CHAPTER FIVE

YOUTH AND SCHOOL REFORM: FROM THE FORGOTTEN HALF TO THE FORGOTTEN THIRD

Jack Jennings and Diane Stark Rentner

Ten years ago, *The Forgotten Half* report focused much-needed attention on a generation of 16-24 year-olds whose future did not include college. Today, a decade later, it is very appropriate to reflect on what is different for teenagers in general, and especially for those highlighted in *TFH*.

During that decade the world has changed substantially and, therefore, today's youngsters face different prospects in their lives than did the youth of the late 1980s. During that momentous ten-year span, Communism collapsed in the U.S.S.R. and eastern Europe. As a result, dozens of nations turned to democracy as a form of government and to capitalism as the driving economic force. The former Russian empire embodied in the Union of Soviet Socialist Republics imploded and left the United States as the world's only super power. The economic threat of a surging Japanese economy receded as that country slipped into economic doldrums, and the United States emerged as the world's most competitive economy.

American military, economic, and political supremacy have been accompanied by social changes in the United States — many positive but some with negative side-effects. A smaller military, reduced in size because of the collapse of communism, has meant fewer opportunities for economic and social advancement for youth, especially minority youngsters. A competitive American economy has come about — in part — through layoffs and a shift to part time and contracted employment which does not offer health care, retirement, and other benefits.

We cannot as yet understand all the effects of these monumental changes in politics, economics, and sociology; but we can see that the lives that today's youngsters will lead will be different from the past, even the near past of the 1980s. One clear effect is greater economic insecurity which is leading young people — and their parents — to place a greater value on gaining more years of formal education. This chapter will concentrate on changes in the education system during the last ten years, while acknowledging fully that changes in the economy, in communities and in families have a great effect on how well children succeed in school. Other chapters of this report also explore these important changes.

Since the late 1980s, millions of words have been spoken and thousands of newspaper articles and reports have been written on the status of public elementary and secondary education. Moreover, hundreds of school reform laws have been enacted by legislatures, and numerous innovations tried in many schools. In fact, the period from the early 1980s to the late 1990s could be called the time of "the Great Debate" of the twentieth century on American public schooling. A major cause of this debate is concern about the quality of American education due to greater worldwide economic competitiveness and resulting domestic job insecurity.

A major consequence of this debate has been that many students in The Forgotten Half of the late 1980s were helped to learn more and encouraged to gain further education and training. Therefore, today there is only a "forgotten third," in the sense that only about one-third of high school graduates end their education at the termination of secondary school (See Figure 5-7). That is the good news. The bad news is that the ones left behind — those who do not gain any education or training after high school and those who do not even earn a high school degree — face a bleaker economic future than those of the The Forgotten Half" of the late 1980s.

This chapter discusses what has happened for the better in schooling and describes what needs to be done to help the ones left behind. Our focus is on the K-12 school sys-

tem, since other chapters deal with related developments affecting families, communities, and preparation for employment.

COMPREHENSIVE REFORMS

In 1983, anxiety about the condition of public education crystallized when the report titled *A Nation at Risk* was released. In language unusually bold for a government-sponsored document, it asserted: "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves." Although labeled unduly alarmist by some educators, the report put into words what many leaders in business and government then felt about the condition of American public schools — and those conclusions resonated with the public and the Reagan Administration. As already mentioned, many of those fears in the early 1980s resulted from a concern about declining American economic competitiveness in a world economy.

Making It Tougher to Graduate

The greatest immediate impact of that reformist mood on the schools and students was the toughening in the mid- to late-1980s of high school graduation requirements by state legislatures and state boards of education. A majority of the states raised their demands for the minimum course-work needed for graduation from secondary school. This was the first of two major comprehensive reforms in American public education during the last ten years.

As a direct result of this reform, high schoolers now are taking much more demanding course-work than their predecessors did in the early 1980s (See Figure 5-1). In 1994 fifty-one percent of students were taking what *A Nation at Risk* called a minimum program: four years of English and three years each of science, mathematics, and social studies. This contrasts with only 14 percent of students taking such course-work in 1982. Enrollments in algebra, geometry, trigonometry, calculus, advanced sciences and Advanced Placement courses are significantly higher than they were a decade ago.

