2002, there will be 3,000 charter schools in operation around the nation.

Expansion of charter schools: Minnesota was the first state to enact charter school authorizing legislation in 1991; since that time, 34 other states, the District of Columbia, and Puerto Rico have followed suit. The number of charter schools has risen dramatically as well, reaching over 1,100 schools in the 1998-99 school year, up from fewer than 300 in 1995-96.

Exhibit 8.3 shows the total numbers of states with charter school legislation and the numbers of new states with charter school legislation, from 1992 to 2001 (projected).

EXHIBIT 8.3
NUMBER OF STATES WITH CHARTER SCHOOLS LEGISLATION, 1992-2001



Source: U.S. Department of Education.

Funding and targeting: **The PCSP has reached a large proportion of charter schools.** In FY 1998, the PCSP made awards to 31 states (including the District of Columbia and Puerto Rico), as well as directly to several schools in Arizona, Arkansas, Hawaii, Mississippi, Nevada, New Hampshire, and New Mexico because their respective state education agencies (SEAs) either chose not to apply for funds or were ineligible. States have funded nearly all of their schools with their PCSP grants, with the exception of Arizona and California, which account for about 40 percent of all charter schools

nationwide. Since the program was enacted in 1994, nearly three-fourths of all operating charter schools, as well as nearly four-fifths of those in the planning stages, had received federal support.

Over the lifetime of the grant program, charter schools have received, on average, $60,000 each in federal funds per year, with individual grants ranging from $3,300 to $420,000. Although precise figures are not available, it is estimated that federal funds cover about 6 percent of the total annual costs of running a school.[7] With just seven states providing start-up funds[8] and more than half of charter schools indicating that the lack of start-up funds is a significant barrier,[9] it is unlikely that the number of charter schools would have grown at such a rapid pace without the financial support available through the PCSP.

Exhibit 8.4 shows a state-by-state breakout of PCSP grant awards in 1997, as well as the number of schools supported in each state. (Not all awards are made to SEAs; some individual schools applied directly to the Department for awards. Only states with legislation that authorizes charter schools are eligible to apply.)

EXHIBIT 8.4
PUBLIC CHARTER SCHOOLS PROGRAM
1997 GRANT AWARDS

State	1997 Grant	No. of Schools Supported
Alaska	$1,516,500	11
Arizona	$3,221,226	17
California	$3,399,959	29
Colorado	$2,024,372	43
Connecticut	$1,286,371	15
Delaware	$691,302	10
District of Columbia	$2,063,095	21
Florida	$4,566,026	33
Georgia	$1,609,380	18
Hawaii	$239,635	2
Illinois	$782,850	3
Kansas	$900,000	13
Louisiana	$373,711	2
Massachusetts	$2,939,142	24
Michigan	$4,943,392	93
Minnesota	$2,183,458	27
New Jersey	$1,759,355	24
New Mexico	$170,173	1
North Carolina	$2,490,276	59
Oregon	$779,948	27
Pennsylvania	$1,333,333	6
Puerto Rico	$1,990,412	36
South Carolina	$1,447,900	4
Texas	$2,415,167	60
Wisconsin	$1,356,548	38
Total	**$46,483,531**	**616**

Source: U.S. Department of Education.

Educational Opportunity: **Charter schools appear to be serving students that have a demographic profile similar to that of students in public schools.** These national averages, however, mask significant state-by-state variability that shows many states serving large percentages of underserved populations as well as a handful of states that have charter schools with a higher proportion of white students. Specifically, comparing the enrollments of racial/ethnic minorities, students with disabilities, students with limited English proficiency (LEP), and low-income students in charter schools to statewide averages suggests the following:

Program Indicator: Studies will show that charter schools are open and accessible to all students.

- **Racial/ethnic composition**. More than 70 percent of charter schools are not "racially distinct," that is, they are within 20 percent of their district average. Of those schools that are racially distinct from their districts, the majority serve higher proportions of minority students than their districts. However, minority enrollments vary considerably by state. For example, Texas charter schools enroll only 13 percent white students compared with 46 percent statewide; conversely, Alaska charter schools enroll 82 percent white students compared with 63 percent statewide.[10]

- **Students with disabilities**. Charter schools serve a somewhat smaller proportion of students with disabilities (8 percent) than public schools as a whole do (11 percent). Enrollments of students with disabilities in charter schools vary markedly by state, ranging from 2 percent in New Jersey to 25 percent in Florida.[11]

- **Students with limited proficiency in English**. Charter schools are intended to serve all kinds of students, including LEP students. Public school students with limited proficiency in English are concentrated in a few states and LEP students in charter schools mirror this pattern. Approximately one-tenth of the students served either by charter schools or other public schools have limited proficiency in English. The largest numbers of such students in states with charter schools are in California and Texas; charter schools in Texas enrolled a significantly higher percentage of LEP students (23 percent) than the total for public schools in the state (13 percent), while California charter schools enrolled a somewhat smaller percentage (18 percent) than its public schools did (25 percent).[12]

- **Low-income students**. Nationally, the percentage of students in charter schools who are eligible for free or reduced-price lunch under the National School Lunch Program—a measure for poverty—is about the same as the percentage for students enrolled in all public schools: slightly more than a third. Again, these comparisons differ at the state level. For example, more than half of the students in Minnesota charter schools are eligible for free or reduced-price lunch, while just over a quarter of all public school students in Minnesota are. Conversely, 30 percent of Georgia's charter school students are eligible, compared with 40 percent overall.[13]

In addition to these aggregate measures, several charter schools specifically serve at-risk students. In fact, Minnesota's authorizing legislation describes these types of schools as a key aspect of charter school reform in their state, and their charter schools serve high proportions of all the special populations of students just described. Also, of the 798 federally funded charter schools, 154 primarily served students who were "at-risk" or required special services (i.e., underserved, dropped-out, low-achieving, LEP students, students living in poverty, or schools otherwise termed "alternative").[14]

Flexibility and autonomy: **Early evidence suggests that charter schools are having trouble obtaining significant autonomy in exchange for clear accountability for student performance.** Understanding how well charter schools reflect this vision is critical in order to assess adequately the promise of this reform.

> **Program Indicator**: By 2002, 75 percent of states receiving PCSP funds will exempt charter schools from significant state and local rules that inhibit flexible operation, and each charter school will have a high degree of autonomy.

Many state statutes that authorize charter schools do not allow the schools to have control over basic functions such as budgeting, acquiring services, and hiring and firing, and do not allow charter schools to operate outside the local school district.[15] Without such flexibility, charter schools are less likely to serve as models for redesigning governance structures in public schools.

Accountability: **States, charter granting entities, and charter schools are finding it a challenge to implement meaningful accountability mechanisms for charter schools.** The National Study of Charter Schools found that every charter school that reported coming up for review by 1997 had had its charter renewed by its chartering agency,[16] indicating that charter schools are at least meeting the approval of their chartering agencies. However, as charter schools have come up for renewal, their charter granting entities are using vastly different criteria for their review.

> **Program Indicator**: By 2002, 75 percent of states receiving PCSP funds will require each charter school's charter to include measurable objectives and specific timelines for meeting student performance goals, including the extent to which students meet or exceed state performance standards. States will also require chartering entities to hold charter schools accountable for meeting the terms of their charter at least once every five years.

A study of charter schools in California, for example, found that most charter schools are held accountable for fiscal viability rather than for the academic achievement of students, both because there was no stable state assessment program for public schools and because some charter schools promoted goals other than academic achievement (such as behavioral indicators or safety).[17] The existence of different entities to which charter schools are accountable also resulted in vastly different accountability plans and methods in Colorado.[18] While there are examples of charter school accountability mechanisms that reflect a strong emphasis on academic results, like those implemented in the Los Angeles Unified School District,[19] on balance, implementing meaningful accountability mechanisms remains difficult for many states, charter granting entities, and charter schools.

Regardless of differences in state law, charter schools are held accountable for the achievement of their students. To assess how well students are faring academically in charter schools, we first need to know the kinds of tests that charter schools are using and for what purposes, as these issues have a bearing on how to interpret the assessment results. First, the authorizing statutes in nearly all states with charter schools require that the charter schools participate in the state or other relevant assessment program. Essentially, state laws and policies treat charter schools like all public schools with respect to assessments. However, changes in state and district assessment practices make the longitudinal measurement of student performance in charter schools difficult. Fewer than 10 states can provide three consecutive years of assessment data. Although the use of standardized tests and the state's assessment test are the most typical method of reporting for accountability purposes, charter schools also use a number of other assessment methods. Most report using performance-based assessments and portfolios to measure student progress.[20]

Impact on student achievement: **So far, it is too early to tell whether student achievement is improving in charter schools, both because the research base is limited and because the schools are young.** The final report of the National Study of Charter Schools, scheduled for publication in the fall of 1999, will examine student achievement in charter schools. In addition to this study, a comprehensive evaluation of the PCSP will obtain information on the academic achievement of charter school students; however, it is just getting under way and cannot contribute to this report.

> **Program Indicator**: By the fall of 1999, a national study of charter schools will be completed that examines the characteristics of charter schools (e.g., range of flexibility, accountability measures) and examines the impact of charter schools on student achievement.

State- and district-level evaluations are another source of information about the achievement of students enrolled in charter schools, but so far, preliminary conclusions are mixed. Two illuminating examples are Colorado[21] and Los Angeles,[22] which are widely regarded as having well-developed charter school programs. But few conclusions can be drawn about the achievement of charter school students because the schools have been operating for only a short time (sometimes less than a year), have vastly different assessment practices, and enroll a small number of students in only a few grades. Although these evaluations are often held up as models, their methods and findings reveal the difficulties in collecting uniform, comparable student achievement data in charter schools.

Students in the Los Angeles Unified School District Charter Schools, with a few exceptions, have maintained or slightly improved their performance over time with respect to students in a comparison group of noncharter district schools.[23] The Colorado evaluation found that "the performance of the charter schools, as a whole, on the Colorado Student Assessment Program is stronger than state averages, stronger than sponsoring district averages and stronger than the averages of other schools in the sponsoring districts who serve a population of students roughly comparable to the population served by charter schools."[24]

It is not yet clear whether and to what extent these fledgling schools can achieve the ultimate goal of any school reform: improving the academic outcomes of students. However, some charter schools are demonstrating better outcomes for students, and we need to continue to monitor how and to what extent they do so in the future.

Impact on public school systems: **We know little about the early impact of charter schools on neighboring schools, but available data suggest that charter schools are generally not perceived as strong agents for change by neighboring schools.** That is not surprising, given the short lifetimes and small numbers of charter schools. A 1998 University of California at Berkeley study of 25 districts in eight states affected by charter schools revealed that the majority of districts did not respond to the advent of charter schools with "swift, dramatic improvements" in their educational programs; the majority of districts had responded to charters slowly and in small ways. However, almost one-quarter of the districts in the study had responded energetically to the advent of charters and significantly altered their educational programs.[25]

> **Program Indicator**: By the year 2000, increasing numbers of charter schools will work with other charter schools and traditional public schools to develop, study, and disseminate promising educational practices.

Magnet Schools Assistance Program

As described earlier in this chapter, the MSAP was enacted to reduce minority group isolation, contribute to systemic reform, offer innovative educational programs, and improve student performance. A comprehensive evaluation of the MSAP that will obtain information on all four of these purposes is in progress. However, supplemental sources that reveal how the MSAP is working are drawn upon here.

Expansion of magnet schools: **The number of magnet schools has grown substantially, quadrupling between the early 1980s and today.** Current estimates place the number of magnet schools at over 5,200, serving approximately 1.5 million students.

Funding and targeting: **The MSAP FY 1998 grants were awarded to 57 districts with approved desegregation plans in 25 states, averaging roughly $1.6 million and ranging from $350,000 to nearly $2.9 million (see Exhibit 8.5 below). Out of the 57 districts, 41 had received grants at some point previously.** Each district uses the funds in targeted schools—typically five schools per district—over half of which serve elementary school children. On average, magnet schools received approximately $300,000 each.[26]

According to preliminary data about the 57 grantees, 31 districts have voluntary desegregation plans, and 26 districts have mandatory desegregation plans. The projects range from small, focused projects in only a few schools to large programs in many schools. Within the projects, there are MSAP-supported programs in 293 magnet schools. They feature a variety of programs, including technology, mathematics, science, and fine arts.[27]

Exhibit 8.5 shows how much each of the 57 districts was awarded, as well as whether or not the district was a previous grantee. (Note: "Previous grantee" means having an MSAP grant in *any* previous grant cycle, not necessarily in the *last* grant cycle.)

EXHIBIT 8.5
MAGNET SCHOOLS ASSISTANCE PROGRAM FY 1998 GRANT AWARDS

District	State	FY98 Grant Award	Previous grantee?
Montgomery County Board of Education	AL	$2,074,806	√
Phoenix Union High School District	AZ	$672,623	√
ABC Unified	CA	$1,478,354	
Berkeley Unified	CA	$1,040,592	
Long Beach Unified	CA	$1,535,607	√
Los Angeles Unified	CA	$2,510,344	√
Moreno Valley Unified	CA	$1,991,371	√
San Diego Unified	CA	$2,533,264	√
Capitol Region Education Council	CT	$350,000	
New Haven City	CT	$2,412,995	√
Gadsden County	FL	$893,493	
Lee County School Board	FL	$1,566,635	√
Miami-Dade County	FL	$2,715,635	
Palm Beach County School Board	FL	$2,400,488	√
Pinellas County School Board	FL	$1,736,255	√
Seminole County	FL	$2,523,078	

(continued)

EXHIBIT 8.5
MAGNET SCHOOLS ASSISTANCE PROGRAM FY 1998 GRANT AWARDS (Continued)

District	State	FY98 Grant Award	Previous grantee?
St. Lucie County School Board	FL	$1,799,666	√
Decatur Public	IL	$491,364	√
Indianapolis Public Schools	IN	$2,370,490	√
Fayette County	KY	$1,820,924	
Topeka Public Schools	KS	$464,958	√
Monroe City	LA	$1,339,136	
St. John the Baptist Parish Public Schools	LA	$502,308	√
Montgomery County	MD	$1,107,283	
Springfield Public Schools	MA	$2,335,896	√
Kalamazoo	MI	$1,930,364	
Madison County	MS	$842,687	
City of St. Louis	MO	$2,705,313	
Montclair Board of Education	NJ	$619,479	√
Beacon City	NY	$428,447	√
Freeport Public Schools	NY	$921,886	√
NYC Community School District #3	NY	$1,928,628	√
NYC Community School District #10	NY	$1,492,932	√
NYC Community School District #15	NY	$2,829,108	√
NYC Community School District #22	NY	$1,835,912	√
NYC Community School District #28	NY	$1,783,311	√
NYC Community School District #30	NY	$2,418,693	√
Newburgh City	NY	$1,061,474	√
Rochester City	NY	$2,576,693	√
Yonkers City	NY	$2,466,310	√
Bleden County	NC	$544,790	
Charlotte-Mecklenburg County Schools	NC	$2,656,683	√
Edgecombe Public Schools	NC	$1,530,693	√
Wake County Public Schools	NC	$2,171,309	√
Dayton Public Schools	OH	$2,574,373	√
Oklahoma City	OK	$2,652,448	
Providence	RI	$2,856,392	√
Hamilton County	TN	$2,401,878	
Amarillo Independent	TX	$573,583	√
Corpus Christi Independent	TX	$1,441,145	√
Victoria Independent	TX	$2,242,389	√
Wichita Falls Independent	TX	$1,772,289	√
Danville	VA	$1,208,601	
Roanoke Public Schools	VA	$958,050	√
Seattle Public Schools	WA	$1,194,516	√
Tacoma School District #10	WA	$1,997,271	√
Yakima Public Schools	WA	$1,214,752	√
Total Number of Previous Grantees			**41**

Source: U.S. Department of Education.

Initial examination of Exhibit 8.5 shows that whereas some of the nation's largest urban centers with serious minority group isolation, such as New York City and Los Angeles Unified District, received magnet school grants in 1998, other large racially isolated cities, such as Chicago and Baltimore, did not receive grants. Moreover, some of the districts that received grants are not in the most racially isolated parts of the state. It is important to understand, however, that in some cases, large, racially isolated urban centers did not submit proposals; or they may have submitted them but because of the highly competitive nature of the grant, they did not receive funding. The level or degree of minority group isolation in a project is not one of the selection criteria used by MSAP to make grants.

MSAP grant awards are determined by peer reviewers (from outside the Department of Education) who take into account the following selection criteria: quality of the project design, quality of the plan of operation, quality of personnel, quality of the evaluation plan, the budget and resources of the project, and the commitment and capacity of the district to continue the project after the three years of the grant. In addition to these selection criteria, the reviewers also give priority to those applications that (1) demonstrate greatest need, (2) propose new or significantly expanded magnet programs, (3) propose to select students for admission to the magnet schools on the basis of a lottery if schools are oversubscribed, (4) propose to draw on community involvement plans, and (5) demonstrate how the project will implement innovative approaches that are consistent with state and local systemic reform plans. Finally, if total MSAP funds exceed $75 million, special priority is given to applicants that were not funded in the previous grant cycle.

In summary, grants are awarded to districts in accordance with the quality of the proposal they submit to the Department of Education with respect to the criteria just listed. In general, school districts with considerable experience in grant applications tend to have an advantage in discretionary grant competitions of all types. Some districts hire consultants to help them write applications. The Department also offers technical assistance to those who request it. Technical assistance by the MSAP includes regional workshops that provide information such as how to prepare applications, what the eligibility requirements are, and what priorities they need to address. The MSAP also provides one-on-one communication, as well as copies of funded proposals that applicants may use as models. If a project was not funded, the MSAP can provide access to the evaluation of that project's proposal and technical assistance during the next funding cycle.

Educational opportunity: **Students who participated in magnet programs would probably not have had comparable educational opportunities in the absence of these programs.** This finding is from a 1997 report from the Citizens' Commission on Civil Rights, which examined the extent to which magnet schools offered improved educational opportunities for poor and minority children in St. Louis, Cincinnati, and Nashville. All three districts received MSAP funding in at least one grant cycle. Not surprisingly, high percentages of minority students attended these magnet schools; the report also notes, however, that poor children are more concentrated in nonmagnet schools.[28]

Program Indicator: Targeted schools (those with substantial populations of minority-group students) will *eliminate*, *reduce*, or *prevent* minority group isolation according to their objective.

Desegregation: One of the MSAP's statutory goals is to eliminate, reduce, or prevent minority group isolation in targeted schools. Applicants to the Magnet Schools Assistance Program must specify their desegregation objectives, whether they have mandatory or voluntary plans.

The 1998 grantees demonstrated greater ability to specify their desegregation objectives. A preliminary examination of the 1998 MSAP applications showed that desegregation objectives consistent with the MSAP statute could be determined for about 85 percent of schools targeted for impact. The evaluation commissioned by the Department of Education to examine the impact of federally supported

magnet schools on school desegregation found that FY 1991-93 MSAP grantees had identifiable desegregation goals in three-fifths of schools targeted for impact.[29]

The national evaluation of the MSAP that began in 1998 has provided preliminary data about the desegregation objectives of the 1998 grantees. The 57 grantee districts operate a total of 293 programs. Of those programs, 11 percent have a goal of preventing minority group isolation in a magnet school; 13 percent have a goal of eliminating minority group isolation in a magnet school; 57 percent have a goal of reducing minority group isolation in a magnet school; and 3 percent have a goal of preventing, reducing, or eliminating minority group isolation in a feeder school.[30] The goals of 16 percent of the programs have not yet been classified (because of unclear objectives in applications); however, most of those goals are expected to be classified by the end of the evaluation.[31]

Progress in achieving desegregation objectives is still unknown for the 1998 grantees, but the study of the 1991-93 grantees found that two-thirds of the schools targeted for impact made some progress in meeting their desegregation objectives. However, about half of the schools with desegregation targets were able to meet their desegregation objectives within the two-year period of the MSAP grant. Schools were generally less successful in meeting specific enrollment targets called for in their desegregation plans than they were in moving in the general direction described by their desegregation objective. MSAP funds typically were used to foster desegregation in schools that had high proportions of minority students and that were located in districts experiencing increases in minority enrollments. There were modest improvements in reducing, eliminating, or preventing minority-group isolation among targeted schools in the grantee districts, but the number of targeted schools that were minority-isolated increased slightly during the two-year period covered by the MSAP grants. Success in meeting desegregation objectives was strongly associated with the demographic conditions surrounding the targeted school, with success much less likely in districts with high and rising percentages of minority students.[32]

It is worthwhile to describe the changing context of school district demographics to better understand these findings from the study of 1991-93 grantees. When city school systems first established magnet schools as a way to integrate schools voluntarily, their populations consisted largely of minorities and whites who lived in segregated sections of each city. With white migration to the suburbs and an influx of minority immigrants in the cities, city populations have become increasingly nonwhite and diverse. As a result, there are fewer white children available to help integrate the magnet schools. These trends have considerable influence on the extent to which the MSAP, as currently conceived, can help desegregate schools.

Race as a Selection Factor: **New to the MSAP in this grant cycle is a requirement that grantees with voluntary desegregation plans use race in only a narrowly tailored way when selecting students for admission to MSAP-funded magnet schools.** In many instances, in order to carry out the MSAP purpose of reducing, eliminating, or preventing minority-group isolation, districts may consider taking race into account in assigning students to magnet schools. In order to meet the requirements of Title VI of the Civil Rights Act of 1964 and the Fourteenth Amendment to the United States Constitution, applicants submitting voluntary plans that involve the use of race in decision-making must ensure that the use of race satisfies strict scrutiny.[33] That is, the use of race must be narrowly tailored to achieve the important goal of reducing, eliminating, or preventing minority group isolation.

Among the considerations that affect a determination of whether the use of race in a voluntary plan is narrowly tailored are (1) the extent to which the district tried or seriously considered race-neutral alternatives and determined that such measures have not been or would not be similarly effective, before resorting to race-conscious action; (2) the scope and flexibility of the use of race, including whether it is subject to a waiver; (3) the manner in which race is used, that is, whether race determines eligibility for a

program or whether race is just one factor in the decision-making process; (4) the duration of the use of race and whether it is subject to periodic review; and (5) the degree and type of burden imposed on students of other races.[34]

Impact on Student Achievement: A comprehensive evaluation of the Magnet Schools Assistance Program that will obtain information on the academic achievement of magnet school students is in progress. There is, however, some evidence about the effectiveness of magnet programs in general, not specifically those funded by the MSAP.

Program Indicator: Students will show achievement gains in core subjects, as well as in applied learning skills, that meet or exceed the gains for students in the district as a whole.

A national-scale research study of magnet school student achievement shows that tenth-grade students in urban magnet schools performed better in reading, science, and social studies than students in public comprehensive high schools or private high schools, after accounting for a host of other factors that explain achievement differences. These results are from a 1996 study that analyzed data from the National Educational Longitudinal Survey in 1988 and 1990. The gains of the students in magnet schools were both statistically and educationally significant.[35] In addition, the 1997 report from the Citizens' Commission on Civil Rights notes that in 1993-94, low-income students attending magnet schools in the three cities in their study outperformed other low-income students in nonmagnet schools.[36]

Options for Strengthening the Programs

Public Charter Schools Program

As stated earlier, the PCSP was reauthorized in 1998. This reauthorization addressed several barriers to establishing charter schools, including flexibility and accountability. The findings presented in this chapter, however, extend beyond the issues of flexibility and accountability of charter schools. Since the statute is newly reauthorized, the Department of Education is analyzing other potential programmatic improvements. The recommendations presented here can be made *administratively* rather than legislatively.

- **Increase federal PCSP support for states that target disadvantaged students.** The federal charter school statute explicitly mentions that charter schools can improve the opportunities available to disadvantaged students. Although data from the national study of charter schools suggest that, overall, charter schools are serving similar proportions of underserved students as public schools, these findings vary by state, as well as within states. When determining the grant awards, the peer reviewers for the PCSP give 20 percent of available points to SEA applicants that target educationally disadvantaged students; an SEA that fails to address the needs of educationally disadvantaged students would be unlikely to receive any grant at all. An extension of the current federal action, then, may be in increasing PCSP funds to those states that target and serve educationally disadvantaged students.

- **Ensure that charter schools receive equitable and sufficient support.** Charter schools are confounded by a lack of comparable access to funds that support public schools. The 1998 reauthorization will affect the equitable distribution of federal funds, but there is a dearth of research on charter schools' access to state and local funds. Although research is necessary to inform this issue of equitable funding, a logical federal role may be to direct PCSP funds to those states that ensure that charter schools receive funding that is comparable with that for other public schools in the district or state.

Magnet Schools Assistance Program

Although information on the effectiveness of the MSAP is limited, the information presented in this chapter suggests some options for federal policymakers to consider:

- **Clarify the kind of diversity the MSAP should address.** Currently, one of the legislative purposes of the MSAP is to reduce, prevent, or eliminate minority group isolation. This statement of purpose is based on objectives designed when the nation was dismantling a dual school system (i.e., black/white). Today, school districts are far more diverse, and the MSAP legislation does not distinguish between and among minority groups, placing Asian, Hispanic, African American, and other students into the general category of minority, and promotes only the integration of such minority students with white (nonminority) students. As the nation looks to its future, clarification is needed about whether and how the purpose of the MSAP could be expanded to include reducing the isolation of students from different ethnic and economic backgrounds in order to adapt to the context within which magnet schools are operating. It may be useful to look toward places like San Francisco, a city considering an array of socioeconomic factors to use in school assignments, including parental education, income, and neighborhood.[37]

- **Improve the targeting of MSAP funds.** Although the MSAP does provide substantial technical assistance to applicants and grantees, efforts should be strengthened to assist areas with significant minority group isolation in successfully competing for funding. An extension of the current federal role may be to consider a project's level or degree of minority-group isolation as a selection criterion for MSAP grants.

- **Clarify the intent of the MSAP statute in regard to whether the MSAP should affect districtwide desegregation, in addition to affecting desegregation in individual magnet schools.** Although the findings of the MSAP statute suggest that districts are to benefit from the MSAP, the purpose seems to state that the impact is intended to be at the school level. It is important to note that for approximately 15 years, the Department has interpreted the legislation to mean that the MSAP should affect only individual magnet or target schools—except in instances when all schools in the district are targeted magnets or feeders.

- **Clarify the role of innovative programs**. The role of the innovative program authority is not clearly defined. Upcoming reauthorizations should address this part of the MSAP statute. Policymakers may wish to consider ending this authority or using it as a research and development set-aside in which the new approaches to promoting diversity discussed previously can be designed, evaluated, and emulated when appropriate.

- **Implement an information management system that could provide data regarding the overall progress of the MSAP grantees.** The MSAP staff do monitor the projects that receive grants by obtaining yearly progress reports and by communicating directly with project directors. However, the program does not have an information management system that can aggregate the progress reports or provide data on the program as a whole. One of the objectives of the Department's National Evaluation of the MSAP is to begin to develop a database that will contain information about each project in the 1998-2001 grant cycle. This database will be updated during the four years of the study. It is possible that once the evaluation is completed, the structure of this database could then be used by the Magnet School Assistance Program office to track projects.

Concluding Thoughts

The federal efforts to promote public school choice in 1994 represented a new approach to this aspect of school reform. While much has been accomplished since then, work remains to be done to better promote and support public schools of choice that equitably serve all children (particularly underserved students), improve academic performance, and provide valuable lessons that can be used to improve public education generally.

[1] Elementary and Secondary Education Act, Section 1115 (a).
[2] Elementary and Secondary Education Act, Section 1116 (d)(6)(B)(VII).
[3] Elementary and Secondary Education Act, Section 10301.
[4] Elementary and Secondary Education Act, Section 10301.
[5] Elementary and Secondary Education Act, Section 10304.
[6] Bruce Fuller and Richard F. Elmore, *Who Chooses? Who Loses? Culture, Institutions, and the Unequal Effects of School Choice* (New York and London: Teachers College Press, 1996).
[7] Westat, unpublished tabulations from the *Interim Report to Congress on the Public Charter Schools Program* (Draft, Sept. 11, 1998).
[8] Westat, unpublished tabulations from the *Interim Report to Congress on the Public Charter Schools Program* (Draft, April 1, 1998).
[9] RPP International, *A National Study of Charter Schools: Executive Summary* (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, 1998) 14-15.
[10] RPP International, *The State of Charter Schools: Third-Year Report* (Washington, DC: U.S. Department of Education, 1999a).
[11] RPP International, 1999a.
[12] RPP International, 1999a.
[13] RPP International, 1999a.
[14] Westat, unpublished tabulations from the *Interim Report to Congress on the Public Charter Schools Program* (Draft, April 1, 1999).
[15] RPP International, *A Comparison of Charter School Legislation: Thirty-three States and the District of Columbia Incorporating Legislative Changes Through August, 1998* (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, 1999b).
[16] RPP International, 1999a.
[17] Amy Stuart Wells, *Beyond the Rhetoric of Charter School Reform: A Study of Ten California School Districts*, 1998 at http://www.gseis.ucla.edu/docs/charter.pdf.
[18] Clayton Foundation, *1997 Colorado Charter Schools Evaluation Study: The Characteristics, Status and Student Achievement Data of Colorado Charter Schools,* 1997 at ftp://ftp.cde.state.co.us/pub/Documents/PDF/chsurv97.pdf.
[19] Jo Ann Izu, Lisa Carlos, Kyo Yamashiro, Lawrence Picus, Naida Tushnet, and Priscilla Wohlstetter, *The Findings and Implications of Increased Flexibility and Accountability: An Evaluation of Charter Schools in Los Angeles Unified School District,* 1998 at http://www.wested.org/policy/pubs/full_text/xs_pfd2.pdf.
[20] RPP International, 1999a.
[21] Clayton Foundation, *1997 Colorado Charter Schools Evaluation Study*, 1997.
[22] Jo Ann Izu et al., 1998.
[23] Jo Ann Izu et al., 1998.
[24] Clayton Foundation, *1997 Colorado Charter Schools Evaluation Study*, 1997.
[25] Eric Rofes, *A Study of Eight States and the District of Columbia: How Are School Districts Responding to Charter Laws and Charter Schools?* (Palo Alto: Policy Analysis for California Education, 1998).
[26] U.S. Department of Education, unpublished tabulations, Budget Service.
[27] U.S. Department of Education, unpublished tabulations, Magnet Schools Assistance Program.
[28] Corrine M. Yu and William L. Taylor, *Difficult Choices: Do Magnet Schools Serve Children in Need?* (Washington, DC: Citizens' Commission on Civil Rights, 1997) 3.
[29] Lauri Steele and Marian Eaton, *Reducing, Eliminating, and Preventing Minority Isolation in American Schools: The Impact of the Magnet Schools Assistance Program* (Washington, DC: U.S. Department of Education, Office of the Under Secretary, 1996) iv.

[30] "Magnet schools" are those schools in which a special curriculum or theme is established to attract students from other schools in the district. "Feeder schools" are the schools from which students entering the magnet school are drawn (i.e., the school that the students would have attended if they had not been attending the magnet school).

[31] U.S. Department of Education, unpublished tabulations, Planning and Evaluation Service.

[32] Steele and Eaton, 1996, iii-vi.

[33] "Magnet Schools Assistance Program: Notice Inviting Applications for New Awards for Fiscal Year 1998," *Federal Register* Vol. 63 no. 31 (February 17, 1998).

[34] "Magnet Schools Assistance Program: Notice Inviting Applications for New Awards for Fiscal Year 1998," *Federal Register* Vol. 63 no. 31 (February 17, 1998).

[35] Adam Gamoran, "Student Achievement in Public Magnet, Public Comprehensive, and Private City High Schools," *Educational Evaluation and Policy Analysis* 18 (1996): 1-18.

[36] Yu and Taylor, 1997, 19-21.

[37] Richard Kahlenberg, "Economic School Desegregation, San Francisco's Groundbreaking Plan," *Education Week* (March 31, 1999): 31.

9. IS THE SCHOOL-TO-WORK OPPORTUNITIES ACT HELPING GRADUATES LEAVE SCHOOL READY TO BEGIN CAREERS OR TO CONTINUE THEIR STUDIES?

Key Findings

- Increasing collaboration between employers and schools has been a particularly successful aspect of STWOA implementation. In 1996-97, half of all high schools involved in school-to-work partnerships reported that employers had provided training or internship opportunities for school staff. STWOA partnerships play an important role in promoting and coordinating program activities, but as federal funding ends, their future role is uncertain.

- States support the local implementation of STWOA, but the visibility of high-level collaboration among key state agencies has declined.

- STWOA partnerships have tended to favor the provision of varied activities to larger numbers of students over a more intensive mix of activities for fewer students.

- STWOA has fostered the growth of career development activities (e.g., job shadowing, worksite visits, career counseling) designed to help students explore career interests, but it has proved difficult to develop a coherent progression among these activities.

- Implementation has tended to move fastest on less-intensive and less-integrated innovations (such as job shadowing and career guidance activities), while improvements in curriculum and in coordination between school- and work-based learning have been limited and uneven.

- Curriculum changes envisioned in STWOA legislation have been modest; structured career programs combining academic and vocational instruction around a career or industry focus are offered in about a quarter of STWOA partnership schools, but usually for relatively few students. Integration of academic and vocational instruction is spreading slowly, but support for these changes usually comes from a small group of teachers. So far, STWOA has placed less emphasis on linking secondary and postsecondary education than it has on other STWOA elements.

- Students give high marks to their STWOA activities, particularly those that afford them workplace experiences and academic classes that are related to their career goals. Female and minority students, in particular, rate their school-to-work experiences highly; individualized experiences such as job shadowing and school-arranged internships earn the highest ratings.

- Evaluation findings suggest that more students in school-to-work systems see a connection between their academic coursework and career interests, with the largest increases occurring among black students and the non-college-bound. Whether this translates into improved academic performance is the focus of an evaluation now in progress.

- State and district efforts to raise academic standards are occurring largely independent of STWOA.

What Did the 1994 Legislation Seek to Accomplish?

Researchers, educators, employers, and policymakers have sought ways to make education relevant to students' future careers, to adapt instruction to the ways in which students learn best, and to ensure that students learn the habits and skills that employers value. By adding meaningful context from the world of work, educators hope to engage the interest and intellect of students and to help them learn more effectively. Whether learning by doing is accomplished at school or in a work setting, school-to-work (STWOA) systems seek to improve career prospects and academic achievement in high school—and thereby boost enrollment in postsecondary education and increase the likelihood of obtaining high-skill, high-wage employment.

The sixth National Education Goal states that by the year 2000, every adult American "will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship." To help achieve this and other National Education Goals, and to help ensure that all high school graduates are better prepared to pursue both further education and high-skill employment, Congress in 1994 passed the School-to-Work Opportunities Act (STWOA).

Introduction to the Programs and the 1994 Legislative Changes

Many federal laws play an important role in helping America's youth leave high school for either postsecondary learning or high-skill employment, including the Elementary and Secondary Education Act, the Carl Perkins Vocational Education Act, and the Higher Education Act. However, this chapter focuses solely on the legislative vehicle enacted in 1994 to support these goals—the School-to-Work Opportunities Act (PL 103-239). Because this legislation expires in 2001, this chapter includes a discussion of how similar programs, such as vocational education, can build on and sustain some of the promising efforts supported through school-to-work.

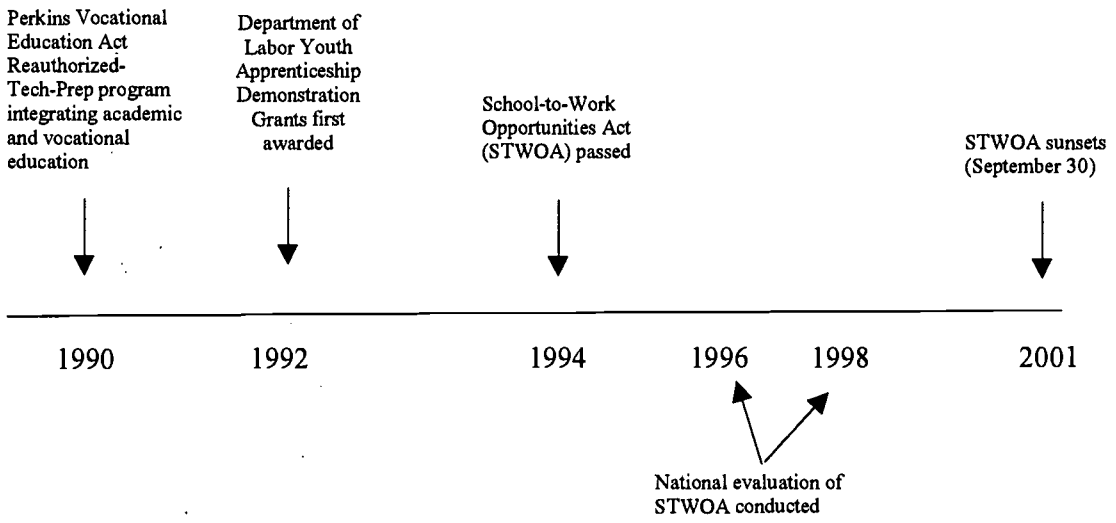
Congress targeted both economic competitiveness and educational equity when it passed STWOA. The economic fear was that too many of the nation's youth, particularly those who are not enrolled in college preparation programs, leave high school inadequately prepared to succeed in tomorrow's more technologically sophisticated and higher-skill jobs. In addition, Congress wished to address growing income inequities attributable to educational attainment. In the 1980s, the gap between the earnings of college graduates and individuals with a high school education or less widened to its greatest level since the 1930s.[1] Real wages fell precipitously for dropouts and for those who possessed only a high school diploma.[2] In this environment, Congress became increasingly concerned about the economic prospects of the 14 percent of young Americans who do not earn a high school diploma or GED and the more than 70 percent who never complete a four-year baccalaureate.[3]

STWOA provides "venture capital" to states and localities to underwrite the initial costs of planning and establishing statewide systems for helping young people make more effective transitions between high school and careers or further education. Federal investments are intended to create new programs and to support the expansion and improvement of ongoing efforts.

The Act encourages localities to develop educational programs that combine school-based and work-based learning, integrate vocational and academic education, and strengthen the connections between high school and postsecondary programs. It was not intended to operate as a "stand-alone" program, but rather, to leverage support from ongoing state, local, and federal sources. Because it provides seed funding,

STWOA is authorized only through September 2001.[4] Exhibit 9.1 summarizes this brief history of school-to-work initiatives.

EXHIBIT 9.1
SCHOOL-TO-WORK OPPORTUNITIES ACT TIMELINE



Source: National School-to-Work Office, U.S. Department of Education.

To promote local experimentation, Congress gave states and localities significant discretion to design and implement school-to-work systems. These systems are to meet needs determined by formal partnerships of employers, educators, parents, labor unions, and others. The law is minimally prescriptive. The intent of Congress was to promote local innovation through incentives and technical assistance, not through compliance requirements. However, the law does specify that local efforts should provide access for any interested student to a program of study that includes the three components summarized below:[5]

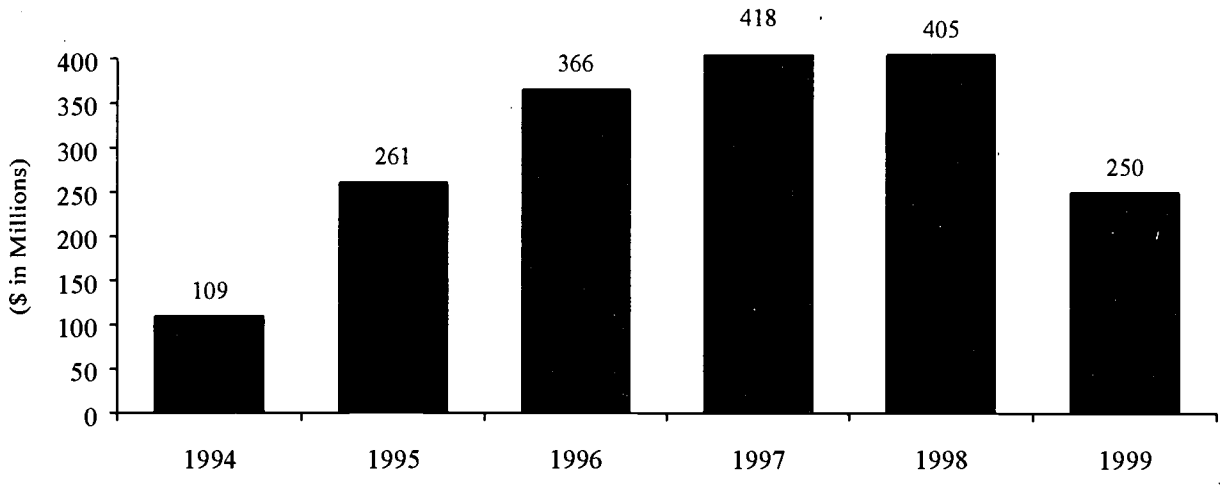
- **School-based learning.** The law encourages partnerships to create opportunities for students to explore careers by no later than the seventh grade. By the end of the eleventh grade, students should select a coherent sequence of courses (called a "career major" in the Act) that prepares them for either postsecondary education or employment in a broad industry or occupational area. These courses of study should meet high academic standards as set by the state, and should offer students a chance to earn portable, industry-recognized skill certificates.

- **Work-based learning.** The law encourages local initiatives to provide participating students with adult mentoring and a range of work experiences, coordinated with their school curriculum and program of study. The work experience should provide progressively more advanced skill instruction and encompass all aspects of the student's chosen industry or career area.

- **Connecting activities.** The law encourages partnerships to help coordinate the interactions among schools, employers, and young people by recruiting employers, matching students with work experiences, and helping employers work with students.

Between 1994 and 1998, Congress appropriated nearly $1.5 billion for grants to states and local partnerships.[6] Although most grants did not target recipients on the basis of need, about $70 million was allocated for grants to high-poverty urban and rural communities. Congress intended for annual appropriations to peak midway through the Act's life and then taper off until the federal investment ends in 2001. The largest appropriation was $400 million in both FY 1997 and FY 1998. For FY 1999, Congress has authorized $250 million. The following chart summarizes annual spending under this Act in constant dollars.

EXHIBIT 9.2
ANNUAL STWOA APPROPRIATIONS, 1994-1999
(IN 1999 DOLLARS)



Source: National School-to-Work Office, U. S. Department of Education.

The lion's share of federal resources was distributed to states in one-time four- to five-year grants for redistribution to local school-to-work partnerships. The law requires that 70 percent of the state's grant be distributed to local partnerships in the first year, rising to 90 percent by the grant's third year and thereafter.[7] States can use, and have used, the remaining funds for interagency coordination, planning, statewide marketing and promotion, professional development, curriculum development, and other system-building activities. As of October 1998, all 50 states, Washington, D.C., and Puerto Rico had received at least their first-year grant funds. First-year awards ranged from $1.3 million to about $22 million.[8]

Local partnerships have significant leeway in the use of the funds, provided they demonstrate broad support from local employers, schools, and other partners. STWOA investments at the local level fund activities that include coordination of students' work experiences by school staff, professional development

opportunities for teachers (including teacher internships in modern workplaces), curriculum development, local labor market analyses, career exposure events and activities, and supplemental support services for students who need them.

A national evaluation estimated STWOA spending per district at $25,092 in 1997-98, or only about $4.32 per elementary and secondary student per year.[9] State, local, and private resources typically have augmented federal funds.

The STWOA funds are allocated among three main activities: grants to states, local grants, and national activities. Exhibit 9.3 summarizes these program characteristics:

EXHIBIT 9.3
SCHOOL-TO-WORK OPPORTUNITIES ACT AT A GLANCE

Program Name	1999 Appropriation	Purpose	Funding and Targeting	Participation	School-to-Work Related Services
The School-to-Work Opportunities Act: State Implementation Grants	$203 million	To provide seed money to states to help create STWOA systems through state initiatives and local partnerships of schools, employers, and other groups and individuals	Competitive one-time, 4- to 5-year grants to states submitting proposals demonstrating broad-based partnerships and priority activities STWOA grants are meant to benefit all students and dropouts.	All states as well as D.C. and Puerto Rico, with most funds redistributed to localities 1,106 local sub-grants	Broad range of services include curriculum development, professional development, data collection, public and employer engagement, supports for students, employer incentives
The School-to-Work Opportunities Act: Other Grants	$28.25 million	To promote STWOA initiatives to specific areas (see targeting provisions)	$25 million targeted to urban and rural high-poverty communities $3 million targeted to Indian schools In previous years, grants were made to localities in states that had not yet received implementation grants.	To date: 109 localities with STWOA partnerships in high-poverty areas 18 Bureau of Indian Affairs–funded Indian schools	Same as for State Implementation Grants
The School-to-Work Opportunities Act: National Activities	$18.75 million	To learn from and strengthen state and local programs and to promote cross-state and multistate innovations	Varied competitive and noncompetitive grants and contracts made to research and technical assistance organizations, industry associations, and local partnerships	Over 60 awards in the following areas: standards, employer/other stakeholder involvement, technical assistance, evaluation and research, communications and outreach	Evaluation, research, technical assistance, multi-state and cross-state innovations, out-of-school youth initiatives

Source: National School-to-Work Office, U.S. Department of Education.

What Do We Know about Good School-to-Work Programming?

The School-to-Work Opportunities Act is designed to help local communities provide young people, particularly high school students, with opportunities to combine learning in school with workplace experiences that improve their preparation for careers and further education. The Act stresses the importance of real-world "learning in context" in school and outside it, as well as stronger, long-term partnerships among local employers, schools, and young people. It promotes collaboration between schools and employers on curriculum, teaching and learning methods, career exploration activities, and work experiences to provide students with good employability skills, a career direction, a strong academic foundation, and a motivation to learn.[10]

Based on its review of research and practice, the Committee for Economic Development has characterized good practice in school-to-work programming as follows:[11]

- **A rigorous academic program effectively delivered to all students;**
- **An end to distinctions between the academic preparation that is needed for college and the preparation needed for employment;**
- **Work as a learning experience for young people;**
- **Classroom curricula and methods related to students' work experience; and**
- **Connections among high schools, employers, and postsecondary institutions to improve young people's academic and career options.**

How Well Is the Program Working?

The national implementation evaluation, covering the 1996-98 period, is based on student data from only the second year of implementation and partnership data from the third. Some more-established individual programs and local efforts, launched prior to passage of the STWOA, are reporting promising outcomes. Others have had little impact on improving teaching and learning for young people. This report cites results in the following areas: partnership formation, employer engagement, population served, student satisfaction, college attendance, and academic performance.

Quality of Implementation: The number of partnerships in operation has expanded annually since passage of the Act. Most localities have succeeded in creating broadly representative collaborations. These partnerships tend to be led by educators; representation of organized labor, four-year colleges, and students is uneven. The creation of these partnerships has been a central activity in every state. By fall 1997, in the 37 states that had received implementation funding, more than 90 percent of high school-age students lived in districts covered by local STWOA partnerships.[12]

Increasing collaboration between employers and schools has been a particularly successful aspect of STWOA implementation. Employer involvement has steadily increased since the Act was passed. According to grantee reports, the number of employers providing work-based learning experiences for high school students doubled between 1995 and

National Indicator: By fall 2000, 350,000 employers participating in STW systems will offer work-based learning opportunities.

1997, increasing from approximately 60,000 employers to 137,000 in that period. More than 48 percent of high schools involved in STWOA implementation in 1996-97 reported that employers provided some training or internships for school staff, a 17 percent increase from the previous year. Other forms of business and industry support also have expanded, including participation in curriculum development, promotion and marketing of STWOA efforts, guest speaking at schools, and provision of material resources.[13] About one-quarter of American firms report formal participation in a school-to-work partnership and one in three report providing work-based learning opportunities.[14]

STWOA partnerships have tended to favor the provision of varied activities to larger numbers of students over a more intensive mix of activities for fewer students. The Act has been interpreted in two distinct ways at the local level.[15] The "depth" interpretation favors STWOA programs that are tightly structured combinations of career development activities, career-related courses, and workplace experiences. These programs tend to be intensive and to serve small numbers of students. However, in a few districts (including Boston, Philadelphia, and Oakland), this approach is being used to drive the reform of entire high schools. The "breadth" interpretation, which appears to dominate local implementation, emphasizes Congress's intention to make a range of STWOA activities available to many students and to let localities design programs that fit their needs.