Even if one were skeptically to assume some relabeling of courses by school officials, the overall differences are marked. It is clear that many more high school students have recently been taking more difficult academic course-work. Further, despite concerns that increased demands would result in higher dropout rates for high schoolers, the exact opposite has happened. More teenagers are staying in school or returning for their equivalency degrees than ever before. In 1996, only 11% of persons ages 16 to 24 had <u>not</u> completed high school or an equivalency degree, compared to over 14% in 1980.

High school vocational education has experienced the downside of this push for more academic content in the secondary school curriculum. Compared to the early 1980s, today's vocational student enrollments are notably reduced as a result of this emphasis on

Figure 5-1: Percentage of High School Graduates Earning the Minimum Number of Course Units in Core Courses, 1982, 1987, 1990 and 1994

Characteristics	"New Basics" curriculum			
	1982	1987	1990	1994
Total	14.0	28.3	39.6	50.6
Race/ethnicity				
White	15.5	29.3	40.6	53.6
Black	11.5	24.1	41.5	44.7
Hispanic	6.7	16.8	30.4	43.8
Asian/Pacific Islander	21.3	45.6	48.7	56.6
American Indian/Alaskan Native	6.5	24.6	21.6	43.6

SOURCE: 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,* 1996; *The Condition of Education* 1996, p. 98.

more demanding academic course-work. In 1982, 26.9% of high school seniors reported that they were in a vocational program, while only 11.7% reported such enrollment ten years later. A basic reason for this shift away from vocational education is that high school vocational courses frequently are electives; and with increased academic demands being placed on students without an increase in the length of the school day, many students do not have enough time to enroll in vocational courses in addition to the newly-mandated academic course-work.

Standards-Based Reform*

In 1988, when *TFH* was published, these requirements for more academically demanding high school course work were beginning to result in a shift of students to more challenging subjects, but since the changes had only recently been enacted by state legislatures or mandated by state boards, the evidence of change was not as dramatic as can be seen today. In the absence of signs of dramatic change and in the face of stagnating national test scores, many political and business leaders — and some educators — became anxious about the lack of progress being made in improving the public schools. Therefore, leaders began a push for states and local school districts to hold students to higher academic standards.

Raising academic quality thus came to mean not only prescribing the completion of more rigorous course work for graduation from high school, but also defining the levels of academic content that students should master at particular grade levels. Kentucky, Delaware, Maryland, and Vermont were early leaders in writing clearer and more demanding standards for what they expected their schoolchildren to know and be able to do. By 1996 forty-nine states had begun to write academic standards or to implement them in their public schools. These changes have come to be known as *standards-based reform,* the second comprehensive school improvement movement of the last ten years in American public education.

National encouragement to raise academic standards resulted from the adoption by the nation's governors of the first-ever national goals for education in 1990 and Presidents George Bush and Bill Clinton's proposals for national standards and tests, as well as for modest federal aid to states and school districts to raise the quality of their education. These national efforts were complementary to state and local efforts to raise standards, reinforcing what the states were initiating on their own with prodding from their governors, business leaders, and the media.

Today, the states are at far different stages of standards-based reform. Some have not even finished writing their standards, while some have been testing schoolchildren for seven to eight years based on the higher expectations contained in more rigorous standards. Despite their varying progress in implementing higher standards, the future for many states — as they continue with standards-based reform — can be discerned from what is occurring in the leaders.

Kentucky rewards schools with grants if they have raised student achievement and plans soon to penalize them if they have not. Maryland determines which schools should be placed on a watch list for state intervention based on student results from the state assessment. Using student performance on the Texas Assessment of Academic Skills (TAAS), along with attendance rates and dropout rates, schools in Texas are rated as "exemplary," "recognized," "acceptable," or "low-performing." At least 35% of a school's students--including 35% of the school's black, Hispanic, and low-income students--must pass each component of TAAS or it will fall into the "low-performing" category. If a school continues to be low-performing for several years in a row, the state can "reconstitute" the school.

After holding schools accountable for the results of their students on state tests, the next step is for students to be held accountable individually for meeting higher standards. Such accountability reforms will have direct and substantial effects on teenagers in high schools. For example, the Maryland State Board of Education recently adopted a requirement that high school students, early in the new century, will have to pass a set number of examinations in order to graduate. Michigan will soon require that high-schoolers pass a demanding exit examination if they are to earn a diploma, and the New York State Board of Regents voted to require that *all* students will have to pass the "Regents Exam" which has traditionally been taken only by college-going students. Virginia and other states are moving in the same direction.