Early data on STWOA implementation reflect the emphasis on breadth. Less-intensive STWOA activities—job shadowing, career interest inventories, and other short-term activities that require little change in curricula or school schedules—have been implemented most broadly. More-intensive internships and curricular changes have been slow to develop. Similarly, although programs that provide an identifiable sequence of academic and technical courses linked to work experiences have been implemented in about a quarter of participating schools, they serve small numbers of students.[16] Many more STWOA programs emphasize guidance for students in identifying broad career goals and choosing core courses and electives relevant to those goals.

Implementation has tended to move fastest on less-intensive and less-integrated innovations (such as job shadowing and career guidance activities), while improvements in curriculum and in coordination between school- and work-based learning have been limited and uneven. Congress enacted STWOA to promote changes in the major systems that help young people prepare for their future. At the same time, Congress expressly limited federal funding to five years of seed funding and provided modest funding for the initiative. The complexity of high school reform is daunting—and STWOA asks schools and employers to change their practices.

The Act stresses that opportunities for participation in programs linking school and work should be available to any student, from the low-achieving to the "academically talented."[17] Congress chose not to target these resources to specific groups of young people.

Local implementation reflects this emphasis on universality, according to early research on the characteristics of participants in STWOA activities.[18] Participation in comprehensive career development activities and in workplace activities linked to school appears to be as common among high school seniors enrolled in college-preparatory curricula as among those who are not. That is, STWOA activities do not appear to be concentrated among the "non-college-bound," as many feared.

At the same time, however, local implementation seems to be particularly attractive to and beneficial for students less likely to continue their education past high school. More intensive programs that combine career-related academic courses, work experiences linked to school, and comprehensive career development have tended to attract students from the general and vocational tracks who do not plan extensive postsecondary education.[19] In addition, the rate of participation in academic classes that students perceive

as focused on their career interests has increased most dramatically among African American students, largely because of the expansion of these activities on a schoolwide basis in urban and suburban areas where black students are concentrated.[20]

STWOA enables state grantees to address unique technical assistance needs. Most technical assistance efforts assume that recipients have identical problems and needs. To customize technical assistance for each STWOA grantee, states have received a "line of credit" which they use to purchase assistance from an identified bank of nearly 200 qualified technical assistance providers.

Performance Accountability: STWOA gives states and communities broad discretion to determine the activities supported, and is similar to other legislation in calling for a system of performance measures to assess progress. Considerable effort has been expended on developing and implementing such a system. STWOA grantees submit annual performance reports containing information on student and school participation in various STWOA activities, employer involvement, rates of high school graduation and transition to college, and additional sources of funding for STWOA. **Because STWOA involves a "one-time" only grant rather than ongoing federal support, the performance accountability measurement systems are not fully developed.**

Outcomes: For students, increasing employer engagement can provide resources, perspective, and real-world experience and connections that schools have difficulty offering. The national evaluation of STWOA found that **worksite experiences students get through school, particularly in paid positions, were of higher quality than jobs they found on their own.** The school-provided jobs offered access to more diverse workplaces, more job time spent in training and more access to career information, more feedback on performance, and closer links between school and the workplace.[21]

Students give high marks to their STWOA activities, particularly those that offer workplace experiences and academic classes related to their career goals.[22] Female and minority students are more likely than male students and white students to attach a high value to their STWOA experiences.[23] In general, students are most positive about activities that involve individualized experiences, such as job shadowing and school-arranged internships. This emphasis on opportunities to relate to adults outside the classroom is consistent with findings from Boston that STWOA students consider their worksite supervisors and school-to-work coordinators to be a greater influence on their postsecondary plans than their teachers.[24]

National Indicator: By fall 2000, the percentage of high school graduates, including vocational concentrators, who successfully make the transition into employment, further education, or the military will increase to 90 percent.

Although formal links between high schools and post-secondary institutions have not expanded significantly as a result of STWOA, well-implemented STWOA programs have the potential to increase college enrollment. Project ProTech in Boston has found that its graduates go on to college at rates higher than those of their peers. Moreover, among African American ProTech graduates, four out of five enrolled in college the year after graduating from high school, compared with only half of the black students in the comparison group.[25] Baseline data from an independent evaluation found that 18 months after graduating from high schools that participate in school-to-work systems, 60 percent of 1996 graduates were enrolled in two-year or four-year

National Indicator: By fall 2000, the percentage of high school graduates from STW systems completing three years of math and three years of science will increase by 10 percent.

colleges, 7 percent were in other postsecondary training programs or the military, and 20 percent were employed full time.

Participation in well-designed STWOA programs appears to increase students' academic focus and motivation. Baseline data from an independent evaluation found that in 1996, 83 percent of high school seniors graduating from school-to-work systems had completed three years of math, 73 percent had completed three years of science, and 69 percent had completed three years of math and science. Studies have found that students in high-quality STWOA programs enroll in more college prep courses than their peers in the general curriculum, particularly in advanced math and science courses.[26] An evaluation of STWOA efforts in New York State concluded that, compared with their classmates, STWOA students had better school attendance, spent more time doing their homework, cut fewer classes, and were more challenged by their schoolwork.[27]

In many communities, however, the emphasis in STWOA implementation on workplace experience without links to or changes in classroom teaching and learning has limited the likelihood of significant academic gains. To date, there has been insufficient rigorous evidence to show that STWOA activities contribute to improved standardized test scores and other traditional measures of academic achievement.

Clarity of Program Focus: Although significant progress in implementation has been made since the Act's passage, and positive academic and career outcomes for students are evident in many promising programs, the Act as implemented in many communities has not lived up to the promise that Congress foresaw when it passed the law in 1994.

Politicization has made it difficult to dispassionately assess the initiative's strengths and weaknesses, as well as its possibilities and liabilities. The STWOA was passed with broad, bipartisan support. By 1997, however, this support had unraveled. The initiative, which was seen by many as the "President's program," became a lightning rod for partisan political battling over the direction of federal education policy.

Many states and localities found it difficult to define and focus their STWOA initiatives and to specify how participants were to benefit from STWOA activities. When debate on this legislation began, policymakers' primary concern was the poor prospects of the non-college-bound. The Act's final language was far more inclusive, encouraging states and localities to create STWOA systems that would serve all students, including those with disabilities, as well as gifted and talented and out-of-school youth. This had the advantage of eliminating the often false distinctions between college-bound and non-college-bound young people. At the same time, though, it caused significant confusion among program planners and implementers.

Lack of integration between STWOA and standards-based reform has fueled fears by some segments of the public and policymakers that STWOA is a diversion from, rather than a potential aid to, efforts to improve academic learning. In many communities, STWOA initiatives have not been well integrated into mainstream education reform efforts. STWOA is frequently seen as another "add-on" program, rather than as a component of a comprehensive high school reform agenda. In many states and communities, efforts to raise academic standards and STWOA initiatives have proceeded in parallel, but have not benefited each other.

Options for Strengthening the Program

The STWOA legislation sunsets in 2001, but there are other promising program options that should be considered. The recently reauthorized Perkins Vocational Education and Applied Technology Education Act can support efforts to deliver rigorous, high-level academic content by appealing to students who have not typically done well in a traditional science and math curriculum. Although in the past vocational education has not generally focused on improving students' academic performance, the most recent Act clearly indicates that Congress expects students in vocational programs to meet the same high academic standards that states increasingly require of all students.

Two promising models in vocational education are High Schools That Work (HSTW), sponsored by the Southern Regional Education Board, and career academies. HSTW focuses on improving the academic achievement of vocational education students by requiring students to take an upgraded college-prep academic curriculum coupled with in-depth career/technical studies. Preliminary evidence suggests that National Assessment of Educational Progress (NAEP) test scores of students completing such a curriculum increased substantially between 1996 and 1998, and that such students are able to pass challenging employer exams. There are currently about 700 high schools in the HSTW network. The National Assessment of Vocational Education being conducted by the Department will examine more carefully whether such changes in school curriculum improve student achievement, and what support structures are necessary to implement these changes.

Career academies represent a different model of school reform. Career academy programs are typically organized as schools-within-schools in an effort to create a smaller, more supportive learning environment. They offer a college-prep curriculum organized around a career theme (e.g., technology, health, finance, and travel). Their primary objective is college preparation, not job training. They also establish partnerships with local employers in an effort to increase students' awareness of career options and to provide students with applied learning opportunities in a work setting.

The Department of Education is currently supporting an evaluation of career academy programs. Data on whether these programs improve student achievement, postsecondary enrollment, and persistence will be available when results from the National Assessment of Vocational Education are reported to Congress.

While states are still receiving and distributing federal STWOA funds, there are opportunities to learn from early implementation and to accelerate innovative practice. However, as states and localities reach the end of their federal funding, they will have to replace federal resources if they are to continue some of the more complex and costly activities funded under the Act, such as the following:

- Integration of contextual learning and experiences outside the classroom into curricula that meet high academic standards;
- Strengthening of local institutions that can build and sustain long-term relationships among schools, colleges, employers, and other community resources; and
- Support and leadership for these efforts in the business community.

Without continued investment by states and localities, it is likely that efforts to develop intensive work placements and to coordinate school- and work-based learning experiences will be weakened. It will not be easy to overcome the obstacles that now confront efforts to expand and deepen school-to-work activity. Federal funding is of limited duration. Reauthorization was never intended and is unlikely, despite the amount of activity the Act has spawned in local communities. Moreover, restrictive provisions in the

vocational education and workforce investment acts may limit the ability of localities to combine STWOA and other federal funds for program improvement, further isolating reforms begun through this funding.

How should federal policymakers proceed in promoting programs to improve the transition from high school to careers and further education? If the best innovations begun under STWOA are to continue, the following options should be considered:

- **Promotion of linkages between the academic standards movement and STWOA efforts,** through curricula that combine academic rigor with greater relevance to students' future plans;
- **Support for professional development** that can help teachers become more adept and comfortable with contextual teaching methods that strengthen the links between schools and outside resources;
- **Continued support for the community-level partnerships and institutions** that connect young people with experiences outside the classroom, so that employers, parents, and students feel that the next generation is being adequately exposed to and prepared for future careers;
- **Targeted support for promising program models,** combined with a longitudinal evaluation of the effectiveness of different models in improving education and employment outcomes; and
- **Incorporation of these approaches into a focused effort** to improve the performance of U.S. high schools, particularly struggling comprehensive high schools in our urban areas.

The implementation of the School-to-Work Opportunities Act reinforces an important lesson about federal investments in education reform: These initiatives must be characterized by continuity of support and by commitment to certain basic, well-defined objectives. Together, the short time horizon for the Act's investments and the breadth of activities promoted in the legislation resulted in what many predicted in 1994: significant creative activity at the local level, support for some exceptional program designs, wheel-spinning in other communities, and insufficient time for many reforms to sink deep enough roots to have noticeable impact or to survive the imminent end of federal funding.

As the School-to-Work Opportunities Act moves toward its sunset, the challenge that the Act addresses—the need to prepare all young people to be able to succeed in postsecondary learning or in employment—remains. If anything, that challenge has become more compelling. Our economy is changing rapidly. New skills are required to succeed in a fast-paced, networked, and constantly changing economy—skills that include teamwork, communications, entrepreneurship, and problem-solving.

The emerging economy requires changes in teaching and learning in all our schools, particularly in the nation's troubled urban systems, so that our educational system prepares all students to meet the high standards that traditionally only a privileged minority have been expected to meet, and so that all young people leave high school (as the National Education Goals demand) in possession of the knowledge and skills necessary to compete in a global economy and to exercise the rights and responsibilities of citizenship.

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[7] School-to-Work Opportunities Act of 1994, P.L. 103-239, section 215 (b)(7).
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[11] Silverberg, 1996, as cited in Committee for Economic Development, *The Employer's Role in Linking School and Work* (Washington, DC: Committee for Economic Development, 1998) 2.
[12] Hershey et al., 1998, 27-28.
[13] Hershey et al., 1998, 36-38.
[14] Zemsky et al., 1998, 36.
[15] Hershey et al., 1998, xvi.
[16] Hershey et al., 1998, 66.
[17] School-to-Work Opportunities Act of 1994, P.L. 103-239, section 4 (2).
[18] Hershey et al., 1998, ch. 4.
[19] Hershey et al., 1998, 116.
[20] Hershey et al., 1998, 117-120.
[21] Hershey et al., 1998, 86-88.
[22] Hershey et al., 1998, 122-24.
[23] Hershey et al., 1998, 127.
[24] Jobs for the Future and Boston Private Industry Council, *School-to-Career Initiative Demonstrates Significant Impact on Young People* (Boston: Jobs for the Future, 1998) 5.
[25] Jobs for the Future and Boston Private Industry Council, 1998, 2.
[26] Committee for Economic Development, 1998, 24; Westchester Institute for Human Services Research, Inc., "New York State's School-to-Work Initiative Demonstrates Promising Student Results," *STW Reporter* 1.2 (July 1998): 2.
[27] Westchester Institute for Human Services Research, 1998, 3.

10. IS THE DEPARTMENT OF EDUCATION PROVIDING HIGH-QUALITY HELP AND GUIDANCE?

Key Findings

- The six technical assistance programs authorized in 1994 have served a significant number of families, schools, and districts nationwide, and customer surveys suggest that federal technical assistance providers are supplying valuable services to the field.

- However, the Department's various technical assistance programs are characterized by overlapping missions and target audiences, with little evidence of extensive collaboration or coordination across programs. It appears that federal technical assistance programs do not yet operate as a coherent *system* of assistance.

Title I School Support Teams

- States' capacity to provide assistance to all Title I schoolwide programs and schools that need improvement is limited. In fall 1998, almost half of all state Title I directors reported that there were more schools in need of school support team services than Title I could accommodate.

Comprehensive Regional Assistance Centers

- Satisfaction with the quality of center services appears to vary with the content of the assistance. For example, two-thirds of state administrators of federal programs reported that Comprehensive Center assistance was helpful or very helpful in planning and carrying out whole-school reform, while only 36 percent reported that the assistance was helpful in understanding federal legislative provisions.

Eisenhower Regional Mathematics and Science Consortia

- The majority of customers surveyed in the national evaluation of the Eisenhower Consortia give the assistance provided by the Eisenhower Consortia high marks for quality and usefulness.

- In addition, two-thirds of participants in Eisenhower Consortia professional development activities reported that they had incorporated some new behavior into their jobs as a result of what they had learned.

Other Federal Technical Assistance Programs

- The Department has not evaluated the effects of services provided by the Regional Technology in Education Consortia, the Parental Information and Resource Centers, or the School-to-Work Learning Center.

If all children are to achieve high and challenging academic standards, those who are responsible for children's learning—parents, teachers, schools, districts, and state education agencies—need resources. Educators and parents need access to new ideas and tested strategies for helping children to learn. States and districts need help in understanding and implementing the provisions of new federal legislation. Professionals at all levels need guidance and coaching as they implement change and expand their repertoire of skills. The technical assistance services offered by the Department of Education aim to help parents, teachers, and administrators at all levels adopt effective strategies for improving student achievement.

The Department employs a variety of mechanisms to deliver information and technical assistance to states, districts, and schools:

- **The Department's own program offices deliver a range of technical assistance services to the field.** For example, the National School-to-Work (STW) Office sponsors a series of institutes for its grantees, and the Office of Elementary and Secondary Education's Regional Service Teams are organized to provide technical assistance as well as to monitor programs. In addition, the Department's own toll-free telephone number (1-800-USA-LEARN) and call centers help disseminate information to the field.

- **The Educational Resources Information Center (ERIC) Clearinghouse System collects, synthesizes, and disseminates research and information about education.** The ERIC system includes the National Clearinghouse for Bilingual Education and other adjunct clearinghouses on high-priority topics.

- **The Eisenhower National Clearinghouse for Mathematics and Science Education (ENC) maintains a collection of mathematics and science instructional materials, compiles information on mathematics and science programs in the federal government, and disseminates information to improve K-12 mathematics and science teaching and learning.**

- **Title I school support teams and distinguished educators provide information and assistance to schools that are planning or implementing Title I schoolwide programs, and to Title I schools that need improvement.** In addition, many other titles under ESEA require states to use a portion of their administrative funds to provide technical assistance to subgrantees.

- **The Department's regional technical assistance programs help states, districts, schools, parents, and communities in priority areas.** These programs include the Regional Educational Laboratories, the Equity Assistance Centers, the Vocational Education and Adult Education National Programs, the National Institute for Literacy, and the Office of Special Education Program's parent resource centers and other technical assistance centers. **In addition, Congress established or reauthorized six major technical assistance programs under ESEA, Goals 2000, and the School-to-Work Opportunities Act:**

  1. **Comprehensive Regional Assistance Centers** to help ESEA grantees implement ESEA programs and school reform programs that improve teaching and learning for all students;

2. **Eisenhower Regional Mathematics and Science Education Consortia** to disseminate exemplary programs in mathematics and science and to improve teaching and learning in those subject areas;

3. **Regional Technology in Education Consortia (R*TECs)** to promote the effective use of technology for teaching and learning;

4. **Parent Information and Resource Centers (PIRCs)** to promote parental and community involvement in student learning; and

5 & 6 **School-to-Work Learning and Information Center** and the **School-to-Work Technical Assistance Resource Bank** to help school-to-work grantees implement effective STW programs.

In many states, however, federal technical assistance is a relatively small component of a much wider array of resources available to schools and districts. In many states, intermediate units such as California's County Offices of Education provide extensive technical assistance and professional development services to schools and districts. In some cases, state investment in technical assistance through these intermediate units outstrips federal technical assistance resources available to the state. In addition, states, districts, and schools draw on local colleges and universities as well as professional associations for subject-matter expertise. Finally, most state education agencies provide their own technical assistance to schools and districts. Any discussion of federal technical assistance efforts should be understood in light of extensive activity at other levels of the system.

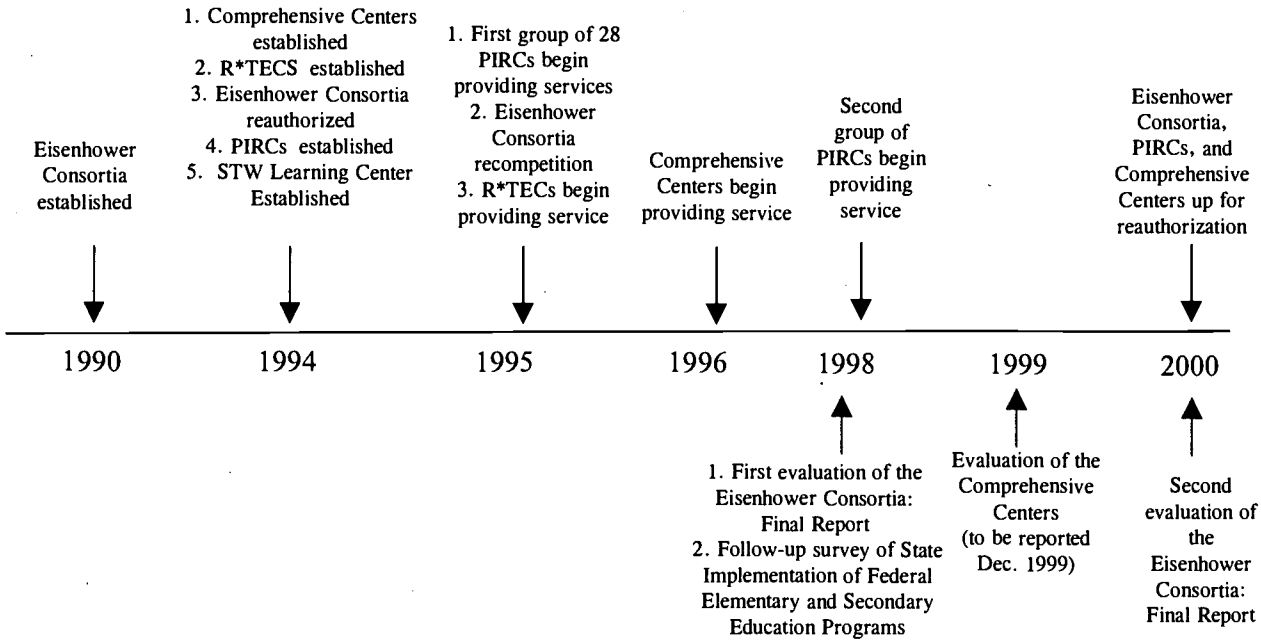
This report describes federal technical assistance programs authorized under ESEA, Goals 2000, and School-to-Work, including the Title I school support teams and the six regional technical assistance programs just listed. The Regional Educational Laboratories, although they are an important source of information and assistance to the field, are not featured in this report.

Introduction to the Programs and the 1994 Legislative Changes

Through the 1994 legislation, Congress sought (1) to provide *comprehensive* assistance to states, districts, schools, and communities to enable all students to meet challenging state content and performance standards and (2) to create a *system* of assistance to support reforms promoted through ESEA and Goals 2000. Congress found that the system of federally funded technical assistance that existed before 1994, when each categorical program was served by its own group of technical assistance centers, had been fragmented and too narrowly focused on the requirements of individual categorical programs. In addition, there was considerable overlap in the topics of technical assistance across programs (e.g., in areas such as student assessment and program planning), resulting in a duplication of effort across the system. Congress found that technical assistance to support a comprehensive approach to addressing the needs of students served by federal programs was a key strategy for helping schools and districts provide opportunities for all children to attain challenging standards.

The legislation passed in 1994 changed the configuration of the technical assistance services offered by the Department, and, in the case of the Comprehensive Centers, cut funding for services. ESEA consolidated 48 existing technical assistance centers, operated by five different categorical programs, into a network of 15 Comprehensive Regional Assistance Centers. At the same time, Congress reduced the funding of the Comprehensive Centers to about half the amount available to the antecedent programs. ESEA created a new structure for providing assistance to Title I schools by requiring states to develop a system of school support teams and authorizing them to use a portion of their Title I allocation to pay for the work of those teams. Finally, ESEA, Goals 2000, and School-to-Work established or reauthorized four new technical assistance programs to address four priority areas: (1) mathematics and science education, (2) technology, (3) parental involvement, and (4) implementation of school-to-work programs. Exhibit 10.1 displays the timeline for these events from 1990 to 2000.

EXHIBIT 10.1
FEDERAL TECHNICAL ASSISTANCE TIMELINE



Source: U.S. Department of Education.

Although each of the Department's technical assistance programs is designed to address a different set of needs and issues, the basic legislative mandate is similar across programs. Here are some common themes in the laws authorizing the Department's technical assistance programs:

- **Disseminating information and practices to large numbers of potential customers.** All of the Department's technical assistance programs have, at least in theory, an extremely broad customer base: The Comprehensive Centers may serve all ESEA grantees, the Eisenhower Regional Mathematics and Science Consortia may serve all K-12 mathematics and science educators, the R*TECs may serve all K-12 educators, and the PIRCs may serve all parents. Because the legislation requires providers to deliver assistance on a comprehensive list of topics

to tens of thousands of potential customers, individual centers and consortia experience some pressure to implement the broadest possible coverage.

- **Targeting high-need, high-poverty customers.** At the same time, most technical assistance programs are charged with targeting schools and districts serving high-need, high-poverty populations. The Comprehensive Centers are required to target high-poverty districts, Bureau of Indian Affairs–funded schools, and schoolwide programs. The R*TECs are required to serve schools and districts where students have traditionally had limited access to technology. The PIRCs are required to target educationally and economically disadvantaged parents.

- **Reforming schools and improving teaching and learning.** All of the Department's technical assistance programs are charged with helping schools and districts to implement reforms that will improve teaching and learning for all students. The Government Performance and Results Act program performance indicators for the Eisenhower Regional Mathematics and Science Consortia take this requirement one step further by calling for evidence of improvements in practice among recipients of assistance.

- **Collaborating with other technical assistance providers.** In line with Congress's vision for a national network of technical assistance programs, each of the Department's technical assistance programs is required to collaborate with other technical assistance providers. This charge is reflected in the legislation authorizing the Comprehensive Centers, Eisenhower Regional Mathematics and Science Consortia, and R*TECs.

Each of the Department's technical assistance programs draws on local, field-based expertise by soliciting proposals from eligible entities for grants to operate regional centers. (The exception to this rule is the School-to-Work Learning Center, which serves the entire country and is run through a contract by the National School-to-Work Office.) Each technical assistance program has a slightly different customer base and addresses a different set of needs, although in many cases the target audiences and the activities conducted overlap. The PIRCs are the largest program of the six and comprise the largest number of resource centers, with one in each state. Smaller programs operate centers in multistate regions; the boundaries defining regions are not consistent from program to program. Exhibit 10.2 summarizes key features of each program.

EXHIBIT 10.2
TECHNICAL ASSISTANCE PROGRAMS AT A GLANCE

Program Name	1999 Appropriation	Purpose	Funding and Targeting	Awardees	Services
Title I School Support Teams	$38 million	Technical assistance and support to schools planning or implementing Title I schoolwide programs and schools in need of improvement	States may reserve up to one-half of one percent of their Title I allocation to support SST activities	SEAs recruit SST members; staffing of teams varies by state.	Training and consultation to schools in developing and implementing schoolwide plans
Parental Information And Resource Centers (PIRCs)	$30 million	Technical assistance and training to economically and educationally disadvantaged families	Discretionary grants to nonprofit organizations, or nonprofit organizations in consortia with LEAs	56 awardees	Parenting education, training, and information dissemination; Parents as Teachers (PAT) and Home Instruction Programs for Preschool Youngsters (HIPPY) programs
Comprehensive Regional Assistance Centers	$28 million	Technical assistance to states, tribes, districts, and schools implementing ESEA programs	Cooperative agreements with public or private non-profit entities or consortia, based on a competitive application process	15 awardees	Professional development, consultation, information dissemination, convening/facilitating events
Eisenhower Regional Mathematics and Science Education Consortia	$15 million	Technical assistance to K-12 mathematics and science educators and dissemination of exemplary programs in mathematics and science	Discretionary grants to eligible entities	10 awardees	Planning assistance, training, facilitating networks, information dissemination
Regional Technology In Education Consortia (R*TECs)	$10 million	Technical assistance to promote the effective use of technology in education	Cooperative agreements with SEAs, IHEs, or non-profit agencies, in cooperation with states and districts, based on a competitive application process	6 awardees	Professional development, information and resource dissemination; facilitating alliances
School-to-Work Learning Center	$4 million	Technical assistance to support the implementation of effective STW programs	Contract with eligible entity	1 awardee	Maintaining a Web site, administering the technical assistance bank, supporting STW institutes
School-to-Work Technical Assistance Resource Bank	$1 million	Technical assistance to support the implementation of effective STW programs	Task orders to eligible entities	192 awardees	Providing individual consultation to states and districts

Source: U.S. Department of Education.

What Do We Know about Good Practice?

A synthesis of findings from earlier studies of federal technical assistance programs suggests that high-quality technical assistance has the following attributes:[1]

- **It is responsive to customer needs and aligned with state standards, local standards, or standards developed by national professional associations.** Teachers, schools, and districts will seek out and benefit from assistance only if it meets a real and clearly defined local need. In addition, products and services that are aligned with national, state, or local standards are more likely than others to have an impact throughout the organizations served.

- **Its products and services are based on sound research.** Customers need access to knowledge and expertise that are accurate, up-to-date, and based on valid ideas about how schools change.

- **The level of service provided is appropriate for the customer's purposes and the customer's capacity to use the assistance.** For some purposes, customers can be served effectively with basic information disseminated in publications or through a Web site; in other cases, customers require face-to-face assistance or more intensive coaching. In every case, technical assistance providers should provide help that the customer can use.

- **The scope, intensity, and duration of the assistance are sufficient to prompt change.** Improving schools is not a simple undertaking. Unless the goal of technical assistance is to convey relatively simple information (like the timetable for implementing particular provisions of a new law), assistance must be intensive and ongoing. One study of reform in urban high schools found that schools that were successful at turning themselves around had used at least 30 days of external assistance annually.[2]

- **It builds customers' capacity to identify and solve problems on their own.** New ideas have a limited effect on how schools operate unless teachers and administrators learn to work together to identify problems, develop their professional judgment, and incorporate new pieces of information and new skills into their broader professional repertoire.

- **It is carefully targeted.** None of the Department's technical assistance programs can hope to serve all states, districts, and schools receiving funds under ESEA, Goals 2000, or School-to-Work. As a result, these programs must make difficult choices about which customers should receive highest priority for assistance.

- **It incorporates strategies for reaching a large number of customers effectively.** Because assistance must be intensive and ongoing if it is to prompt change in teaching and learning, it can be extremely expensive. Regional providers of technical assistance must adopt strategies for delivering assistance on a large scale if they are to have a measurable impact in their regions. Such strategies include managing regional networks of educators or schools involved in reform, leveraging local resources for ongoing support of change efforts, using distance learning and on-line technologies to reach larger numbers of educators at lower cost, and employing training-of-trainer and other dissemination models.

The provisions of the law address only some of these criteria for high-quality technical assistance. The law spells out who is to receive assistance and provides some guidelines for targeting of services. It

also specifies what topics the assistance will address, and what general strategies can deliver the assistance (e.g., information dissemination or coordination with other service providers). However, the law has no requirements about the scope, intensity, or duration of services, and makes no provisions for adopting strategies that might reach large numbers of customers effectively. Instead, the quality of services provided depends primarily on the knowledge and skills of the technical assistance providers themselves, and on the Department's effectiveness in overseeing programs. The box below provides an example of high-quality, intensive technical assistance from a recent evaluation of the Eisenhower Regional Mathematics and Science Consortia.

Guiding Teachers in Implementing Standards-Based Curriculum

Over the course of five years, the Eisenhower Consortium at Pacific Resources for Education and Learning (PREL) and the University of Hawaii are helping the Mokapu Elementary School in Hawaii to implement a new science curriculum that addresses the state's content and performance standards.

During a 10-day summer institute, facilitators from the University of Hawaii modeled a new, research-based curriculum series, Developmental Approaches in Science and Health (DASH), for groups of teachers. Facilitators explicitly focused on the major science concepts associated with the activities, and continually reinforced conceptual connections between units so that teachers understood how the curriculum culminates in specific student knowledge and skills. Teachers gained in-depth exposure to up to half of the units in the series during the summer institute.

Staff from PREL and the University of Hawaii provided support to teachers throughout the school year. Teachers met in groups once a week to share what they were doing in science class. In addition, teachers received four to six days of release time to observe one another teaching the new curriculum, visit other schools using DASH materials, or visit the university's lab school, where the curriculum materials were pilot-tested.

Source: Daniel C. Humphrey, Lee Anderson, Kara Finnegan, Judith Powell, and Viki M. Yang, *Eisenhower Mathematics and Science Education Regional Consortia Program: 1999 Evaluation Report.* Draft (Washington, DC: U.S. Department of Education), 35-36.

How Well Are the Programs Working?

Performance expectations for the Department's technical assistance programs emphasize customer satisfaction and targeting of services over the effects of those services on districts, schools, and classrooms. Because the law mandates high-quality assistance, customer satisfaction figures prominently in GPRA annual program performance indicators for the R*TECs, the Comprehensive Centers, and the Eisenhower Regional Mathematics and Science Consortia. However, only the Eisenhower Regional Mathematics and Science Consortia program has an indicator addressing the effects of technical assistance on recipients' practices.[3] This emphasis on process over outcomes in the Department's program performance indicators reflects the fact that the effects of technical assistance on classrooms and schools are often difficult to assess.

Key findings from early evaluations of the Department's technical assistance programs are presented in the next seven sections. The kinds of data available from early evaluation activities reflect, in part, the criteria established by the Department's program performance indicators.

Title I School Support Teams

By fall 1998, Title I school support teams were serving schools in all but five states.[4] Approaches to organizing and staffing school support teams vary widely by state. For example:

- **California** has established a system of 12 regional School Support and Improvement Centers, known in the state as S-4s. Each S-4 is housed in one of California's county offices of education and employs one or two staff members. The S-4s hold six to eight institutes over the course of the school year for teams from schools developing plans for schoolwide programs. In addition, the S-4s locate additional professional development resources for the schools they serve by tapping other state and federal programs that operate out of the county offices of education; they also provide individual assistance to a small number of schools.

- In **Missouri**, each of the 45 districts in the state has designated one distinguished educator to provide up to five days of technical assistance each year to schools. The state pays for the distinguished educators' expenses and training through Title I program improvement funds, while the school district covers their salaries.

- In **New Hampshire**, 50 to 60 SEA staff serve on five regional service teams. Regional service teams provide technical assistance in several areas, including Title I, and they broker services for individual schools. The state uses its Title I allocation for school improvement to purchase individual support to schools that request assistance, usually by hiring contractors.

Title I school support teams vary in their capacity to serve schools in need; in some states, the need for assistance is greater than school support teams can accommodate. In 1998, almost half of all state Title I directors (24) reported that there were more schools in need of school support team services than Title I could accommodate; 20 Title I directors reported that their programs were able to accommodate all schools that had a need.[5]

> **Program Indicator**: States and districts will provide more effective assistance to schools not making progress through school support teams and other resources.

State-level data on the actual numbers of schools served by school support teams appear to be limited. In 1998, for example, 19 state Title I directors reported that they did not know the percentage of Title I schoolwide programs served by school support teams. Of those Title I directors that could provide estimates of the numbers of schools served, about half (13) said that school support teams had served all or almost all of the schoolwide program schools in their state. A small proportion (5) said that school support teams served a quarter of those schools or fewer.[6]

The Department has not evaluated the work of Title I school support teams, and there is no information available about their effects on schools.

Comprehensive Regional Assistance Centers

Although the Comprehensive Centers are relatively new to the field, Comprehensive Center services have reached a significant proportion of states, districts, and schools. The Comprehensive Centers became fully operational in April 1996. In 1998, 68 percent of state administrators of federal programs reported that they had received assistance from the Comprehensive Centers;[7] 44 percent of district administrators of federal programs reported that they had had contact with a center.[8]

The Comprehensive Centers are targeting some services to high-priority customers, but the level of targeting does not yet meet the Department's expectations. Fifty percent of center services to schools in FY1998 were targeted to schoolwide programs, and 65 percent were targeted to high-poverty schools.[9] By 1999, the Department's program performance plan expects center services to be even more closely targeted, with 85 percent of all center services targeted to high-poverty schools and districts.[10]

Program Indicator: By 1999, 85 percent of Comprehensive Centers' customers will represent schoolwide programs, or high-poverty districts and Bureau of Indian Affairs (BIA)–funded schools.

Satisfaction with the quality of Comprehensive Center services appears to vary with the content of the assistance. At the state level, Comprehensive Center customers appear to be most satisfied with assistance on general reform topics; customers at the state and district levels are less satisfied with assistance on the particulars of implementing ESEA programs. For example:

Program Indicator: The percentage of clients reporting satisfaction with the quality of technical assistance provided will increase annually, reaching 65 percent by 2000.

- In 1998, 64 percent of state administrators of federal programs reported that Comprehensive Center assistance on planning and carrying out whole school reform was helpful or very helpful.[11]

- On the same survey, however, only 36 percent of state administrators who had received assistance from the Comprehensive Centers reported that the assistance was helpful or very helpful for understanding federal legislative provisions.[12] Similarly, only 29 percent of district administrators who had received assistance from the centers reported that the assistance was helpful or very helpful for understanding the new flexibility and accountability provisions in federal legislation.[13]

- The centers' own customer surveys reveal general satisfaction with center assistance. Among the four Comprehensive Centers that reported the results of client surveys to the Department in their annual progress reports, approximately two-thirds of customers surveyed reported that they were satisfied or very satisfied with the quality of center services.[14]

A national evaluation of the Comprehensive Centers is being conducted in FY 1999 and will provide additional information about the effects of center services.

Eisenhower Regional Mathematics and Science Education Consortia

Almost two-thirds of Eisenhower Regional Mathematics and Science Education Consortia customers report that they represent schools that serve a majority of at-risk students. Consortia progress reports to the Department show that in FY 1998, 23,545 district and school staff participated in the consortia's continuing technical assistance activities. Sixty-five percent of these local education agency participants reported that they work in schools serving a majority of at-risk students.[15]

Program Indicator: At least 70 percent of the district and school staff who participate in the consortia's continuing technical assistance will work in districts or schools with more than 35 percent of their students eligible for free or reduced-price lunch.

Most customers give the Eisenhower Regional Mathematics and Science Education Consortia high marks for the quality and usefulness of their services:

- In a national evaluation of the Eisenhower Regional Mathematics and Science Education Consortia, almost all participants in selected professional development activities rated the quality of the professional development "excellent" or "good" in terms of accuracy of content and presentation. More than 80 percent rated it "excellent" or "good" in terms of completeness and depth.[16]

- On the consortia's own customer surveys, 91 percent of participants report that the training or technical assistance they received from the consortia was "moderately" or "extensively" useful in improving their instructional or job-related practice.[17]

Specific professional development and networking activities sponsored by the Eisenhower Regional Mathematics and Science Education Consortia appear to have had a measurable effect on teachers. For example:

Program Indicator: At least 80 percent of the teachers, administrators, and providers of professional development who participate in the consortia's continuing technical assistance will report improvement in their practice.

- In a national evaluation of the Eisenhower Regional Mathematics and Science Education Consortia, nearly two-thirds of participants in selected professional development activities reported that they had incorporated some new behavior into their jobs as a result of what they had learned. Just over half of participants in networks facilitated by the Eisenhower Regional Mathematics and Science Education Consortia reported that they had incorporated something new into their work.[18]

- Most participants surveyed reported that the activities contributed in a "moderate" or "major" way to their skills and knowledge in math/science/technology education, professional development, and assessments/standard setting. Participants in networks reported smaller changes in knowledge and skills.[19]

Contacts with customers by print and electronically are increasing annually. From October 1997 through September 1998, the Eisenhower Regional Mathematics and Science Education Consortia reported over 500,000 contacts with customers by print and over 1.5 million Web site "hits," a 10 percent increase in total dissemination over the previous year.[20]

Program Indicator: The total number of consortia contacts with customers by print or "hits" on electronic sites will increase by 10 percent annually.

R*TECs

The R*TECs target many of their products and services to students who have traditionally had limited access to technology. Although there is no information about the numbers of schools and districts served by the R*TECs, R*TEC progress reports indicate that R*TEC services reached over 146,000 clients in FY 1998, and R*TEC products reached over 268,000.[21] Almost half of R*TEC customers during this period were teachers; the remainder were administrators, students, and parents.[22] The R*TECs report that 60 percent of their services were designed to benefit underserved populations.[23]

The R*TECs own customer surveys indicate that general satisfaction with R*TEC services is high:

- More than 90 percent of all R*TEC clients surveyed in 1997-98 agreed or strongly agreed that R*TEC services were "useful," "relevant," or "high-quality," and more than 80 percent agreed or strongly agreed that they "facilitate learning" and are an "important resource."[24]

Program Indicator: An increasing proportion of recipients (individuals or agencies) of the R*TEC services and products—particularly those representing underserved schools—will indicate that these products and services are of high quality and meet their needs.

- More than 90 percent of participants in regional, statewide, or schoolwide alliances facilitated by the R*TECs rated alliance work "moderate" or "high" in terms of increasing access to resources, supporting school reform, and addressing educational concerns.[25]

The Department has not conducted an evaluation of the R*TECs, and no information is available about the effects of R*TEC services in schools and classrooms.

PIRCs

Participation in PIRC programs has risen steadily since 1996, in parallel with increases in funding levels and the number of PIRCs operating in the field. If participation in PAT and HIPPY programs continues to rise at current rates, the program should meet its target by 2000:

Program Indicator: In the geographic areas in which the Parental Assistance Centers provide direct services, the number of children and families who participate in Parents as Teachers (PAT) or Home Instruction for Preschool Youngsters (HIPPY) will substantially increase. By 2000, approximately 14,000 families will participate in PAT or HIPPY.

- Participation in PAT and HIPPY programs sponsored by the PIRCs has risen steadily, from 5,000 families in 1995 to 10,000 in 1997.[26]

The PIRCs are also relatively new to the field. The first group of 28 PIRCs began delivering services in 1995; a second group of 28 began work in 1996 or later.

The Department has not conducted an evaluation of the PIRCs, and no information is available about the quality of PIRC services or the effects of those services on families.

School-to-Work Technical Assistance Program

Program data suggest that the reach of School-to-Work technical assistance services has been broad. Since 1995, the School-to-Work Learning Center has filled over 14,500 information requests and 700 special information requests; the STW Web site averages about 150,000 hits per month. More than 200 School-to-Work grantees have used funds provided by the National School-to-Work Office, known as "lines of credit," to purchase services from the STW Technical Assistance Resource Bank; the Learning Center has brokered 250 task orders for technical assistance services.[27] In addition, the Learning Center has held more than seven strategic planning institutes and assisted in the planning of over 15 state initiatives.

> Because the technical assistance activities supported by the School-to-Work Opportunities Act are not funded as separate line items, no performance indicators have been developed for STW technical assistance services.

The Department has not evaluated the effects of STW Learning Center services on states, districts, or schools implementing STW programs, and there are no reports available on customer satisfaction with STW Technical Assistance Resource Bank services.

Other Sources of Technical Assistance

Federally funded technical assistance providers do not operate in a vacuum; in many states, schools and districts may seek external assistance from an array of possible providers. School staff in large districts can draw on the curriculum specialists and program coordinators at their district office, or at a regional educational agency; district staff may call on their counterparts at the SEA. In some cases, the state's own technical assistance activities can be extensive. In 1998, 91 percent of state administrators of federal programs reported that their programs provided technical assistance on at least one topic to subgrantees. Forty-one percent of administrators reported that they provided assistance on eight or more different topics.[28] Several states, including Oregon, Massachusetts, and Iowa, have adopted the STW Technical Assistance Resource Bank as a model for providing technical assistance at the local level. Exhibit 10.3 summarizes other examples of state-supported technical assistance activities.

EXHIBIT 10.3
EXAMPLES OF STATE-SUPPORTED TECHNICAL ASSISTANCE ACTIVITIES

Program Name	Funding	Organization	Purpose	Services
California: Professional Development Consortia	$3 million	The state awards grants to 11 county Offices of Education	Professional development for K-12 educators	Training and other professional development to support state initiatives; brokering professional development and training from other sources; disseminating information about professional development resources in the region
North Carolina: School Improvement Division's Mandated Assistance Program	$4 million	78 teachers and principals work on site in targeted schools as employees on loan from their districts.	Provides intensive assistance to the lowest-performing schools in the state. In 1998-99, 12 schools were identified for mandated assistance.	Five-member teams work in residence in targeted schools for one year. They review the school improvement plan, evaluate teachers, and provide individual mentoring/coaching to staff.
New York: Teacher Centers	$20 million	The state awards grants to districts and Boards of Cooperative Educational Services to operate centers, which are directed by policy boards made up of a majority of teachers. 119 centers serve 650 of the state's 750 districts.	Provide teacher-driven professional development to K-12 educators and serve as clearinghouses of information and instructional materials.	Workshops and other training, teacher networks, teacher-led study groups; lending program of materials and equipment
Texas: Education Service Centers (ESC)	$40 million	The Texas Education Agency (TEA) funds 20 regional ESCs, which receive policy direction from TEA.	Serves as the TEA's training and technical assistance arm.	Workshops and other training on a wide range of topics; individual consultation with schools and districts; publication development and dissemination

Source: Personal communications with state Departments of Education in California, New York, North Carolina, and Texas, 1999.

Nationally representative surveys of state and local administrators suggest that, for some purposes, other sources of assistance may be more useful to educators than federally funded technical assistance programs. Several different surveys of local administrators suggest that federally funded technical assistance programs reach fewer districts and schools than state and local sources of technical assistance, and that state and local sources of assistance are often more useful to school and district staff who work on federal programs:

- In 1998, more than two-thirds of Title I principals reported that their state Department of Education had been helpful to a great or moderate extent in their understanding or implementing comprehensive reform; almost all Title I principals (91 percent) reported that their district had been helpful to a great or moderate extent.[29]

- On the same survey, only a small percentage of Title I principals reported that federal sources of assistance—including the Comprehensive Centers, the Regional Educational Laboratories, the PIRCs, and other Department offices or programs—had been helpful to a great or moderate extent in their understanding and implementing standards-based reform. These findings probably reflect the fact that these technical assistance providers reach only a small percentage of schools.[30]

- In 1996, 77 percent of district administrators reported that state-sponsored workshops on standards-based reform were "helpful" or "very helpful," compared with 54 percent who found the U.S. Department of Education-sponsored workshops "helpful" or "very helpful."[31]

- In 1996, 61 percent of district administrators reported that they had had contact with at least one federally supported technical assistance center. Of these, fewer than half said that the assistance provided on standards-based reform was "helpful" or "very helpful."[32]

These results suggest that the states, supported in large measure by federal funds, play an important role in providing technical assistance services to districts and schools.

Survey results indicate that the Department of Education's dissemination of written information reaches more state and local staff than its other technical assistance efforts do, and also generates the highest levels of satisfaction.

- In 1998, Title I principals gave higher ratings to the ERIC clearinghouse system than to any other federal source of technical assistance—one-third reported that ERIC had been helpful to a great or moderate extent in understanding or implementing standards-based reform, compared with 24 percent for the Department's program offices, 22 percent for the Regional Educational Laboratories, and 13 percent for the Comprehensive Centers.[33]

- In 1996, more than 80 percent of state Title I and Goals 2000 directors found written guidance from the Department on comprehensive, standards-based reform "helpful" or "very helpful," compared with 46 percent who found assistance from Comprehensive Centers "helpful" or "very helpful."[34]

- A follow-up survey conducted in 1998 produced similar results: 88 percent of all federal program administrators found written information from the Department "helpful" or "very helpful" in understanding federal legislative provisions, compared with 36 percent who found Comprehensive Center assistance "helpful" or "very helpful."[35]

The Federal Technical Assistance System

Some evidence suggests that technical assistance providers are working together within programs to enhance the quality of their services and eliminate duplication of effort. For example, all 15 Comprehensive Centers are currently collaborating on the implementation of the Reading Success Network, and a 1998 evaluation of the Eisenhower Consortia concluded:

> The Eisenhower Regional Mathematics and Science Consortia have collaborated to achieve economies of scale and to take full advantage of the special capacities of individual Consortia. Their collaborations, coupled with assistance strategies that leverage resources from other institutions and programs, have helped stretch their limited resources.[36]

However, current levels of collaboration among technical assistance programs suggest that the notion of a federal *system* of technical assistance is not yet well defined and is not reflected widely in practice. Comprehensive Center progress reports, for example, show that only 8 percent of all technical assistance activities undertaken by the centers in FY 1998 involved collaboration with other agencies. Similarly, Comprehensive Centers reported very few referrals to other technical assistance providers or programs.[37] This lack of collaboration is especially striking given the fact that some overlap exists in the mission and goals of the Department's major technical assistance programs, and that most of these programs are required by their authorizing legislation to collaborate. For example, the Eisenhower Regional Mathematics and Science Consortia, the Comprehensive Centers, and the R*TECs all share an interest in the implementation of standards-based reforms and new uses of technology in instruction. Both the PIRCs and the Comprehensive Centers support increased parental involvement in education.

Federal technical assistance providers have not yet exploited the full potential of new telecommunications technologies to disseminate information and deliver services. Despite their mission to promote the use of advanced technology in instruction, for example, the Regional Technology in Education Consortia report that 85 percent of their services are developed for face-to-face delivery. Only a small percentage of their services are developed for listserve, videoconferencing, or teleconferencing.[38] In addition, most technical assistance programs have not yet developed cross-center or cross-consortia Web sites that would allow access to the on-line resources of each center or consortium from a single point of entry.

Federal technical assistance programs are providing valuable assistance to the field, but the federal technical assistance system cannot satisfy all needs and purposes. Customer surveys conducted over the past several years show a similar pattern of responses among customers of federal technical assistance. Direct recipients of specific services report relatively high levels of satisfaction with the quality and usefulness of the assistance they receive, suggesting that federal technical assistance providers provide valuable services to customers who have sought out their assistance. At the same time, general surveys of state and local administrators of federal programs yield lower levels of satisfaction and suggest that other sources of assistance may be more accessible and useful to these staff in some areas central to their work.

Federal technical assistance programs must address extensive needs with very limited resources. The Department's providers of technical assistance are expected to support changes in teaching and learning that require substantial investments in ongoing and intensive assistance. At the same time, each of the Department's technical assistance programs is charged with serving tens of thousands of potential customers. As a result, federally funded technical assistance providers are forced to engage in a delicate

balancing act between depth and breadth of services—serving enough customers to make their presence felt in the regions they serve, and serving a few customers intensively enough to bring about real change.