* For a fuller discussion of the national debate surrounding standards and assessments, see *Why National Standards and Tests* by John F. Jennings. Thousand Oaks, CA: Sage Publications, 1998.

In early 1998, it is too early to tell exactly how the course of standards-based reform will go. In Maryland and other states, parents have voiced concerns that students will be held to higher standards and denied a high school diploma without being adequately prepared for the examinations and without having several chances to pass the tests. As a result of these complaints, the Maryland State Board of Education adopted a policy to improve teaching and learning when it adopted its requirements for exit examinations from high school. In Michigan, the state legislature made some modifications in the provisions of the exit examination because some students opted out of taking the test, but the state legislature still retained the test. In Virginia, many educators complained that the more demanding requirements are being instituted without adequate teacher training and other aids.

To summarize, there have been two comprehensive school reforms during the last ten years and these are having, or will have, major effects on high school students. The course work requirements for graduation from high school have been increased in many states and school districts, and higher academic standards are being implemented in most states to measure the success of schools and students in mastering knowledge. The first reform is far advanced with direct results already evident among the students highlighted in *The Forgotten Half*. The second reform is still evolving with its major effects on students yet to be seen, as states grapple with issues of testing, accountability, teacher preparation, and equity. Although not fully implemented as yet, standards-based reform — if it continues on track — will have even greater impact on high school students than have the increased demands for academic course-work.

Both of these comprehensive reforms are meant to prod the public schools to improvement, through the first reform's requirements for completion of more demanding course work for graduation and through the second reform's raising the rigor of the academic content of schooling and measuring achievement of that content in tests. Increasing requirements and raising expectations for students can be very helpful in improving schools, but they must be accompanied by changes in the quality of teachers, fairer distributions of funding, and additional opportunities for students to master the curriculum.

The severe problems faced by many large city school systems are a particular drag on comprehensive school reform. As the January 1998 *Quality Counts '98* from *Education Week* pointed out, while over 60 percent of students in non-urban school districts scored at the "basic" level on the National Assessment of Educational Progress's reading, mathematics, and science exams, only about 40 percent of students in urban districts met that standard. Indicative of broader equity concerns and the effects of poverty, an Educational Testing Service study found that, in schools with minority enrollments of over 90 percent, the ratio of students to computers is 17 to 1, while schools nationally have about one computer for every ten students. Further, the study includes a survey of seniors from the Class of 1996 which found that 54 percent of white students had taken courses in computer literacy compared with 41 percent of black and Puerto Rican students.

Those facts about inequities in educational opportunity show some of the serious challenges facing the implementation of comprehensive reforms. The next sections will discuss some of the changes which reformers have sought to bring about in schools, in funding, and in the preparation of teachers. These should be seen as complementary to comprehensive reforms as, in many respects, they are meant to address the inequities inherent in American education.

SCHOOL-BASED REFORMS

During the last ten years, while the two comprehensive, system-wide reforms were being implemented, particular schools were the focus of other efforts to bring about change. These included networks such as the Coalition for Essential Schools and the High Schools That Work project. Other reform efforts involved linkages between high schools and community colleges fostered by the Tech-Prep program and schools involved in the "choice movement."

Coalition of Essential Schools

One of the most interesting phenomena of the last decade has been the creation of reform "networks" among schools and school districts. Often organized by a university professor who advocates a particular way to bring about improvement in schools, these leaders have sought to broaden the effects of these changes by connecting with like-minded teachers, principals, and superintendents in other schools and school districts.

Most of these networks involve elementary schools, because reformers' experiences have shown that it is easier to change an elementary

school than it is a high school, in part because of the departmental nature of secondary education. The Coalition of Essential Schools, organized in 1984 by Theodore Sizer of Brown University, took on a more difficult set of problems by focusing on high schools, although elementary and middle schools have since joined. The Coalition seeks to bring about improvement by dealing with the relationship among students, teachers, parents and the curriculum, plus the structural changes needed to make that relationship work better. The Coalition emphasizes that change must come from within the school, that there is no other way to bring about improvement. Sizer explains his philosophy thus: "Our research suggests that you're not going to get significant, long-term reform unless you have subtle but powerful support and collaboration among teachers, students, and the families of those students in a particular community." Approximately 800 schools participate in the Coalition.

High Schools That Work

The High Schools That Work (HSTW) project deals exclusively with secondary schools. Initiated by Gene Bottoms of the Southern Regional Education Board, HSTW began in the southern states and has now spread to every region of the country, involving about 550 high schools. The idea behind HSTW is that schools blend the best from the college preparatory curriculum with vocational and technical studies of high quality. Schools join this network if they agree to raise the academic rigor of course-work for all students, especially those who are in a vocational track, and to give those students who need it extra assistance to meet the higher standards. Schools must also agree to eliminate the general track and to improve counseling on careers for all students. Every year, test scores are collected to determine the effectiveness of the project as well as to provide schools with valuable information that they will use to make improvements in the program.

The Tech-Prep Movement

A broader and looser movement than the HSTW project and the Coalition for Essential Schools is Tech-Prep. Its basic concept is to coordinate education and training in high schools and postsecondary institutions, such as community colleges and technical colleges, in order to allow a student to proceed smoothly from courses that are less complex to those that are more demanding and which build on what has been learned earlier. Articulation agreements about course work are entered into by high schools and postsecondary institutions as the way to achieve this progression of academic and skill training. Although such agreements had been used prior to 1990 in some states and localities, Tech-Prep received a major boost that year when the Carl Perkins Vocational Education Act was amended to provide federal financial assistance to all states to carry out such programs. In the fall of 1995 there were more than 1,000 Tech-Prep consortia of high schools and postsecondary institutions with approximately 740,000 students participating in school year 1994-95.

The School Choice and Charter Movements

The "choice movement," another effort to change individual schools, has several facets. Open enrollment among public schools in one school district allows students to opt to attend whatever school he or she wishes within certain restraints, such as space and racial balance. Thousands of school districts throughout the country now permit this choice for students, especially high schoolers. Magnet schools, frequently organized around a theme such as science and technology or arts, are a form of open enrollment.

Charter schools are a more advanced form of choice. These schools vary greatly by state in their structures, with some states only permitting charters which are controlled by local school districts and with others permitting charters to operate independently of school districts. The concept is that all of these public schools will be freer to experiment, being bound by fewer regulations and administrative strictures than regular public schools. Charter schools are growing in popularity as more state legislatures authorize them or enlarge the number permitted. In 1998, there were 784 charter schools in 32 states and the District of Columbia. Sixteen states allow charter schools to operate as independent entities. In 12 states, only local school boards can grant a charter; in the 13 other states and the District of Columbia, many agencies have the authority to grant charters. The U.S. Department of Education estimated that less than a quarter of charter schools were secondary schools in the 1995-6 school year, although it cautioned that some charters were ungraded or kindergarten through grade 12 (K-12).

To summarize again, the system-wide movements for change of the last decade have been occurring at the same time as efforts to improve individual schools. These efforts have operated separately from one another since they

are premised on different approaches to reform. The systemic reformers generally believe that change must occur throughout the whole system and that the levers of change are state laws, regulations and assessment systems. The individual school reformers, by contrast, believe that true improvement in schooling only occurs when teachers and administrators change the way they act within the school buildings and that this new way of thinking must come about through their desire to change, not through state laws, tests or regulations.

Although these two mechanisms approach reform from different perspectives, they should be seen as complementary. System-wide efforts to bring about change will flounder if individual teachers and administrators are resistant. Changing schools one-by-one may not be possible due to a lack of motivation on the part of some teachers and administrators. Furthermore, system-wide changes are having a broad impact; but mandates for change have their limits, since teacher training and student assistance must be brought in as a complementary set of activities. Individual schools can change, but "light-house" schools frequently do not help to improve whole systems, and so a broader effort can help to spread good practices. The years ahead will show if it is possible to merge these two movements to bring about both widespread and consistent improvement in elementary and secondary education.

Furthermore, comprehensive academic reforms and school-based reforms — even if more fully implemented — would still not be enough to help all children to succeed. Some schools have a "culture of failure" which must be changed. Many states have unfair systems of school finance which deprive children of adequate classrooms and science laboratories. Too many teachers do not have a major or even a minor in the subjects they teach. Consequently, even more changes are needed than those described to this point.