Developing viable strategies for reaching larger numbers of customers effectively is fundamental to the success of all of the Department's technical assistance programs. The Department's technical assistance programs do not have sufficient resources to serve all schools and districts in need of assistance, and both the Department and its technical assistance providers must learn to "make strategic choices about limited resources to achieve maximum impact." [39] At the same time, many states have extensive technical assistance and professional development systems in place that appear to be much more accessible to schools and districts than federal programs. In some cases, the Comprehensive Centers are organizing their services to support the work of these state systems (for example, the Northern and Southern California Comprehensive Centers work closely with the state's Title I school support teams). However, working with and through state-level technical assistance providers is not well developed as a strategy for going to scale throughout the system.

Options for Strengthening the Programs

Options for reauthorizing the Department's technical assistance programs fall into two categories: (1) options for strengthening individual programs and (2) options for creating a more coherent national *system* of technical assistance.

Strengthen Individual Programs

Limit the focus of the Department's technical assistance programs to those areas where they can add most value to customers. Some of the Department's technical assistance programs continue to struggle with a lack of clarity in their mission. For example, a review of the Comprehensive Centers' work in fall 1997 found that the notion of "comprehensive, cross-program" assistance contained in their authorizing legislation was poorly defined in practice and not well understood by the field.[40] In addition, the objectives and activities of some technical assistance programs overlap in some important areas. In the process of awarding grants and negotiating cooperative agreements, the Department should think strategically with providers about how to limit their activities to areas where they can make a valuable contribution.

Strengthen requirements to target services exclusively on high-poverty, high-need districts and schools. The Department's technical assistance programs engage in some targeting of goods and services, but not to the extent currently desired in their GPRA program performance plans. More extensive targeting of services is consistent with the policy framework of ESEA and effectively limits the number of potential customers for technical assistance providers. The legislation authorizing the Department's technical assistance programs should include explicit benchmarks for targeting.

Encourage the use of technology to expand the number of customers served. The Department's technical assistance programs have not yet exploited the full benefits of information technology as a strategy for broad-scale dissemination of information to the field. In 1994, the World Wide Web was just beginning to be widely used as a tool for communication and information dissemination. Reauthorization of the Department's technical assistance programs should take advantage of the availability of this powerful new resource. More specifically, the Department should support the

development of cross-program Web sites, and should create other incentives for technical assistance providers to explore innovative uses of technology in delivering assistance. A model for these efforts could be the Web site operated by the Eisenhower National Clearinghouse, which provides a single point of entry to the Eisenhower Regional Mathematics and Science Education Consortia and other federal mathematics and science resources. The School-to-Work Learning Center, described in the box, provides another model for how the Web can be used to disseminate information:

Using the Web to Disseminate Information about High-Quality Programs

The Web site maintained by the School-to-Work Learning Center (www.stw.ed.gov) has the largest collection of electronic STW resources in the country, with over 600 implementation tools. Updated daily, the site is the Department's primary mechanism for disseminating information about high-quality STW programs. The site features resources on evaluation, statistics, communications, and implementation information about STW. Its databases allow users to search for STW initiatives by state, technical assistance providers by area of expertise, and written resources by subject-area category. The site also features an *Examples That Work* database and compendiums of STW links to postsecondary education and parental involvement. The STW Web site has won a Reinventing Government "Hammer" award for its innovative use of on-line technology to deliver services to grantees.

Surveys completed by visitors to the STW Web site indicate high levels of customer satisfaction with Web site services. More than three-quarters of visitors who completed the survey reported that they obtained the information they needed through the Web site. More than 80 percent who completed the survey said that the information was useful and easy to obtain.[41]

Source: National School-to-Work Office, U.S. Department of Education.

Strengthen accountability requirements for the Department's technical assistance programs:

- **Require that technical assistance providers demonstrate how their work has contributed to improvements in school or classroom practice.** Require that providers evaluate the effects of their work in classrooms, schools, and educational agencies. By the end of each grant period, require providers to produce credible evidence that their work has enhanced the knowledge and skills of teachers and administrators or contributed to improvements in teaching, learning, or school administration.

- **Develop common standards and criteria for high-quality technical assistance across discretionary programs, and include benchmarks for performance into the legislation authorizing the Department's technical assistance programs.** Although the Department's performance indicators have established some standard expectations for center performance, they do not have the force of law. Through legislative language, announcements of competitions for grants and contracts, and general oversight of programs, Congress and the Department should communicate clear expectations for the quality, scope, and impact of those services. In addition, the Department, in consultation with the field, should identify some uniform, measurable benchmarks of high-quality technical assistance that can be used to judge the performance of all of its technical assistance programs.

- **Revise performance indicators to address the effects of technical assistance on the recipients of services.** An example is Indicator 2.1 for the Eisenhower Regional Mathematics and Science Consortia: "At least 80 percent of the teachers, administrators, and providers of professional development who participate in the Consortia's continuing technical assistance will report improvement in their practice."

- **Require technical assistance providers to demonstrate their responsiveness to local needs each program year.** Through needs assessment activities or documentation of ongoing relationships with key stakeholders in the region, providers should demonstrate that they understand the particular needs of their region—and are designing services to respond to those needs. Services should include entering into performance agreements with each state in their region on what technical assistance services will be provided.

- **Establish or refine standardized reporting requirements to collect reliable and valid information about activities and customers served.** The Department should continue efforts begun by the Eisenhower Regional Mathematics and Science Consortia, the Comprehensive Centers, and the R*TECs to collect reliable and valid information about activities that will allow the Department to assess their performance against established benchmarks. In addition, the Department should develop some core data-reporting elements across programs.

- **Require grantees to engage in more formative evaluation and continuous improvement of their services.** Aside from reporting to the Department about the effects of their services on participants, technical assistance providers need to conduct more in-depth assessments on the quality and effectiveness of their work for the purpose of improving their services. A forthcoming evaluation report, based on case studies of Eisenhower Regional Consortia services, argues that the tracking of quantitative indicator data by itself does not always foster in-depth reflection on the quality and effects of services.[42] In addition to collecting quantitative data on quality and effects, service providers should engage in formative evaluation exercises that include expert reviews of their work and observations and discussions of each other's services.

Develop a More Coherent Federal System of Technical Assistance

Focus the federal technical assistance system on those areas where providers offer unique expertise and where they can add most value. Federal technical assistance programs should target their assistance to address those issues and topics for which assistance is not readily available from other sources, such as states, district offices, or institutions of higher education. For example:

- **Implementation of federal programs.** Providing assistance to states, districts, and schools in understanding new provisions of federal education legislation and in using federal programs to support local reforms is a continuing priority for the Department. Regionally based technical assistance providers are well positioned to provide such assistance because they combine expertise in the implementation of federal programs with intimate knowledge of state-level reforms and regional conditions and purposes. The STW Technical Assistance Resource Bank is another model, which has already been adopted by the Department's Rehabilitation Services Administration, the Department of Health and Human Services, and other federal agencies.

- **Development and implementation of performance indicator systems and continuous progress models.** Collecting, analyzing, and using data on student performance and other outcomes to hold schools accountable and to manage programs now constitute a major emphasis of many federal programs, most notably Title I. Federal technical assistance providers can provide valuable aid to the field in developing performance indicators and in implementing these new approaches to accountability.

- **Dissemination of objective evaluation information on research-based school reform models and instructional approaches.** School systems and communities need objective information, based on rigorous evaluation data, about the effectiveness of innovative school reform models and instructional approaches. Federal technical assistance providers can be a source of information for objective, third-party assessment of research-based models for school reform and instructional improvement.

Integrate the Comprehensive Centers, the Eisenhower Consortia, the R*TECs, and the PIRCs into a system of regionally based comprehensive centers, complemented by national specialty centers. One of the goals of the 1994 reauthorization of ESEA was to allow customers easy access to all of the Department's technical assistance resources from a single point of entry. This notion of "one-stop shopping" guided the development of the Comprehensive Regional Assistance Centers. However, available evidence suggests that there is relatively little collaboration among the Comprehensive Centers, the Eisenhower Consortia, and the R*TECs, although their activities and target audiences do overlap in some cases. A system of closely integrated regional centers would help states, districts, and schools implement federal programs, and develop and use performance indicator systems and continuous improvement models. Specialty Centers, designed to disseminate research-based instructional materials and reform models in priority areas such as mathematics and science, reading, and the uses of technology in instruction, would serve much larger regions (with one to three centers serving the entire country), and would be encouraged to do their work electronically.

A number of states, including Texas, New York, and Oregon, currently operate systems of regional service centers, and the available evidence suggests that they have been effective at providing useful assistance to large numbers of schools and districts. These regional centers are easily accessible to schools and districts and offer a comprehensive array of services that can be tapped by a single phone call. Federal regional assistance centers could be more closely modeled on these state systems.

Test a range of options, in one or two pilot regions, for integrating the Department's technical assistance programs. The Department can support the development of new approaches to integrating the Comprehensive Centers, the Eisenhower Consortia, the R*TECs, and the PIRCs by testing one or more of the following options:

- **Standardize regional boundaries.** Because the size and shape of regions served vary with each of the Department's technical assistance programs, providers may have to collaborate with many others. Standardizing regional boundaries would help to reduce the number of organizations involved in providing technical assistance in the region and increase incentives to collaborate.

- **Allow providers to submit a consolidated application for funding for the Comprehensive Center, the Eisenhower Consortium, the R*TEC, and the PIRCs serving that region.** Consolidated applications from a consortium of technical assistance providers would be judged,

in part, on the strength of plans for integrating services across programs and for collaborating across programs to improve the quality of services provided to the field.

- **Provide some additional funding to technical assistance providers in the pilot regions to develop models for integrating common operations and eliminating duplication of effort.** Coordination of activities among technical assistance providers takes time. A modest amount of additional funding would allow providers in the pilot regions to maintain the level of services they provide to the field and to explore approaches to streamlining common operations, for example, conducting regional needs assessments, developing relationships with key stakeholders, developing plans for providing services, and developing products and services.

- **Consolidate the Comprehensive Center, Eisenhower Consortium, R*TEC, and PIRCs serving the region into a single omnibus center.** This center, run by a single provider or consortium of providers, would carry out all the activities for these four technical assistance programs in the region.

- **Evaluate the effects of this integration in pilot regions on the quality and cost-effectiveness of services.** The results of this evaluation would inform future reauthorizations of the Department's technical assistance programs.

Create an electronic network that would disseminate products and information on behalf of all federal technical assistance programs. Modeled on, or embedded in, the ERIC system, this electronic network, composed of several specialty area clearinghouses, would provide users with access to products and materials developed by all of the Department's technical assistance providers, from a single point of entry. This national clearinghouse would be designed to take full advantage of cutting-edge telecommunications technology as a means of disseminating information.

Create a national dissemination system that would promote the adoption of high-quality, research-based school reform models and instructional approaches. Elements of a dissemination system might include these:

- **An independent agency that would support the rigorous evaluation of effects on student learning.** This agency might award competitive grants to developers of promising school reform models and instructional approaches to support evaluation efforts, or it might conduct the evaluations itself.

- **Staff based in SEAs or in regional technical assistance centers who would be responsible for disseminating these models and approaches at the local level.**

Deploy federal technical assistance resources to complement existing state-level systems. Working with and through state-level technical assistance systems is one strategy for reaching larger numbers of schools and districts than would be possible for providers working alone. Federal technical assistance providers can add value to state-level systems by (1) providing training to state-level technical assistance providers in their particular areas of expertise (including the implementation of federal programs, research-based school reform and continuous improvement models); (2) training Title I school support teams and supporting their work with schools; and (3) providing consultation and expertise in evaluation, analysis of student performance data, and continuous improvement.

Limit direct assistance to schools and districts to those with the highest numbers and percentages of children in poverty, and to areas where state capacity is low. Federal technical assistance providers cannot begin to serve all the districts and schools that require assistance. Because federal resources to support direct assistance to schools and districts are so limited, they should be reserved for those schools and districts with the highest numbers and percentages of children in poverty. In addition, some states have very limited capacity to serve schools and districts themselves; in those cases, it may be appropriate for federal technical assistance providers to help compensate for lack of capacity at the state level.

[1] This list of attributes was developed by synthesizing findings from the following studies: Katrina G. Laguarda, Karen P. Walking Eagle, Jeanine L. Hildreth, Theresa M. Ellis, and Brenda J. Turnbull, *A Conceptual Framework for an Evaluation of the Comprehensive Centers* (Washington, DC: Policy Studies Associates, December 1997); Carrie B. Chimerine, M. Bruce Haslam, and Katrina G. Laguarda, *Third-Year Evaluation of the Nine-Site Program Improvement Initiative* (Washington, DC: U.S. Department of Education, 1994); M. Bruce Haslam, Matthew I. Janger, Katrina G. Laguarda, Karen L.M. Panton, and Beverly A. Pringle, *A Review of Technical Assistance Programs Supported by the U.S. Department of Education* (Washington, DC: Policy Studies Associates, April 1994); and Karen L.M. Panton, Kelly W. Colopy, and Beverly A. Pringle, *Evaluation of the Indian Education Technical Assistance Centers* (Washington, DC: U.S. Department of Education, 1995).

[2] Karen Seashore Louis and Matthew B. Miles, *Improving the Urban High School: What Works and Why* (New York: Teachers College Press, 1990) 251.

[3] U.S. Department of Education, *FY 2000 Program Performance Plans: Eisenhower Mathematics and Science Education Consortia, Indicator 2.1* draft (Washington, DC: U.S. Department of Education, Dec. 7, 1998).

[4] U.S. Department of Education, unpublished tabulations from the *Follow-up Study of State Implementation of Federal Elementary and Secondary Education Programs*, Feb. 1999.

[5] U.S. Department of Education, unpublished tabulations from the *Follow-up Study of State Implementation of Federal Elementary and Secondary Education Programs*, Feb. 1999.

[6] U.S. Department of Education, Unpublished tabulations from the *Follow-up Study of State Implementation of Federal Elementary and Secondary Education Programs*, Feb. 1999.

[7] U.S. Department of Education, unpublished tabulations from the *Follow-up Study of State Implementation of Federal Elementary and Secondary Education Programs*, Dec. 18, 1998.

[8] The Urban Institute, unpublished tabulations from the *District Survey: Local Implementation of Federal Programs (II),* Jan. 13, 1998.

[9] Policy Studies Associates, *Evaluation of the Comprehensive Centers*, unpublished tabulations from quarterly progress reports of the Comprehensive Centers, Dec. 30, 1998.

[10] U.S. Department of Education, *FY 2000 Program Performance Plans: Comprehensive Centers Program, Indicator 1.1* draft (Washington, DC: U.S. Department of Education, Dec. 6, 1998).

[11] U.S. Department of Education, unpublished tabulations from the *Follow-up Study of State Implementation of Federal Elementary and Secondary Education Programs*, Dec. 18, 1998.

[12] U.S. Department of Education, unpublished tabulations from the *Follow-up Study of State Implementation of Federal Elementary and Secondary Education Programs*, Dec. 18, 1998.

[13] The Urban Institute, *District Survey: Local Implementation of Federal Programs*.

[14] The Urban Institute, *Year Three Evaluation Report: New England Comprehensive Assistance Center at the Education Development Center* (Washington, DC: The Urban Institute, 1998) 41; Region II Comprehensive Center at the Metropolitan Center for Urban Education, *Annual Grant Performance Report, 1997-98* (New York: Region II Comprehensive Center at the Metropolitan Center for Urban Education, September 1998) 63; Region III Comprehensive Center, *Internal Evaluation Reports for the Period July 1, 1997–June 30, 1998* (Arlington, VA: Region III Comprehensive Center) 10; Region XIV Comprehensive Center, *Annual Performance Report* (Tucker, GA: Region XIV Comprehensive Center, August 1998) Appendix 2.

[15] U.S. Department of Education, *Eisenhower Mathematics and Science Regional Consortia Preliminary Report, Fiscal Year 1998* (Washington, DC: U.S. Department of Education, Eisenhower Mathematics and Science Regional Consortia Program, March 5, 1999) 18, 40.

[16] M. Bruce Haslam, Brenda J. Turnbull, and Daniel C. Humphrey, *Eisenhower Mathematics and Science Regional Consortia Program: Final Evaluation Report* (Washington, DC: U.S. Department of Education, 1998) 23.
[17] U.S. Department of Education, *Eisenhower Mathematics and Science Regional Consortia Preliminary Report*, 1999, 25.
[18] Haslam et al., 1998, 27, 50.
[19] Haslam et al., 1998, 25, 50.
[20] U.S. Department of Education, *Eisenhower Mathematics and Science Regional Consortia Preliminary Report*, 1999, 40.
[21] Regional Technology in Education Consortia, *Regional Technology in Education Consortia Program Performance: Draft Report Fiscal Year 1998* (Washington, DC: R*TEC Program, Jan. 1999) 8.
[22] Regional Technology in Education Consortia, Jan. 1999, 12.
[23] Regional Technology in Education Consortia, Jan. 1999, 17.
[24] Regional Technology in Education Consortia, Jan. 1999, 13.
[25] Regional Technology in Education Consortia, Jan. 1999, 25.
[26] U.S. Department of Education, *FY 2000 Program Performance Plans: Goals 2000 State and Local Education Systemic Improvement, Indicator 3.1* draft (Washington, DC: U.S. Department of Education, Dec. 4, 1998).
[27] *FY 1997 School-to-Work National Activities: Training and Technical Assistance*, memorandum of the National School-to-Work Office, undated, 1, 3.
[28] U.S. Department of Education, unpublished tabulations from the *Follow-up Study of State Implementation of Federal Elementary and Secondary Education Programs*, Feb. 3, 1999.
[29] Camilla Heid and Ann Webber, *School-Level Implementation of Standards-Based Reform: Findings from the Follow-up Public School Survey on Education Reform* (Washington, DC: U.S. Department of Education, 1999).
[30] Heid and Webber, 1999.
[31] Jane Hannaway and Kristi Kimball, *Reports on Reform from the Field: District and State Survey Results* (Washington, DC: U.S. Department of Education, 1997) Section III, 46-48.
[32] Hannaway and Kimball, 1997, 46-48.
[33] Heid and Webber, 1999.
[34] Hannaway and Kimball, 1997, 63-66.
[35] U.S. Department of Education, unpublished tabulations from the *Follow-up Study of State Implementation of Federal Elementary and Secondary Education Programs*, Dec. 18, 1998.
[36] Haslam et al., 1998, 96.
[37] Policy Studies Associates, *Evaluation of the Comprehensive Regional Assistance Centers, Quarterly Progress Reports: Aggregated Data Tables* draft (Washington, DC: Policy Studies Associates, Mar. 17, 1999) 5.
[38] Regional Technology in Education Consortia, *Regional Technology in Education Consortia Program Performance: Preliminary Report Fiscal Year 1998* (Washington, DC: R*TEC Program, Oct. 16, 1998).
[39] Haslam et al., 1998, 96.
[40] Laguarda et al., 1997, 25.
[41] School-to-Work Learning Center, *Semi-Annual Web Site Customer Survey, July 1998-December 1998* (Jan. 15, 1999).
[42] Haslam et al., 1998, 27.

11. ARE FEDERAL LAWS PROMOTING FLEXIBILITY AND ACCOUNTABILITY FOR RESULTS?

Key Findings

Overall, the flexibility provisions in the 1994 legislation are better implemented than the performance accountability provisions.

Flexibility

- The 1994 legislation encourages integration of federal programs with state and local efforts by building on state initiatives.
- States, districts, and schools report that the 1994 legislation provides them with more flexibility than previous legislation, and that they are using this flexibility. They also indicate that the flexibility provided is sufficient to meet their needs.
- In cases where the 1994 legislation does not provide sufficient flexibility, waivers fill the gap.
- The relatively small number of waivers requested from the Department and in Ed-Flex states suggests that federal programs are sufficiently flexible to meet local needs. Other evidence supports this conclusion.
- Many of the federal requirements that concern district officials are not related to education programs, but instead pertain to health, safety, or civil rights requirements that affect schools and should not be compromised.
- Educators are still learning how to make full use of the flexibility in federal education programs.

Accountability

- Although the 1994 legislation greatly increased the amount of flexibility available to state and local education agencies, with the exception of ESEA Title I, it did not simultaneously put in place better systems for holding districts and schools accountable for results.
- Only three of the federal education programs authorized in 1994 require states to develop and use performance measures to monitor progress.
- States and districts have made progress in implementing the Title I accountability provisions, though they will remain incomplete until aligned assessments, which are required by 2000-01, are implemented.
- Tying flexibility in federal programs to clearly defined purposes is important.

Educators today are working in a changed environment. More than ever before, ESEA and other major education laws passed in 1994 have focused attention on helping all students, including limited-English-proficient students and students with disabilities, achieve to higher academic standards. In addition, the rules have changed—literally. Although federal programs have always provided relatively flexible funding to state and local education agencies, the laws passed in 1994 provide even greater flexibility in adapting federal education programs to specific local contexts. In exchange for this flexibility, states and districts are expected to show better outcomes for students. This chapter focuses on the implementation of key areas of flexibility and accountability in ESEA, the Goals 2000: Educate America Act, and the School-to-Work Opportunities Act.

What Do We Know about Good Practice?

Flexibility and accountability should work together to improve teaching and learning. Good flexibility in education programs should:

- Contribute to improved teaching and learning. Flexibility should not be an end in itself but a means of helping states and districts achieve key education goals,
- Advance the effectiveness of federal education programs and federal efforts to address national priorities such as high academic achievement for all students and computer literacy, and
- Function together with good accountability systems for tracking progress and measuring results.

Good accountability in education programs should:

- Measure the progress of all students against challenging academic standards;
- Allow measurement of progress against key performance indicators;
- Keep the public informed about school and student progress; and
- Be coupled with technical assistance to provide for continuous performance improvement.

To take full advantage of greater flexibility and to operate with greater accountability, states and districts need to be able to effectively help schools plan and implement comprehensive and innovative educational programs; they also need to help schools document and report student achievement. Providing such support is a new role for many states and districts.

Introduction to the Programs and the 1994 Legislative Changes

In striving to improve student achievement nationwide, the 1994 legislation sought to incorporate flexibility and accountability measures that would enhance the effectiveness of federal education programs to promote better student achievement. The legislation ties what we know about good flexibility with what we know about good accountability, in the expectation that the flexibility and accountability provisions will help students by supporting:

- More flexibility for states, districts, and schools within program implementation;
- More flexibility for coordination among federal programs and among federal, state, and local reform efforts;
- More innovation in education; and
- Better systems for holding districts and schools accountable for student achievement.

The legislation takes several different approaches to providing flexibility. In some cases, flexibility is incorporated within programs, giving greater discretion in implementing federal programs to state and local educators. In other cases, flexibility facilitates the implementation of federal programs in ways that reinforce state and local reform efforts and allow for increased coordination across federal programs. Waiver authorities included in the legislation, which are administered either by the Department or by SEAs through the Ed-Flex program, make available the broadest kind of flexibility. The waiver authorities allow state and local educators to be exempt from federal requirements when exemptions promote better program implementation.

Although the legislation emphasizes holding all children to high standards, strong performance-based accountability provisions are included only in Title I.

Exhibit 11.1 highlights the key flexibility and accountability provisions in the 1994 legislation. These provisions and the programs they affect are used to describe the flexibility and accountability in the 1994 legislation. Their implementation provides useful lessons regarding what works and where modifications are needed.

EXHIBIT 11.1
WHAT ARE THE KEY FLEXIBILITY AND ACCOUNTABILITY PROVISIONS IN THE 1994 LEGISLATION?

Flexibility provisions allowing local discretion in program implementation:

- Title I of ESEA allows many more schools to implement schoolwide programs and eases restrictions so that schools can more easily serve students with special needs, such as limited-English-proficient and migrant students.
- The Eisenhower Professional Development Program (Title II, ESEA) was expanded so that, after a minimum appropriation for mathematics and science, educators may spend additional funds in other core subject areas.
- The Safe and Drug-Free Schools and Communities Act (Title IV, ESEA) expanded the range of drug and crime prevention activities that schools and communities can support with program funds.
- Innovative Education Program Strategies (Title VI, ESEA) allows districts to spend funds in any of eight broad funding categories.
- The Bilingual Education Act (Title VII, ESEA) now allows districts receiving certain Bilingual Education Act funds to use the funds for improving services for LEP students systemwide.
- ESEA Title XI allows districts and schools to use up to 5 percent of their ESEA funds to carry out coordinated services projects to meet the needs of students and their families.

Flexibility for coordination with state and local reform efforts:

- The Technology Literacy Challenge Fund (Title III, ESEA) ties funding for technology to long-range, home-grown state and district plans for implementing technology in schools and classrooms.
- The Public Charter Schools Program (Title X, ESEA) expands choices for parents and students by providing seed money for the development and initial implementation of public charter schools.
- Goals 2000: Educate America Act provides funds to states and districts to design and carry out state-designed standards-based school reform initiatives.
- School-to-Work Opportunities Act provides funds to states and partnerships within states to design and implement coordinated state systems for preparing youth for careers and further education and training.

Flexibility for coordination across federal programs:

- Consolidated application provisions in ESEA allow states and districts to coordinate program activities by submitting a single, consolidated application for multiple programs supporting elementary and secondary education, rather than separate applications for each program.
- Provisions allowing the consolidation of administrative funds from various elementary and secondary education programs help states and districts streamline program administration.

Waivers from federal requirements:

- Waivers of most ESEA program requirements are available to states and school districts when the requirements hinder innovation or improvement efforts.
- Ed-Flex (Education Flexibility Partnership Demonstration Program) has given 12 states the authority to grant waivers of most ESEA requirements to districts in their states.

Major accountability provisions:

- Title I of ESEA requires that accountability be based on states' individual accountability systems, which are to include high-quality assessments aligned with challenging state content and performance standards for students.
- Title I of ESEA requires states to identify low-performing districts, and districts to identify low-performing schools. States must take action to strengthen districts that consistently do not make "adequate yearly progress" toward achievement goals for students. Districts must take similar actions for schools consistently not making adequate yearly progress.
- The Eisenhower Professional Development Program and the Safe and Drug-Free Schools and Communities Act require states to develop and use performance indicators to monitor the success of program implementation.
- Waiver recipients must outline measurable education improvement goals they expect to achieve under their waiver and report on progress made towards reaching the goals.
- Ed-Flex states must monitor and annually report on the progress of districts operating under waivers.

How Well Is Flexibility Operating in Practice?

Although significant flexibility is available to, and being taken advantage of by, educators, the exchange of increased flexibility for increased accountability has not yet been fulfilled because performance accountability systems are not sufficiently in place. Flexibility and accountability should work together to promote innovative and effective approaches to improving student achievement. The following four sections discuss progress toward meeting the desired goals of the flexibility and accountability provisions mentioned earlier.

1. Do States, Districts, and Schools Have More Flexibility within Program Implementation? **States, districts, and schools report that the 1994 legislation provides them with more flexibility than previous legislation and that they are using this flexibility. They also indicate that the flexibility provided is sufficient to meet their needs.**

Example of the Use of Flexibility Provisions

The Technology Literacy Challenge Fund (TLCF) (Title III, ESEA) provides funds for acquiring technology for schools and gives funding priority to high-poverty districts and districts with the least access to technology while giving states almost complete discretion over how to meet these priorities and to distribute the funds. The Oregon Department of Education observed that its neediest districts had the fewest resources for planning how to use technology. A waiver of certain TLCF requirements permitted the Oregon Department of Education to use TLCF funds to make planning grants to districts, in order to help these districts develop comprehensive, long-range technology plans. Coupled with the flexibility already in the program, the waiver enabled the state to do what it believed would increase the number and quality of technology plans implemented under TLCF.[1] As a result, between 1996 and 1999, the number of Oregon districts that had developed technology plans rose from 30 to 186.[2]

Schools have significantly more flexibility. Title I schools, in particular, have more flexibility as a result of expanded opportunities to implement schoolwide programs. The schoolwide program option greatly increases schools' flexibility by allowing eligible schools to consolidate funds from Title I and several other federal education programs. Such consolidation supports whole-school improvement rather than targeting program services to individual students. Research has shown that, with a focus on changing the entire school, not just improving the performance of the lowest-achieving children, schools serving even the most disadvantaged students can succeed.[3] Schoolwide programs allow schools to use Title I funds to pursue activities such as adapting curriculum, training all teachers, and pursuing whole-school reform to better meet the needs of the most disadvantaged students.

By lowering the poverty threshold for schoolwide eligibility under Title I, the 1994 law gave many more schools the option to implement schoolwide programs, as shown in Exhibit 11.2:

EXHIBIT 11.2
SCHOOL ELIGIBILITY FOR AND IMPLEMENTATION OF SCHOOLWIDE PROGRAMS

School Year	1994-95	1997-98
Poverty threshold	75%	50%
Number of eligible schools	9,751	22,799
Number of schoolwide programs	4,583	16,662
Percentage of eligible schools implementing schoolwide programs	47%	73%

Sources: U.S. Department of Education, *Mapping Out the National Assessment of Title I: The Interim Report* (Washington, DC: Author, 1996), 42.

Stephanie Stullich, Brenda Donly, and Simeon Stolzberg, *Targeting Schools: Study of Title I Allocations within Districts,* draft (Washington, DC: U.S. Department of Education, Mar. 1999).

In addition, since 1994, 174 districts have requested and received waivers allowing otherwise ineligible schools in their districts to operate schoolwide programs.[4] Title I schools still operating targeted-assistance programs also have more flexibility for serving migrant, preschool, neglected and delinquent, homeless, and limited-English-proficient students. The current legislation enables all Title I schools to better streamline services to students under several programs—a departure from the earlier approaches that were more categorical.

Provisions similar to Title I schoolwide provisions were included in the 1994 reauthorization of the Title I program for Neglected or Delinquent Youth and the Bilingual Education Act (Title VII of ESEA). These provisions allow correctional facilities serving eligible youth to operate services institutionwide, rather than requiring that all services be targeted only to particular youth. They also allow districts receiving certain Bilingual Education Act funds to use the funds for improving services for LEP students systemwide.

The Eisenhower Professional Development Program (Title II, ESEA), once limited to mathematics and science education, now allows funds to be used for professional development in all core academic subject areas once a threshold amount devoted to professional development in mathematics and science ($250 million) is reached. According to a national survey of district Eisenhower coordinators, whereas all districts funded professional development activities in mathematics and science, 60 percent also used Eisenhower funds to support professional development in other content areas, most frequently in English/language arts, social studies, and technology. Evaluators indicated that the expansion of the program has not changed its central role in funding professional development in mathematics and science;[5] the flexibility does not appear to have compromised basic program purposes.

Similarly, the 1994 legislation expanded the range of drug and crime prevention activities schools and communities can support under the Safe and Drug-Free Schools and Communities Act (Title IV, ESEA). ESEA Title XI allows districts and schools to use up to 5 percent of their ESEA funds to carry out coordinated services projects to meet the needs of students and their families.

States and districts benefit from the flexibility in Goals 2000, according to state and local officials interviewed in a recent GAO study. Goals 2000 funds support the achievement of state and local reform goals through systemic, standards-based reform. Almost every state official interviewed reported that "flexibility is key to Goals 2000's usefulness in promoting state education reform" because states are permitted to decide how the funds should be used, and states are in the best position to make this

determination because they are at different points in the reform process. **Most of the state officials did not desire any changes in the amount of flexibility provided by Goals 2000.**[6]

2. Has Coordination across Federal Programs and with Federal, State and Local Reform Efforts Improved? **Increased flexibility has provided states, districts, and schools with more opportunities to coordinate their reform efforts**. However, it is too early to assess the extent to which these opportunities influence program activities.

The 1994 legislation encourages integration of federal programs with state and local efforts by building on state initiatives. For example, although Goals 2000 promotes systemic, standards-based reform, it provides only broad parameters for participating states to follow. Each participating state developed a plan for Goals 2000 that was based on its state plan for systemic, standards-based reform. Within each Goals 2000 state, districts that receive Goals 2000 funds integrate their Goals 2000 efforts with their local school improvement efforts. Similarly, the application process for the Technology Literacy Challenge Fund (TLCF) requires each participating state to develop a long-range plan for the use of technology in its schools. Although TLCF state plans must follow limited criteria outlined in the law, they are basically home-grown. TLCF funds support states and their districts in carrying out their plans for education technology. Other programs, including School-to-Work, also are designed to achieve the purposes of federal programs by integrating federal efforts with state and local efforts in mutually reinforcing ways.

Although consolidated planning promotes well-coordinated reform, its potential has not yet been fully realized. Consolidated application provisions encourage better coordination by allowing states and districts to coordinate program activities by submitting a single, consolidated application for several federal education programs supporting elementary and secondary education, rather than separate applications for each.

In 1995, all but one state took advantage of the option under Title XIV of ESEA to submit a five-year consolidated application for federal education programs. Many state administrators who were involved in developing their states' consolidated plans felt that consolidated planning provided greater flexibility in the use of time, resources, and staff, and were enthusiastic about the opportunities for greater effectiveness created by consolidated planning. However, according to an early evaluation of ESEA, state program administrators were just beginning to learn how to work together effectively to maximize its potential.[7]

Evidence of more collaboration in program implementation is emerging. According to a recent study, state administrators of federal programs are increasing the extent to which they coordinate across programs. The majority of state administrators surveyed for each of nine federal education programs reported that, since January 1997, their programs had conducted specific administrative or operational activities in coordination with other federally funded programs.[8] Specific collaborative activities they most frequently mentioned were monitoring local projects, providing technical assistance to districts and schools, and making decisions about allocating program resources to districts and schools.[9]

District use of consolidated planning varies considerably by state. Approximately half of the states require districts to submit consolidated plans when they apply for federal funds, with other states typically providing this option to districts.[10] Recent estimates suggest that 60 percent of districts nationally are using this option. According to a national sample of districts, small, poor districts are more likely to submit a consolidated application, and large, poor districts are less likely, than the average

district. Of those districts that submitted consolidated plans, over three-quarters, including 90 percent of low-income districts, claimed that consolidated planning makes federal programs more effective.[11]

Use of provisions allowing the consolidation of administrative funds is more limited. The 1994 ESEA also added provisions allowing state education agencies (SEAs) (where the majority of their resources came from nonfederal sources) and districts to consolidate administrative funds for certain federal programs. Only some of the eligible states opted to consolidate their administrative funds and, among those that did, several chose to consolidate funds for fewer than the allowable number of programs.[12] Some states have not allowed districts to consolidate administrative funds for federal education programs. Only a small number of districts in states allowing this option have consolidated administrative funds for several federal programs.[13]

Nearly all districts in a recent study reported doing more integrated planning and service delivery across different federal programs, and three-quarters indicated that their administrative burdens had decreased.[14] The 1994 legislation's decreased emphasis on keeping track of categorical programs and funds separately supports this shift to better coordination between programs and more comprehensive reform efforts. A 1998 evaluation of the Eisenhower Professional Development Program similarly revealed that Eisenhower and Title I programs are better coordinated at the district level, but also showed that some of the coordination remains at a more superficial "sharing" level and has yet to lead to true collaborative programming.[15] **Although current law supports better coordination between programs, states, districts, and schools are really just beginning to pursue this goal.**

Concerning charter schools, since 1995-96, the first year of the federal Public Charter Schools Program, the number of charter schools nationally has risen from fewer than 300 to over 1,000 today.[16] As public schools that operate under negotiated agreements exempting them from state and local regulations, charter schools have significant flexibility in how they operate. By providing seed money for the implementation of charter schools, the Public Charter Schools Program (PCSP) has helped nearly three-fourths of all operating charter schools overcome one of the most common barriers for charter schools – lack of sufficient funds for start-up costs. When counting charter schools in the planning stages, almost 80 percent have benefited from the PCSP.

3. Waivers from Federal Requirements. **In cases where the 1994 legislation does not provide sufficient flexibility, waivers fill the gap**. Waivers provide exemptions from federal requirements in cases where an applicant can demonstrate that an exemption likely will enhance the effectiveness of the federal program in improving teaching and learning. Under general waiver authorities, the Department may grant waivers to SEAs and school districts. Under the Ed-Flex Program, the authority to grant waivers of certain federal education requirements is delegated to 12 SEAs. Each participating Ed-Flex state must develop processes for granting waivers of federal requirements similar to the waiver review process operated by the Department. Districts in both Ed-Flex states and other states may receive waivers. The key difference is that in Ed-Flex states, districts request waivers from their SEAs rather than from the Department. Ed-Flex gives states the opportunity to integrate waivers of federal requirements with other state initiatives. It also makes states responsible for holding waiver recipients accountable for improving teaching and learning. A second difference is that the U.S. Department of Education may grant waivers of requirements that apply to SEAs, whereas Ed-Flex does not allow participating SEAs to grant waivers of requirements that apply to themselves. The U.S. Department of Education's waiver authority became effective in March 1994. The 12 Ed-Flex states received their waiver authority between February 1995 and July 1997.

Overall, from a potential annual pool of 52 state education agencies and approximately 15,000 school districts, the Department has received fewer than 650 waiver requests since waivers were initiated in 1994. In response, the Department has granted 358 waivers.[17] Thirty percent of the waiver requests submitted to the Department were returned because the applicants did not need a waiver: The law as written already provided applicants with the flexibility to proceed with their school improvement initiatives without a waiver.[18] As shown in Exhibit 11.3, the majority of waivers requested have related to only a few provisions.

EXHIBIT 11.3
WAIVERS GRANTED BY THE U.S. DEPARTMENT OF EDUCATION

Type of Waiver	Number of Waivers
All Waivers	358
Title I schoolwide eligibility	84
Title I targeting requirements	178
Eisenhower Professional Development Program Math/science priority	11
Other	85

Source: U.S. Department of Education, unpublished data, March 1999.

Nearly one-quarter of the waivers granted to districts by the Department allowed otherwise ineligible schools to implement the more flexible schoolwide programs, rather than targeted assistance programs, under Title I. Over one-half of the waivers granted were targeting requirements under Title I that direct funds to the highest-poverty schools in a district. Several waivers of the requirement to spend a minimum amount on mathematics and science under the Eisenhower Professional Development Program also were granted.

The experiences of Ed-Flex states with waivers resembles the Department's experience: Most Ed-Flex states have granted relatively few waivers,[19] and a large proportion of the waivers granted by Ed-Flex states allowed the implementation of schoolwide programs in otherwise ineligible schools. In a recent survey, Ed-Flex administrators in 9 of the 12 Ed-Flex states said that they believed their state and districts were underutilizing the Ed-Flex authority. The most common explanation offered was that the reauthorized programs are sufficiently flexible.[20] Exhibits 11.4 and 11.5 show the numbers and types of waivers granted by Ed-Flex states.

EXHIBIT 11.4
WAIVERS GRANTED IN ED-FLEX STATES FROM 1995 to 1997[21]

Ed-Flex States	Date Waiver Authority Received	Number of Programmatic Waivers Approved for Districts	Number of Statewide Waivers Approved
Colorado	July 1996	6	1
Illinois	July 1997	1	NA
Iowa	July 1997	0	NA
Kansas	August 1995	20	NA
Maryland	May 1996	22	0
Massachusetts	September 1995	14	NA
Michigan	July 1997	0	1
New Mexico	November 1996	1	0
Ohio	November 1995	14	2
Oregon	February 1995	2	NA
Texas	January 1996	40	8
Vermont	March 1996	10	1
Total Ed-Flex Waivers		**130**	**13**

Source: General Accounting Office, *Ed-Flex States Vary in Implementation of Waiver Process* (Washington, DC: General Accounting Office, 1998), 10.

Note: ED-Flex state reports for 1998 will be submitted in April 1999.

Thirteen of the waivers granted by Ed-Flex states are statewide waivers, which are available to be taken advantage of by many or all districts in the state and which, as a result, may affect multiple districts even though they are counted only as one waiver. For example, Ohio granted a statewide waiver which, under certain conditions, allows any school in the state to implement a schoolwide program, even if the school falls below the minimum poverty threshold for operating a schoolwide program. Ohio also granted a statewide waiver of the minimum amount of Eisenhower Professional Development Program funds that must be devoted to mathematics and science. Over 200 districts in Ohio took advantage of these statewide waivers.[22]

EXHIBIT 11.5
TYPES OF WAIVERS GRANTED BY ED-FLEX STATES FROM 1995 to 1997

Type of Waiver	Number of Waivers Granted to Districts	Number of Statewide Waivers Granted
All Waivers	130	13
Title I schoolwide eligibility	90	2
Title I targeting requirements	25	5
Eisenhower Professional Development Program math/science priority	12	3
Other	3	3

Sources: U.S. Department of Education, *Goals 2000: Reforming Education to Improve Student Achievement* (Washington, DC: U.S. Department of Education, 1998), 16.
General Accounting Office, *Ed-Flex States Vary in Implementation of Waiver process* (Washington, DC: General Accounting Office, 1998), 10.

4. Is the Flexibility in Federal Education Legislation Sufficient and Promoting Innovation? **The relatively small number of waivers requested from the Department and in Ed-Flex states suggests that federal programs are sufficiently flexible to meet local needs. Other evidence supports this conclusion.** In a recent survey, a majority of state administrators for seven federal programs indicated that the 1994 reauthorization gave them more administrative flexibility.[23] In an earlier study, many state administrators of federal programs—particularly those for the Eisenhower Professional Development Program, the Safe and Drug-Free Schools and Communities Program, and ESEA Title VI—indicated that they did not perceive that ESEA had increased their flexibility because their programs had always been flexible.[24] With respect to districts, over three-fourths of districts nationally—and all low-income districts—in a recent survey said that federal programs are more flexible now than they were prior to the 1994 legislation.[25] Significantly, 84 percent of districts nationally said that if they were given even more flexibility in federal programs, they would offer services no different from those they provide now.[26]

Many of the federal requirements that concern district officials are not related to education programs, but instead pertain to health, safety, or civil rights requirements that affect schools and should not be compromised. A 1998 GAO report on flexibility initiatives indicates, for instance, that removing asbestos from school buildings or making buildings accessible for people with disabilities is burdensome to districts. District officials also noted that the process for determining students' eligibility for free and reduced-priced lunch, under the Department of Agriculture program, is paper-intensive and challenging.

In addition, certain problematic accounting requirements appear to originate at the state level, not from federal laws or regulations. At least one state requires districts to submit more documentation for the uses of certain federal funds than federal regulations require. It can be difficult for districts to distinguish between state and federal requirements, especially when a state requirement arises from the implementation of a federal program.[27] Despite federal support and significant flexibility in federal legislation for charter schools, flexibility for many charter schools is limited by state charter schools laws that do not allow schools to control basic functions such as budgeting, acquiring services, hiring and firing, and operating outside the local school district.

It will take more time, and a more seamless implementation of the flexibility and accountability provisions, however, before sufficient evidence will be available to determine whether the 1994 laws have led to more innovation. The greater flexibility provided by ESEA is intended to promote innovation in educational reform. Schoolwide Title I programs, for example, encourage the implementation of innovative, research-based ideas for education that serve to improve the whole school while directing extra support to students with the greatest educational needs. Schools switching to schoolwide programs can focus on redesigning their whole education program rather than on providing supplemental services for at-risk students. Under other programs also, school staff research and then implement innovative research-based improvement methods. The Comprehensive School Reform Demonstration Program, enacted in 1997, further encourages the use of research-based strategies in Title I and other schools. The Safe and Drug-Free Schools and Communities Act (ESEA, Title IV) emphasizes more multifaceted solutions to the problems of drugs and violence in schools because the 1994 reauthorization expanded the range of school- or community-based education and prevention activities that can be funded under the program. Waivers also encourage innovation; they allow educators to focus first on identifying the most promising strategies for improving academic achievement and then on requesting waivers to remove obstacles to their efforts.

How Is Accountability Operating in Practice?

Are Better Systems in Place for Holding Districts and Schools Accountable for Student Achievement?
Although the 1994 legislation greatly increased the amount of flexibility available to state and local education agencies, with the exception of ESEA Title I it did not simultaneously put in place better systems for holding districts and schools accountable for results. For most of the education programs authorized or reauthorized in 1994, accountability systems have not been established. Even for Title I, important components of states' Title I accountability systems are not due to be completed until 2000-01. As mentioned earlier, an important feature of the 1994 legislation was the desire to exchange greater accountability for increased flexibility. The development and implementation of the accountability side of the exchange have been problematic and have proceeded at a much slower pace.

ESEA requires that states, districts, and schools shift to a performance accountability system for Title I and two other federal education programs, as illustrated in Exhibit 11.6. The previous legislation required all states to use national norm-referenced tests for accountability under Title I. In contrast, the current Title I calls for states to develop and use assessments aligned with challenging state content and performance standards to define "adequate yearly progress" for schools and districts. The assessments are to be administered to all students, including those with limited English proficiency and disabilities, using appropriate accommodations. States are to use the results to identify districts that fail to make adequate yearly progress, and districts are to use the results to identify failing schools. Title I also requires states and districts to provide technical assistance to districts or schools that have been identified as in need of improvement, and to follow technical assistance with stronger corrective action if student achievement in a district or school does not improve. States and districts must use state definitions of adequate yearly progress in their annual progress reports to the Department on programs operating under waivers. Goals 2000 similarly emphasizes that states use assessments and accountability systems aligned with state standards.

EXHIBIT 11.6 ACCOUNTABILITY AT A GLANCE		
1994 Federal Program	**Accountability Requirement**	**Implementation Issues**
Title I	Accountability systems are to be aligned with state standards. Schools and districts not making "adequate yearly progress" (AYP) must be identified. Corrective actions must be taken in cases of consistent low performance. States and districts must report student performance results to the public.	States are required to define AYP. No state has notified the Department that it has made final the assessments that make up the basis for determining AYP. States have until 2000-01 to do so; they use transitional assessment systems in the interim. During this transitional period, states and districts must report "statistically sound" student performance results.
Eisenhower Professional Development	States are required to develop and use program performance indicators.	Compliance with this requirement varies considerably by state.
Safe and Drug-Free Schools and Communities Act	States are required to develop and use program performance indicators.	Compliance with this requirement varies considerably by state.
Waivers and Ed-Flex	States are required to report on the progress of waiver recipients in meeting goals and improving student achievement.	Where state accountability systems do not provide school-level data on student performance, it is difficult to track progress.
All other programs	**No performance-based accountability system is required by law.**	
Source: U.S. Department of Education.		

During the current federally mandated transition period, until 2000-01, accountability under Title I is somewhat loose. By the end of the transitional period, all states are required to use their state assessments for Title I accountability purposes. Currently, no state has notified the Department that its assessments have been made final, and some states are refining their existing definitions of "adequate yearly progress." Change and variation across states in their definition of adequate yearly progress make it difficult to hold states and districts accountable for progress made using federal funds. Some states are employing measures other than state assessments to monitor schools' yearly progress. Some school districts have set their own temporary definitions of adequate yearly progress, using proxy measures that are not always well aligned with state standards. Furthermore, the lack of uniformity or comparability across these state systems does not ensure that all students, particularly limited-English-proficient and poor children, are held to the same standards.

The Safe and Drug-Free Schools and Communities and Eisenhower Professional Development programs require state program managers to develop and use program performance indicators to measure their outcomes. State performance reports and other Department records indicate that states have fulfilled this requirement. During the first several years following the 1994 legislation, however, many state administrators reported that their offices had not developed performance indicators.[28]

With respect to Ed-Flex, accountability also is loose. Ed-Flex states are expected to monitor the progress of their districts operating under a waiver, and the Department has asked Ed-Flex states to report on student performance in districts that have operated under a waiver for at least two years. Although the impact of Ed-Flex remains unclear, it does appear that states with strong state accountability systems are better able to support implementation of Ed-Flex. A recent GAO study noted, "While some states have put in place specific goals (such as improving student achievement in math and science) and established clear and measurable objectives for evaluating the impact of waivers (such as improving average test scores by a certain number of points), many Ed-Flex states have not established any goals or have defined only vague objectives."[29] For example, in one state where a district was

granted a schoolwide program waiver, only nonspecific goals were reported, such as "a commitment to the identification and implementation of programs that will create an environment in which all students actualize academic potential."[30] State reports on Ed-Flex have reflected this paucity of measurable goals.

In the absence of strong or uniform accountability systems, monitoring the effect of waivers granted by the Department has also been hampered. Because most waivers granted have been related to Title I requirements and because "adequate yearly progress" under Title I is one of the few performance-based accountability measures for federal education programs, the Department used "adequate yearly progress" to assess the impact of waivers through 1998. However, the difficulties pertaining to "adequate yearly progress" just noted also presented challenges to measuring the impact of waivers. According to 1998 state reports on waivers, 72 percent of schools for which information was provided made adequate yearly progress in 1995-96, and 67 percent of schools affected by waivers made adequate yearly progress in 1996-97. However, information was not provided on 50 schools for 1995-96 and on 86 schools for 1996-97.[31]

State administrators have not yet fully converted their monitoring systems for districts and schools to reflect the central message of ESEA: Accountability for student performance is replacing the compliance monitoring of the past.[32] The emphasis on performance accountability needs to be sharpened. Although the framework created by ESEA, Goals 2000, and other federal education programs signals that districts and schools will be held accountable for the academic achievement of their students, this message has not permeated all school systems. State administrators, as a group, failed to use student performance data to assess program success. [33] A survey of state program administrators showed that, except for identifying districts and schools in need of improvement for Title I, student performance data continue to be used most frequently for reporting purposes[34] instead of for program improvement. Moreover, very few state administrators report that monitoring visits are triggered by information about student performance. Instead, state administrators seem more likely to visit districts that invite them.[35] District administrators similarly reported that assessments and accountability were among the areas in which they were making the least progress and needed the most assistance.[36]

States and districts have made progress in implementing the Title I accountability provisions. In 1994-95, all states used national, norm-referenced tests for Title I accountability purposes.. These tests were not typically aligned with challenging state or national standards. As of the 1997-98 school year, 14 states had designed their own assessments that were aligned with performance standards.[37] State administrators of six of nine federal programs included in a 1998 state survey reported that their programs made decisions or provided services on the basis of state-level data that identified failing schools.[38] Districts, too, are actively identifying schools needing help. Approximately two-thirds of large, poor districts and 20 percent of all districts have formally identified schools in need of improvement. Over 80 percent of districts nationally with such schools use "more professional development" as a strategy for helping schools in need of improvement. Other strategies that the majority of these districts use include having district staff spend more time in identified schools, more closely supervising school decisions, bringing in assistance from outside the district, and strongly encouraging the adoption of a new comprehensive model program.[39]

At the same time, implementation of the Title I accountability provisions remains limited. Identification of low-performing Title I schools is intended to spur improvement by identifying low-performing schools publicly, requiring increased attention to school reform, and providing external assistance and intervention. However, in 1998, 13 percent of principals of Title I schools did not know whether or not their schools had been identified as in need of improvement.[40] In the same survey, only 47 percent of principals of Title I schools reported that their schools had received additional technical

assistance or professional development after their schools had been identified as in need of improvement.[41]

Overall, the performance accountability provisions in the 1994 laws are less well implemented than the flexibility provisions.

What Results Have Been Achieved?

Two important measures of the success of the 1994 legislation exist. The first measure is whether student performance has improved, and the second is whether educational programs are better able to meet their intended purposes. Nearly all district administrators in a recent study claimed that the increased flexibility in the 1994 legislation had contributed to improved student outcomes.[42] However, because well-developed, standards-based accountability systems are not fully in place, it is difficult to confirm whether student achievement is improving programs or whether federal programs are better meeting their intended purposes. For most programs, it is simply too early to draw conclusions about student performance. However, the evidence presented in this chapter suggests that the legislation provides significant flexibility to states, districts, and schools to improve school programs, teaching, and learning.

The effectiveness of federal education programs in meeting their intended purposes provides the other key measure of the success of the flexibility incorporated into these programs. To gauge the impact of federal programs, the Department, through its Strategic Plan, has developed performance indicators for each program as well as overall objectives for the Department's efforts to improve education.

An important feature of flexibility is that it does not, in and of itself, lead to better outcomes. Although the goal of providing less restrictive funding for innovative school reform is an underlying purpose of ESEA, flexibility should neither obscure the underlying intent of federal education programs nor move the federal government toward general funding of education, which is the responsibility of states and localities.

Comparing Goals 2000 and Title VI of ESEA illustrates the importance of having clear expectations for the use of federal funds in conjunction with flexibility. Both programs are considered to be very flexible, yet Goals 2000 explicitly promotes systemic standards-based reform while Title VI provides relatively unrestricted funding to states and districts. Under Title VI, decisions about the uses of funds are most likely to reflect local priorities, with long-term district plans a close second in influence. State priorities are much lower on the list. Use of data on student performance also has little influence on district decisions about how to use Title VI funds.[43] Title VI funds are most likely distributed to all schools in a district with little targeting of funds to schools based on need (e.g., high-poverty or low-performance).[44] By comparison, Goals 2000 funds are used to support local activities that are much more heavily influenced by state policies and long-term district plans. Targeting of funds to individual schools under Goals 2000 also is more likely to be based on a desire by schools or teachers to participate or on the designation of schools as having low achievement.[45]

Goals 2000 funds, which are flexible but tied to clear purposes, appear to better support systemic school improvement. In contrast, ESEA Title VI more closely resembles general aid for schools. Title VI funds are much less likely than Goals 2000 funds to be used for activities related to

implementation of standards-based reform.[46] Goals 2000 clearly designates funds to promote standards-based reform while providing states and districts with significant latitude in determining how to meet program purposes within their local contexts. Title VI functions as a block grant, providing flexibility in how funds may be spent but identifying only broad categories of allowable expenditures, rather than specific priorities for the use of funds. In a 1998 survey, low percentages of local respondents cited standards-related activity as being supported by Title VI: 13 percent cited aligning curricula and instruction with standards, 13 percent cited providing professional development linked to standards, and 5 percent cited developing or adopting assessments linked to standards.[47] When Title VI funds have been used for professional development, they have supported a wide variety of topics; less than half of districts indicated that the Title VI-supported professional development focused on content or performance standards.[48] By contrast, 93 percent of respondents indicated that Goals 2000-supported professional development addressed standards or enabled students to meet state or district proficiency standards.[49]

Texas: A Combination of Flexibility and Accountability

Texas has effectively combined strong accountability and broad flexibility. While increasing individual school authority in the 1990s, the state strengthened its accountability system and increased the emphasis on high performance for all students. Texas rates its districts and schools on the basis of pass rates for all grades tested in reading, writing, and mathematics on the Texas Assessment of Academic Skills (TAAS), annual dropout rates for grades 7-12, and attendance rates for grades 1-12. Rewards and sanctions are distributed in accordance with ratings of "exemplary," "recognized," "acceptable," or "low performing."

The system includes a number of significant features. All students in grades 3-10 are tested in reading, writing, and mathematics. Districts and schools must demonstrate that they have met the state's performance and dropout targets overall and for four student subgroups: African Americans, Hispanics, whites, and economically disadvantaged youth. In addition, the percentage of students who must pass the TAAS to achieve a particular rating has been raised by 5 percent annually since 1996. Finally, the state tracks school performance using a large database that makes results available to the public through the World Wide Web.[50]

In 1996, Texas became one of 12 states with the authority to grant waivers of federal education legislation to its districts and schools through the Ed-Flex program. Texas has tightly linked its actions under Ed-Flex to the state accountability system and has used its Ed-Flex authority more often than any of the other Ed-Flex states. Texas districts and schools that receive waivers are held accountable for high student performance. In addition to being required by federal law to demonstrate specific, measurable improvements in order to continue operating under a waiver, Texas districts and schools operating under waivers must exceed "acceptable" academic performance, as defined through the state accountability system.

What has Texas accomplished? In over half of the districts that received waivers, gains made during the first year were significant enough to meet the expected gains for year 2 of the waiver. In many cases, student performance gains exceeded the state average. Gains on the TAAS for African Americans and economically disadvantaged students in districts and schools with waivers exceeded the statewide average gains for these groups.[51]

Options for Improving Flexibility and Accountability

Although considerable progress has been made in implementing the flexibility and accountability provisions in ESEA, obstacles still exist.

1. States, districts, and schools need to build their capacity to take full advantage of their new flexibility. The early study of ESEA and Goals 2000 showed that many state program administrators "were still learning how to communicate with each other and break down categorical program barriers."[52] Schools also are having difficulty adjusting to the changes in the law: "When you lift the [regulations], it's hard to convince [schools] that they can use flexibility to their own advantage and they won't be cited by an auditor," said one Title I state administrator.[53] It will take time for state and local district officials to become better collaborators in delivering education programs. Especially in an environment where opportunities for local innovation have replaced more prescriptive requirements, schools need support from state and district officials in developing the capacity to design, implement, and monitor the impact of schoolwide reform.

2. Better accountability systems must be put in place so that progress toward federal program goals can be measured. Because many federal programs operate at the state level without clear performance indicators, it is difficult for state administrators to gauge the effectiveness of such programs. Under Title I, the delay—until 2000-01—in the implementation of clear definitions of "adequate yearly progress" recognizes that designing assessments to measure student achievement against high academic standards is a complex, time-consuming task. At the same time, the delay may compromise the effectiveness of Title I. Only when solid accountability systems are in place can the impact of federal programs be determined.

Integrating data systems can make accountability systems more useful and reduce paperwork. Most states do give the public some information about their public schools, but this information is rarely comparable from state to state. Several states are working to develop statewide integrated data collection systems for their administration of federal and state programs in such a way that schools and districts can compare their results. To help streamline data collection, the Department is embarking on a five-year effort to create, by 2004, an Integrated Performance and Benchmarking System (IPBS) for federal elementary and secondary education program reporting. The IPBS will provide states, districts, and parents with accurate, comparable information about how their schools and districts compare with other schools and districts nationwide. This effort will reinforce the strengthening of accountability systems.

3. More and better technical assistance is needed. The Department needs to continue providing technical assistance to states in implementing the 1994 laws, and states must be equipped to provide technical assistance to their districts and schools. Surveys indicate that districts rely more on state education agencies than on the Department for technical assistance.[54] Although it is appropriate for districts to rely more on their states, the Department must ensure that states have the capacity to help their districts implement federal programs. States have had some success guiding schools in how to take full advantage of Title I through the creation of Title I support teams. However, a recent study revealed that slightly less than half of the state Title I directors surveyed reported that their school support teams were able to meet the needs of all the schools in their purview.[55] To help states and school districts take advantage of the new flexibility and accountability provisions, the Department offers technical assistance through its program staff, its Comprehensive Regional Assistance Centers, the Eisenhower Regional Consortia, and the Goals 2000 Parent Assistance Centers, among other resources. In addition, the Comprehensive School Reform Demonstration Program, passed in 1997, should increase technical assistance by fostering the implementation of research-based school reform models in schools in need improvement.

Given that federal programs appear flexible enough to meet the needs of states, districts, and schools, it is important to focus on how to best support local reform and to encourage further progress by states and

districts in the development and use of performance accountability systems. The Department and state education agencies can provide leadership and technical assistance for building the capacity of districts and schools. The Department can also help states develop and use program performance indicators and complete their assessments by offering technical assistance and helping states share information. Congress also has a role to play. It is vital to increase the emphasis on accountability systems in reauthorizing ESEA and in no way interrupt the progress that states have made in developing accountability systems. The Title I accountability deadline of 2000-01 should be firm, and states, while given significant flexibility, should be required to meet specific program goals for their uses of federal funds. By supporting states and districts as they build their capacity for innovation and results-based reform, Congress and the Department can make good on the promise of ESEA and other 1994 legislation to help all children achieve to high standards.

The nation will not successfully achieve increased accountability in exchange for increased flexibility until performance outcomes for all of the major programs are specified, state assessments are completed, and all aspects of the school improvement system are in place. The conclusions presented in the next chapter suggest in more detail how this might be accomplished.

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[10] U.S. General Accounting Office, *Flexibility Initiatives Do Not Address Districts' Key Concerns about Federal Requirements* (Washington, DC: U.S. General Accounting Office, 1998b) 56.
[11] Jane Hannaway and Shannon McKay, *Local Implementation Study, District Survey Results 1: Flexibility and Accountability* (Washington, DC: Urban Institute, 1998) 67.
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[13] U.S. General Accounting Office, 1998b, 55.
[14] Hannaway and McKay, 1998, 62-63.
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[25] Hannaway and McKay, 1998, 14.
[26] Hannaway and McKay, 1998, 64.
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[30] U.S. General Accounting Office, 1998c, 3.
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[51] U.S. Department of Education, *Goals 2000: Reforming Education to Improve Student Achievement*, Washington, DC: U.S. Department of Education, April 30, 1998) B-6-B-7.
[52] Anderson and Turnbull, 1998, 16.
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12. CONCLUSIONS

This report has evaluated the effects of the 1994 legislation enacted in the Elementary and Secondary Education Act amendments, Goals 2000, and School-to-Work legislation. This concluding chapter considers the implications of the findings drawn from the preceding chapters according to the three organizing principles used throughout the report:

1. How well are federal programs achieving their desired outcomes?

2. Are programs being effectively implemented with respect to such issues as targeting to the populations most in need, delivery of high-quality services, and coordination of services across programs?

3. Do programs demonstrate sound performance accountability?

It then offers options for consideration by Congress and other policymakers, which could strengthen the impact of federal programs by improving their implementation and accountability.

Implications of Findings on How Well Programs Are Achieving their Desired Outcomes

1. Continue to support and accelerate the pace of standards-driven reform that states and local school districts are implementing.

Since the early 1990s, at-risk students have progressed on NAEP in reading and math, and all students have, on average, improved in math, although not in reading. These improvements in students' outcomes, particularly for at-risk students, are encouraging, but represent only a start at reducing the large performance gap between disadvantaged and more-advantaged students.

These findings suggest that standards-driven reform should be given a chance to fully take hold while the nation continues to assess progress in student performance. At the same time, the pace of reform must accelerate if the achievement gap is to be significantly reduced for those students most at risk of school failure.

2. Reorient program implementation to focus more on results.

Many ESEA programs are demonstrating improvements in certain performance areas consistent with standards-driven reform, but continued improvements in performance are required if federal programs are to contribute to greater results. For example:

- The U.S. General Accounting Office has documented that Goals 2000 has helped virtually all states to adopt content standards. However, at this time less than half the states have developed performance standards and fewer than 10 states are able to report three consecutive years of performance data. Also, a majority of classroom teachers in high-poverty schools feel ill equipped to adequately teach to the standards in the classroom.

- The Eisenhower program has strengthened certain program features characteristic of good professional development, but only about half of the participants typically report that they acquired significant new knowledge from their training.

- The Technology Literacy Challenge Fund and other federal programs have made a substantial contribution to nationwide progress in getting computers into the classroom, but there is much less progress in enabling teachers to effectively use those computers and little information about students' level of computer literacy.

- Annual surveys show that crime in schools has declined in recent years and drug use is also starting to decline, but the rates remain above those in the early 1990s.

- The number of school-to-work partnerships has greatly expanded and more students in school-to-work systems see a connection between their academic coursework and career interests. However, systematic attention to high-level academics in school-to-work job experiences is rare.

These findings suggest that legislative attention is needed to help programs focus on areas of weakness and more effectively apply research-based practices.

3. Clarify current program objectives.

Some programs lack clarity of purpose concerning the expected outcomes of program resources, which hinders their ability to effectively focus on achieving clear outcomes. These programs include the following:

- *Magnet Schools Assistance Program.* Clarification is needed on whether the MSAP should continue to focus on reducing only minority-group isolation or also include reducing isolation of ethnic or socioeconomic groups. The new requirement that the use of race in student selection must satisfy strict scrutiny by the courts (i.e., by using race-neutral alternatives) raises further concerns over how the magnet program can effectively operate to achieve reduced minority-group isolation. A related issue is whether the goal of MSAP should include assisting in the desegregation of school districts, as well as in the desegregation of schools.

- *Technology Innovation Challenge Grants.* This program currently addresses two related but distinct objectives. One is to support projects that enable school systems to go to scale in effectively implementing a systemwide delivery of instructional technology. A second objective is to demonstrate whether and what types of technology innovations are able to produce significant gains in student outcomes. With respect to the second purpose, few projects are now evaluating the impact on student achievement; legislative clarification could focus projects on assessing the effects of instructional technology on student learning.

- *Eisenhower Professional Development.* Reauthorization could address whether the program should continue to focus on mathematics and science training or should include professional training for teachers in other content areas, such as reading. At the same time, evaluations of the Eisenhower program have shown that its focus on the content areas of math and science is a source of strength in helping teachers align curriculum with content standards. To retain a content focus, possible options include (1) adding a separate set-aside to the Eisenhower Professional Development program for reading or other subjects or (2) including content-focused training as part of related legislation, as in the Reading Excellence Act.

- *School-to-Work.* It is not clear whether this program was designed to assist all students, students not bound for college, or students who are interested in a career-oriented educational program.

Implications of Findings for the Quality of Program Implementation

Findings about the quality of program implementation concern effectively targeting resources, using research-based strategies, improving technical assistance, and simplifying and coordinating programs.

1. Improve the effective targeting of federal resources.

Rationale
The federal government has a historic responsibility to help ensure adequate educational opportunities to students in high-poverty communities, schools, and racial/ethnic population groups. Title I is the major program to reach these communities and populations, but a case can be made for other programs also to give priority to the neediest populations.

Broad options for consideration
a. Clarify provisions to target federal programs within states to the neediest populations, including high-poverty schools. Decide whether to give states discretion over program participation with appropriate performance accountability and reporting or, instead, to target funds on federal priority populations.

- **State discretion.** Under one conception of the federal role, federal ESEA support is intended primarily to achieve the National Education Goals through supporting statewide performance improvements on these goals, with states setting and reporting on statewide progress and having broad discretion to fund projects to fulfill these goals.

  Under such an approach, federal program outcomes could be defined in such terms as:

  - Improving the qualifications of a state's teachers through professional development,
  - Reducing statewide rates of students' illegal substance use and school violence, or
  - Improving access to and use of instructional technology in each state.

  Advantages of a statewide approach are that it is simple, gives the states flexibility to target their perceived needs, and would allow for greater targeting on highest-quality projects.

  One argument against a state-level approach is that it could weaken the targeting of federal funds, which are currently shown to reach poor children and schools at much higher rates than do state funds. As the U.S. General Accounting Office has shown, federal funds provide an average of $4.73 per poor student nationwide for every $1 provided to each student, while state funds provide an additional $0.62 per poor student in state funding. A state-level approach is also likely to dilute federally supported services. Moreover most states currently lack assessments and reporting that disaggregate the performance of populations traditionally targeted for federally supported services. Such disaggregation is a critical component in any performance accountability system to ensure that special populations are benefiting from federal resources.

- **Targeted program participation.** Under the targeted program approach, federal funds would have to be disproportionately directed to federal priority populations, especially high-poverty schools. For example, states might be required to allocate funds to groups of districts and schools generally in accordance with the distribution of federal funding.

  Under a targeted program approach, states would report on grantee outcomes, such as:

  - Improving the qualifications of teachers who participate in federally supported professional development, including improvements by high-poverty schools;
  - Reducing rates of illegal substance use and school violence in schools receiving federal support, including improvements by high-poverty schools; and
  - Improving access and use of instructional technology in schools receiving federal support, including improvements by high-poverty schools.

  Major disadvantages of the targeted approach are that states would no longer have so much discretion to target their perceived needs or the best projects.

b. Call on states to report publicly on how they distribute federal funds to schools serving high concentrations of low-income and other federally targeted students. States would report their distribution of funding according to participation of high-poverty schools or other priority participants. This could be achieved through direct accounting for federal funding or through sampling of program participants. The advantage of public reporting of funding allocations is that it leaves decisions over funding in the hands of each state, but it makes the distributional results of state funding a clear and open process.

c. Create "Catch-up Consolidated Grants" focused on achieving high performance for high-poverty schools. Under this approach, a part of reauthorization funding would explicitly focus on the multiplicity of federal grants potentially going to the highest-poverty schools (those with 75 percent or more poor children) to improve teaching and learning. These grants include those in the original 1994 ESEA reauthorization, such as Title I (education for disadvantaged), Title II (Eisenhower), and Title III (Technology Literacy Challenge Fund). There are also new grant programs including the Reading Excellence Act, 21st Century Schools, and GEAR UP. Although the highest-poverty schools could benefit from participation under each program, collectively the aggregate effects of separate applications and tracking of funds would be quite burdensome.

An alternative is to provide a set-aside for consolidated support for these schools to implement research-based schoolwide models to support the purposes of programs such as 21st Century Learning Communities, Reading Excellence Act, Technology Literacy Challenge Fund, GEAR UP, and Class-Size Reduction. To receive consolidated "Catch-up Grants" funds:

- Highest-poverty schools would compete under a consolidated grant set-aside to support schoolwide approaches. Proposals would describe how schools plan to carry out the purposes of the programs folded into "Catch-up Grants" such as improving early reading, as in the Reading Excellence Act program; running a program to start middle-school students thinking about college and planning for their futures, as in GEAR UP; reducing class size; or choosing a combination of such approaches.

- In turn, recipient schools would **be held accountable for continuing to work toward better student outcomes** as defined through annual outcome and service improvement targets. States

and districts would have to pledge to assist their highest-poverty schools by identifying resources and providing peer reviewers to work with the schools on a sustained basis.

2. Effectively implement federal program services.

Rationale
Programs that are not applying the best knowledge of promising and effective practices to their own projects are wasting taxpayer money and short-changing participants. While some progress in improving the quality of ESEA services is evident, serious implementation weaknesses remain. For example:

- The Eisenhower program has intensified its interventions, but district-implemented Eisenhower services remain less intense and less reliant on newer, more effective forms of professional development than services supported by the grants to institutions of higher education and nonprofit organizations.

- School-to-Work implementation has focused too much on short-term, less-intensive interventions that involve large numbers of students rather than on in-depth, structured programs and curriculum changes that are more difficult to undertake.

- Technology funds are building the schools' computer and Internet capacity, but need to focus on developing the staff capacity to effectively apply these systems in the classroom.

- Even Start programs produce demonstrable improvements in student achievement, but still need to improve certain key components related to effective instruction and parental involvement.

- Some recent progress has been observed in reducing student drug use and rates of violence, but it is hard to measure the extent to which that progress may be attributed to the Safe and Drug-Free Communities and Schools Act because funds are spread thinly, averaging around $6 per student.

Broad options for consideration
a. Adopt "Principles of Effectiveness" as an explicit legislative provision across all major federally funded programs. The Department, in administering the Safe and Drug-Free Communities and Schools Act, is responding to concern about weak project interventions identified by evaluations by requiring that districts follow Principles of Effectiveness. Recipients of SDFCSA funds are to develop measurable goals and objectives, implement research-based programs, and evaluate programs regularly.

Reauthorization could extend the concept of Principles of Effectiveness to other programs and help focus limited resources on high-quality programs and enlarge the available pool of strategies of demonstrated effectiveness. Examples of how the Principles of Effectiveness could be applied to other programs include the following:

- Further clarifying the need for adequate intensity of services in programs such as Even Start, Eisenhower Professional Development, Public Charter Schools Program, and drug and violence prevention in high-need schools;

- Adopting effective instructional or training approaches, such as requiring all programs to show how they link and support instructional content, requiring instructional technology recipients to adequately address teacher preparation, or requiring the Eisenhower program to include an emphasis on programs with collaborative "active learning" opportunities;

- Recognizing the importance of program retention in such programs as Even Start, which has relatively low rates of retention; and

- Requiring grantees across all programs to use data on the quality and effects of their professional development activities for continuous improvement as well as for accountability purposes.

b. Introduce competitive awards. To the degree that recipients of federal funds are assured automatic funding solely on the basis of need, such as through the Safe and Drug-Free Schools program, the incentives for high-project quality are diminished. Basing awards on the quality of the projects' proposals could enhance competition and produce better proposals.

Alternatively, awards that depend on potential recipients' applying for the awards may not achieve the desired targeting on areas most in need. The Eisenhower program typically serves teachers who volunteer for the program rather than targeting teachers who may be less inclined to improve their practices; as a result, teachers in high-poverty schools are underrepresented. The effectiveness of an expanded competitive award process might be improved by setting aside funds for separate competitions for high-need areas and by contingency funding of projects in which continuations depend on demonstrated progress.

3. Modernize the system of technical assistance.

Rationale
Although the 1994 ESEA reauthorization consolidated some technical assistance authorities, the seamless network of support initially envisioned has yet to develop. Providers of federal assistance often remain isolated from each other and from the direct delivery of technical assistance by state or locally funded providers. However, new tools have been developed that could make such a network possible. The Internet is now a widely used avenue for information sharing and collaboration. Initial designs for an electronic information network can be drawn from pioneering states, such as Maryland, Oregon, and Washington State.

Effective information transfer must rely on the continuous development of high-quality, accurate information about effective practices to be shared. An electronically modernized, integrated, and sound assistance system could be supported by the following three components:

Broad options for consideration
a. Support an integrated national electronic education network. A federally supported network would serve as an electronic resource center for sound education information. Specialty area clearinghouses, built around a state-of-the-art ERIC system, could support the provision of information electronically. The network could provide schools and school systems with productivity-enhancing tools. The network might also make it easier for the collaboration and information sharing that now take place within state electronic systems among universities, school administrators, teachers, and parents to occur regionally and nationally.

b. Better integrate the Comprehensive Centers, the Eisenhower Consortia, and the R*TECS into a seamless system of regionally based comprehensive centers, complemented by national specialty centers linked to state and community providers. Regional technical assistance centers supported through various federal authorities generally receive high customer ratings for quality. However, they do not constitute a system, their capacity is limited, and they do not necessarily focus on places with the highest need. Reauthorization would emphasize that federal assistance centers should serve as "training the trainer" models and work through state or local assistance collaboratives rather than directly provide assistance themselves. Furthermore, the Comprehensive Centers should focus directly on issues of

federal program implementation, including performance measurement to support continuous progress, a core program component that is weak among most programs.

Specialty Centers, designed to disseminate research-based instructional materials and reform models in priority areas such as mathematics and science, reading, and the uses of technology in instruction, would work nationally, including electronically, with one to two centers serving the entire country on a particular topic.

c. Support "Grants for Evaluating Model Effectiveness." Rigorous independent evaluations of models would provide objective information that would be disseminated through the electronic network and Comprehensive Centers. Competitive awards could be made to support independent testing of model approaches, using evaluations that meet rigorous standards of quality. The encouragement to apply research-based models is becoming increasingly common in federal programs, as in the Comprehensive School Reform Demonstration Program and the Reading Excellence Act. Yet most models currently lack objective information with which to assess their impact or even to determine the conditions under which they are likely to be successful. Evaluation grants would provide objective validation of models that could be screened through expert panel reviews and shared with states, districts, and schools to make optimum choices as they pursue their reform efforts.

4. Improve coordination across programs.

Rationale
Legislation that is acceptable when looked at in isolation may not be optimal when all parts are combined and the aggregate effects are considered. Administrative burden accumulates, and the sheer number of pieces of legislation may unintentionally diffuse efforts, confuse purposes, and fragment service delivery. Legislation may be improved by clarifying objectives and criteria for effective services.

This report has highlighted several areas of improvement:

- Almost all states and 60 percent of districts have submitted consolidated plans for federal programs. Of those districts that submitted consolidated plans, three-quarters claimed that consolidated planning makes federal programs more effective, and almost 90 percent of low-income districts agreed with this statement.

- At the district level, nearly all districts surveyed in a recent study reported doing more integrated planning and service delivery across different federal programs. Three-quarters indicated that their administrative burdens had decreased.

But further improvements to simplify the programs are needed.

Broad options for consideration
a. Simplify and clarify federal authorities. Certain program areas are a priority for review and improved integration through coordinated funding or consolidation of purposes:

- Programs that provide major support for professional development, including Eisenhower Professional Development, Goals 2000, and Innovative Educational Program Strategies (Title VI-A), all provide relatively broad assistance. In addition, the Technology Literacy Challenge Fund and Title VII professional development programs support professional development in areas of high need.

- Information technology programs—the four major elementary and secondary programs (the Technology Literacy Challenge Fund, Technology Innovation Challenge Grants, Star Schools and the E-rate) plus seven other smaller authorities—all support the expansion of technology in schools.

- Technical assistance is supported through various authorities with different foci, including assistance to parents, technology, math, and science.

b. Strengthen coherence across programs. A number of programs with different purposes have common program components that would benefit from being made more coherent across programs. Two program components in particular should be reviewed:

- Professional development provisions that could be made similar by incorporating common language that is consistent with high-quality practices, including professional development provided through programs such as Title I and Title VII.

- Parental involvement provisions to incorporate a common set of policies and requirements for schools to develop a single set of parental policies and compacts to cover all ESEA programs that now have distinct parental involvement provisions.

Implications of Findings for Performance Accountability: Creating an Integrated Performance and Benchmarking System

Rationale

Efforts are under way in several program offices of the Department of Education to consolidate data collections and to bring them on-line electronically. In addition, most states already provide the public with information about their public schools in the form of "school profiles" or "report cards"; however, this information is rarely comparable from state to state. Several states are already developing statewide integrated data collection systems for their administration of federal and state programs in such a way that schools and districts can compare themselves with others. Many are working toward the goal of a better-integrated performance and benchmarking data system. Such an **Integrated Performance and Benchmarking System (IPBS)** could enhance federal and state efforts by developing a set of mutually needed core measures and performance indicators, and could increase the compatibility of the data collection systems. The goals of an IPBS would be to:

- Make federal education data more coherent, timely, and comparable across units and over time;

- Increase the usefulness of federal data to states, districts, and the general public;

- Facilitate the development of annual school, state, and district report cards that allow comparison and benchmarking between states and districts; and

- Reduce the burden of federally required program data collections and surveys.

Broad options for consideration

The Department of Education could work with states and districts on a long-term project to develop an IPBS. Such a system would be developed over the next five years, to replace the currently overlapping and antiquated federal-state education program reporting system by the year 2004. It could:

- Be based on a core set of program performance indicators incorporated in ESEA reauthorizing legislation, as well as in state program performance reports;
- Use the core set of indicators as a basis for streamlining other duplicative and inconsistent program data collections;
- Facilitate standardization of measures for program performance indicators across states, similar to the Common Core of Data;
- Make possible aggregation of data across schools, districts, and states, to provide national estimates, as well as comparable benchmarking between sites;
- Use modern electronic reporting methods, by having schools and districts sign on to an Internet site and report the data needed for the performance indicators;
- Include data quality standards for collection, aggregation, and reporting of data;
- Include grants and technical assistance to states to develop or improve their performance data reporting systems to be able to participate in IPBS; and
- Be designed to ensure the complete confidentiality of student information.

The IPBS would be designed in partnership with various states and state education organizations, piloted as a demonstration project in a few partner states, and then revised and gradually expanded to all states.

A Final Note

The Department's evaluations of Goals 2000, Title I, and other Elementary and Secondary Education Act programs have shown that federal programs have contributed to the nation's progress in implementing standards-based reform. Many of the key elements for achieving the democratic ideal of excellence and equity for all are just being put in place. Other reform elements need to be strengthened if challenging standards are to reach all classrooms and help all children reach high expectations. Evaluations have documented how federal programs can stimulate and work in tandem with the best efforts of states and local school systems to improve education for our nation's children. They have also shown where federal programs, and education in general, must address shortcomings in delivering on the promise of high-quality schooling for all students. Educational improvement is a work in progress and benefits from a careful analysis of its implementation and early impact.

APPENDIX

KEY PROVISIONS OF THE 1994 AMENDMENTS TO THE ELEMENTARY AND SECONDARY EDUCATION ACT, THE SCHOOL-TO-WORK OPPORTUNITIES ACT, AND THE GOALS 2000: EDUCATE AMERICA ACT

Improving America's Schools Act (IASA)—the 1994 Amendments to the Elementary and Secondary Education Act of 1965

Title I—Helping Disadvantaged Children Meet High Standards

Title I is intended to boost the academic success of low-achieving students in high-poverty schools. It is distributed by formula to states and districts, which distribute funds to schools according to poverty levels, with the highest-poverty schools funded first, as required by federal guidelines.

Part A, Improving Basic Programs Operated by Local Educational Agencies supports districts in providing high-quality opportunities for students in high-poverty schools to meet the same challenging state content and performance standards that all children are expected to meet.

Title I allows many schools to implement schoolwide programs and eases restrictions so that schools can more easily serve students with special needs, such as limited-English-proficient and migrant students. A provision requires states to establish a system of school support teams to provide information and assistance to schoolwide programs.

Title I requires that accountability for Title I be based on states' individual accountability systems. Schools failing to meet adequate yearly progress benchmarks in student achievement must spend 10 percent of their annual Title I grants (or the equivalent) on professional development, but, in general, professional development is an option rather than a requirement under Title I. When Title I schools invest in professional development, it must
(1) reflect research on teaching and learning; (2) improve teaching in academic areas; and (3) involve school staff, including regular and Title I teachers, in planning professional development.

Part A funding can be used to support preschool programs for children who are most at risk of failing to meet the state's challenging performance standards. The 1994 reauthorization required that, beginning in FY 1997, local educational agencies that choose to use Part A funds to provide preschool services must ensure that these services comply with the Head Start Program Performance Standards. These standards are extensive and call for, among other things, developmentally and linguistically appropriate services, parental involvement in program planning, and support for children's social and emotional development, cognitive and language skills, and physical development. Districts that choose to use Part A funds to operate or expand preschool programs using the Even Start model are exempt from this requirement.

Part B, Even Start Family Literacy Program provides family-centered education programs for low-income parents and children from birth through age seven. The program is designed to promote achievement of the National Education Goals and to help children and adults from low-income families to achieve to challenging state content and performance standards. Local programs are implemented by building on existing community resources to create a new range of services. Each local program must

include high-quality, intensive instructional programs that promote adult literacy and empower parents to support the educational growth of their children, offer developmentally appropriate early childhood educational services, and prepare children for success in regular school programs. The legislation also calls for local projects to provide special training for staff to develop the skills necessary to work with parents and young children in the full range of program services.

Title II—The Eisenhower Professional Development Program

The Eisenhower program is the largest of the Department of Education's efforts to develop teachers' competence. Part B awards funds to states and districts on the basis of a formula, and to institutions of higher education and nonprofit organizations through state-run competitive grant programs. The funds are earmarked for providing teachers with opportunities to learn more of the content and processes of teaching core subject areas, particularly math and science.

Allowable activities are wide-ranging and include workshops and conferences, study groups and collaboratives, task force work, and peer coaching. The activities may be sponsored by the district, a school, an institution of higher education, or other nonprofits. The Eisenhower Program requires efforts supported by its funds to reflect appropriate attention to the characteristics of effective professional development.

To cultivate professional skill and knowledge, Title II requires that professional development be based on solid research on teaching and learning, include strong academic and pedagogical components, and be of sufficient duration and intensity to have a positive, lasting impact on teachers' classroom performance. The law gives priority to math and science, but provides for other core subjects as well.

To bolster accountability and provide data for continuous improvement, Title II requires states and districts to develop and use performance indicators to measure the quality and effects of professional development.

Title III—Technology For Education

The Technology Innovation Challenge Grants (TICG) program works to develop the knowledge base for innovative uses of educational technology to improve teaching and learning. Under this program, Congress authorizes competitive five-year grants to local education agencies that are part of a consortium of community partners for technology development and demonstration projects. Besides focusing on areas with high concentrations of poverty, the program favors projects that include ongoing professional development, directly benefit students, and are sustainable. The grants may be used to acquire and use educational technology to support school improvement; improve student learning (including professional development and professional support); purchase hardware, software, and linkages; and provide educational services for adults and families.

The Technology Literacy Challenge Fund (TLCF) provides leadership and leverage to enable states and districts to more effectively plan, coordinate, and integrate the use of educational technology to improve teaching and learning. With this program, all states receive technology funds in accordance with their Title I funding. States must distribute the money on a competitive basis to local education agencies with high need or high poverty. These grants may be used for the same activities as the Technology Innovation Challenge Grants. The states must submit statewide technology plans that outline long-term strategies for financing technology and ensure that school districts with the greatest need are not left

behind. In addition, local educational agencies must submit a three- to five-year technology plan with their applications for subgrants. The Technology Literacy Challenge Fund ties funding for technology to long-range, home-grown plans by states and school districts.

The Star Schools program provides support for distance learning, including paying for distance learning equipment, instructional programming, and technical assistance. This distance learning is provided by means of satellite, broadcast television, and, increasingly, the Internet. Funding is granted on a competitive basis for telecommunications partnerships that include a local education agency. When established in 1988, the program emphasized programs to benefit small rural schools. Increasingly, this has been augmented to increase learning opportunities for other students, including urban schools. In many cases this includes professional development and brings instructional resources to strengthen teaching in existing courses, or to make it possible for students to take courses (such as foreign languages or Advanced Placement mathematics) that would not otherwise be available in these schools. For some rural schools these courses are important in retaining accreditation and staying open. The program focuses on underserved populations, including people who are not literate, have limited English proficiency, or have disabilities.

Title III establishes a network of six **Regional Technology in Education Consortia.** R*TECs are required to (1) collaborate with states and districts on strategies for serving students with little or no access to technology; (2) provide information and recommendations on hardware and software currently available; and (3) provide technology-specific professional development to teachers, administrators, technology coordinators, and staff developers.

Title IV—Safe and Drug-Free Schools and Communities Act

The Safe and Drug-Free Schools and Communities Act (ESEA Title IV) expanded the range of activities that can be funded in school- and communitywide approaches to drug and violence prevention.

From the total appropriation, after funds are reserved for outlying areas, the Bureau of Indian Affairs, programs for Native Hawaiians, and evaluation of the program, the Department allocates the remaining funds to states, half on the basis of school-age population and half on the basis of ESEA Title I funding. Of each state's allocation, 80 percent is administered by the state education agency and 20 percent by the governor.

States are authorized to reserve funds for statewide initiatives. The remaining funds are subgranted to districts, based 70 percent on enrollment and 30 percent on "high need." Criteria for determining high-need districts are developed by each state and may include factors such as high rates of drug use among youth and high rates of youth crime victimization. High-need funds may go to no more than five districts or 10 percent of the districts in each state, whichever is greater.

Participating districts must use their funds to implement a comprehensive drug and violence prevention program for students and employees that includes activities to promote the involvement of parents and coordination with community groups and agencies. Within this context, districts are authorized to use their funds for a wide range of related activities.

Governors' funds flow to parent groups, community action and job training agencies, community-based organizations, and other public and private nonprofit organizations for community-based drug and violence prevention programs and activities. Governors must give priority to activities for children and youth who are not normally served by states or districts, or for populations that need special services or

additional resources (such as youth in juvenile detention facilities, runaway or homeless children or youth, and school dropouts). Governors may use some funds for program administration, and must use at least 10 percent for law enforcement education partnerships.

SDFSCA National Programs receive a separate allocation and support drug and violence prevention activities for students at all educational levels, preschool through postsecondary, through agreements with other federal agencies or through assistance to states, districts, institutions of higher education, and nonprofit organizations.

Safe and Drug-Free Schools and Communities Act programs mandate that states develop and use performance indicators to monitor their programs.

Title V—Promoting Equity

The **Magnet Schools Assistance Program (MSAP)** requires that districts that receive grants have either a voluntary or a court-ordered desegregation plan to support racial integration in MSAP-funded schools, and design schools that are capable of attracting students of different social, economic, ethnic, and racial backgrounds. MSAP funds may be used for planning, promotional activities, and for expenditures necessary for the management of programs in magnet schools that are directly related to the improvement of students' reading, mathematics, science, history, geography, English, foreign languages, art, music, or vocational skills. MSAP grantees are prohibited from using MSAP funds for transportation.

The Secretary gives priority to those applicants that (1) demonstrate greatest need; (2) propose new or significantly expanded magnet programs; (3) propose to select students for admission to the magnet schools on the basis of a lottery if schools are oversubscribed; (4) propose to draw on community involvement plans; and (5) demonstrate how the project will implement innovative approaches that are consistent with state and local systemic reform plans.

Title VI—Innovative Education Program Strategies

This extremely flexible program allows school districts to use funds to support school reform and educational innovation in any of the following nine categories:

1. Instructional technology
2. Instructional and educational materials
3. Education reform projects, including effective schools and magnet schools
4. Improving higher-order thinking skills and reducing school dropout rates
5. Programs to combat illiteracy
6. Programs for gifted and talented students
7. School reform activities consistent with Goals 2000
8. School improvement programs consistent with Title I
9. Professional development

Title VII—Bilingual Education, Language Enhancement, and Language Acquisition Programs

The Bilingual Education Act recognizes the special needs of students with limited English proficiency and provides funds to support teaching and learning for limited-English-proficient students. The Act provides funds for broad-scale improvement of services to LEP students. It provides discretionary grants to districts to improve, reform, and upgrade systemwide their approaches to serving LEP students through strategies such as curriculum development, development of education standards for LEP students, improvement of assessment procedures, and the use of educational technology. The Act also provides discretionary grants for schoolwide bilingual education or English as a Second Language programs and other special alternative instructional programs to schools with concentrations of LEP students. The Act also has a professional development focus and supports efforts to upgrade the skills of noncertified education personnel, teachers, and other educators who serve LEP students. In addition, the Act funds the National Clearinghouse for Bilingual Education and Academic Excellence Awards that promote the adoption and implementation of exemplary bilingual education, English as a Second Language and other programs that address the needs of LEP students.

Title VII (Bilingual Education) is funded at $224 million for competitive grants in 1999. Of that amount, $50 million in Subpart 3 (Part A) is allocated for training teachers and other educational personnel to prepare them to effectively serve students with limited English proficiency, primarily through grants to institutions of higher education. Professional development is allowed under all of the Part A, Subpart 1, programs (Bilingual Education Capacity and Demonstration Grants). In light of the fact that LEP students are often served by paraprofessionals who are bilingual, who have ties to the local community, and who often lack formal educational credentials, Title VII supports career ladder programs for uncertified bilingual personnel.

Title VIII—Impact Aid

Not addressed in this volume.

Title IX—Indian, Native Hawaiian, and Alaska Native Education

Not addressed in this volume.

Title X—Programs of National Significance

The **Public Charter Schools Program (PCSP)** requires that states that receive funds have enacted charter school authorizing legislation. Charter schools in partnership with public charter granting entities use PCSP funds only to cover the start-up costs of planning, applying for, or launching a charter school.

In making grants, the Secretary must consider (1) the ways in which the proposed charter school program will assist educationally disadvantaged students; (2) the degree to which meaningful flexibility is afforded to charter schools by the state education agency; (3) the state charter school program objectives' ambitiousness, mechanism for assessment of objectives, and likelihood of achieving its objectives; and (4) the quality of the strategy for assessing the achievement of its objectives.

The Department reserves a fraction of PCSP appropriations for national activities, to provide charter schools with information about eligibility for federal funds and to fund research assessing the impact of charter schools on student achievement and other measures.

Title XI—Coordinated Services

Title XI allows districts, schools, and consortia of schools to use up to 5 percent of funds they receive under ESEA to develop, or to implement or expand, a coordinated service project to increase children's and parents' access to social, health, and education services.

Title XII—School Facilities Infrastructure Improvement Act

Not addressed in this volume.

Title XIII—Support and Assistance Programs to Improve Education

Part A establishes a network of 15 **Comprehensive Regional Assistance Centers** to provide support, training, and assistance to states, tribes, districts, schools, and other ESEA grantees. The long list of required topics for technical assistance includes (1) improving the quality of instruction, curricula, assessments, and other aspects of school reform, supported with funds under Title I; (2) implementing effective schoolwide programs; (3) meeting the needs of children served under ESEA, including migratory, limited-English-proficient, homeless, and Indian children; (4) implementing high-quality professional development activities; (5) improving the quality of bilingual education; and (6) creating safe and drug-free environments. Comprehensive Centers must target their services to high-poverty schools and districts, Bureau of Indian Affairs schools, and ESEA recipients operating schoolwide programs.

Part B, the **National Diffusion Network**, is not addressed in this volume.

Part C reauthorizes 10 **Eisenhower Regional Mathematics and Science Education Consortia.** The Eisenhower Consortia are charged with contributing to the improvement of mathematics and science education by (1) supporting the implementation of new teaching methods and assessment tools, (2) disseminating exemplary mathematics and science education instructional materials, and (3) coordinating resources for improving mathematics and science education. The Eisenhower Consortia serve mathematics and science teachers, administrators, and providers of professional development.

The School-to-Work Opportunities Act

The School-to-Work Opportunities Act provides grants to states and districts to implement school-to-work systems that enable any interested student to pursue a program of study that includes the following:

School-based learning. Partnerships are encouraged to create opportunities for career exploration, beginning no later than the seventh grade. By the end of eleventh grade, students should make an initial selection of a coherent sequence of courses (called a "career major" in the Act) that prepares them for either postsecondary education or employment in a broad industry or occupational area. These courses of

study should meet high academic standards as set by the state and offer students a chance to earn portable, industry-recognized skill certificates.

Work-based learning. Local initiatives are encouraged to provide participating students with adult mentoring and a range of work experiences, coordinated with their school curriculum and program of study. The work experience should provide progressively more advanced skill instruction and encompass all aspects of the student's chosen industry or career area.

Connecting activities. Partnerships are encouraged to help coordinate the interactions among schools, employers, and young people through assistance with recruiting employers, matching students with work experiences, and helping employers work with students.

The School-to-Work Opportunities Act establishes a **School-to-Work Learning and Information Center** that provides training and assistance to states and local partnerships. In addition, the STW Learning Center operates a **School-to-Work Technical Assistance Resource Bank**. States that have STW implementation grants receive a line of credit to "purchase" technical assistance services from a list of preapproved providers.

Goals 2000: Educate America Act

Title I—National Educational Goals

Not addressed in this volume.

Title II—National Education Reform Leadership, Standards, and Assessments

Not addressed in this volume.

Title III—State and Local Education Systemic Improvement

Goals 2000 provides funds to help states and districts develop and implement their own systemic education reforms to raise student achievement. States participating in Goals 2000 are asked to raise expectations for students by setting challenging academic standards for their students. Each Goals 2000 state and district develops its own comprehensive strategies for helping all students reach those standards. States and districts can use Goals 2000 funds for a wide range of activities that fit within their own approaches to helping students reach higher standards—upgrading assessments and curriculum to reflect the standards, improving the quality of teaching, expanding the use of technology, strengthening accountability for teaching and learning, and building strong partnerships among schools and families, employers, and others in the community. Goals 2000 includes a strong focus on preservice training and professional development related to reform for teachers.

Title IV—Parent Information and Resource Centers

Title IV authorizes up to one center in every state and outlying area. The PIRCs are charged with (1) increasing parents' knowledge of and confidence in child-rearing activities; (2) strengthening partnerships

between parents and professionals in meeting the educational needs of children from birth through age five, and (3) strengthening the working relationship between home and school. The PIRCs are required to spend at least a portion of their funding on two established parent programs: Parents as Teachers (PAT) and Home Instructional Program for Preschool Youngsters (HIPPY).

The Education Flexibility Partnership Demonstration Program (Ed-Flex)

The Education Flexibility (Ed-Flex) Partnership Demonstration Program was established by the Goals 2000: Educate America Act. In exchange for increased accountability for results, Ed-Flex provides greater state and local flexibility in using federal education funds to support locally designed, comprehensive school improvement efforts.

Ed-Flex gives partnership states the power to waive requirements of certain federal education programs, including the Title I program and the Eisenhower Professional Development program. Specifically, Ed-Flex allows the Secretary of Education to delegate, to up to 12 states, the authority to waive certain federal statutory or regulatory requirements affecting the state and local school districts and schools. A state that has developed a comprehensive school improvement plan that has been approved by the Secretary may apply for Ed-Flex. In addition a state applying for Ed-Flex must have the authority to waive its statutory or regulatory requirements, while holding districts and schools affected by the waivers accountable for the academic performance of their students.

Waivers

The Goals 2000: Educate America Act, the School-to-Work Opportunities Act, and the reauthorized Elementary and Secondary Education Act (ESEA) all contain general waiver authorities that allow the Secretary of Education to waive requirements of most ESEA programs and requirements of the Carl D. Perkins Vocational and Applied Technology Education Act in cases where a waiver will likely contribute to improved teaching and learning. In general, to receive a waiver, an applicant must address the following criteria:

1. Identify the statutory or regulatory requirements for which a waiver is requested;

2. Describe why the waiver is needed to improve student performance and what goals would be achieved under the waiver;

3. Describe how progress that would result from implementing the waiver would be measured;

4. Describe how interested parties were notified of the waiver request; and

5. Describe how similar state requirements would be waived.

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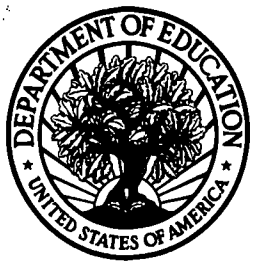

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