OTHER APPROACHES TO REFORM

State Takeovers of School Districts

In some states, concern about the poor performance of some school districts has led to direct state action to bring about improvement. In New Jersey, the state has taken over the Newark and Jersey City school districts; in New York the state took over the Roosevelt school district; and in Ohio, Cleveland was placed under the control of a state administrator. Although the districts in these three states have all been large urban districts, two rural county school districts in Kentucky have also been placed under state control.

In other states, the legislatures have enacted laws which place failing urban districts under the control of the mayors. In Illinois the mayor of Chicago was given near complete control of the public schools, and in Cleveland the state is trying to extricate itself from direct control of the schools by giving the responsibility to the mayor. In Boston, the mayor led a successful effort to do away with the elected school board and to have a board under his control so that he could make major changes in the schools. The opposite happened in Baltimore, where the mayor had control of the schools, and the state legislature injected the state board of education into the process of appointing the school board and in changing the administrative structure of the school district. The theme of all these various changes is that large urban school systems are not adequately educating youngsters and therefore there must be major changes to improve the schools.

School District Intervention in Failing Schools

Continuing with the same theme, within some large urban school districts the school board or the school superintendent have taken over failing schools and "reconstituted" them. This local takeover varies by district, but it usually involves removing the principal and reassigning at least some of the teachers. The idea is to administer shock therapy to the school to change the culture of the school from one of failure to one of success. Many of these local takeovers have been of high schools, since they are frequently the poorest-performing schools in a district. For instance, in San Francisco and in Philadelphia several high schools were reconstituted, causing an uproar from the teachers' unions.

The state takeovers of school districts and other shifts in governance and the reconstitution of schools have all occurred relatively recently. These changes have also affected relatively few school districts and schools. Therefore, it is too early to draw any general conclusions about their effects on students highlighted in *TFH*. However, since high schools, and especially large urban schools are becoming objects of increasing concern, the effects could be substantial in years ahead as more schools and districts face the prospect of takeover or reconstitution.

Improved Teacher Quality

Another major education reform of the last decade is to raise the quality of the teaching force. To illustrate the need for improvement, in 1993-94, 24 percent of all mathematics teachers and 17 percent of science teachers were not certified to teach in those fields. The reform of teacher education and of training of current teachers is occurring on several fronts.

Since 1994, the National Board for Professional Teaching Standards has been constructing an assessment system which awards a certificate to teachers as "board-certified." The idea is to have a voluntary and vigorous national system of recognition for outstanding teachers, with the hope that they will receive monetary and other rewards for being so recognized. In North Carolina, board-certified teachers are now given salary increases of 4%. It has taken years to organize this certification system and so, in May 1998, there were only 912 certified teachers in the whole country. The numbers may soon grow significantly, especially since some states and school districts are paying for the costs of the process of certification.

Other improvements are coming to teacher preparation and training. The states are cooperating in a project to make state licensure more meaningful and the accreditation system for colleges of education is being gradually overhauled. With a million new teachers needed in the next decade due to retirements among current teachers and to increased pupil enrollments, the recommendations of reform groups, like the National Commission on Teaching and America's Future are carrying weight. The Commission contends that now is the opportune time to raise the quality of teaching. Although it is too soon to draw conclusions on the affects of these reforms on high school students, it is fair to predict that the eventual impact will be major.

Equitable Funding of School Districts

Another reform in education is the ongoing effort to secure more adequate and fairer funding of elementary and secondary education within the states. Since 1971, most of the states have been sued in state courts for unfair systems of school finance. In 16 of these cases, state supreme courts have found the finance systems unconstitutional; many states are still in litigation. For example, in *Abbott v. Burke*, the court found that New Jersey's finance system was unconstitutional for poor urban districts, and the state was ordered to fund those school districts at a level commensurate with wealthier districts. In addition, the state was directed to provide additional funds to meet the needs of at risk students in those districts.

The New Jersey case is especially interesting because the state had prescribed higher academic standards for all children and said it was providing enough funding to help them achieve to the level of those standards. The Supreme Court held that, at least as regards the poorer urban districts, the state was not providing enough for children to have an opportunity to meet those standards. This case could be an indication of the future direction of litigation as courts evaluate the level of funding provided for education with the expectations for students embodied in higher standards.

Service Learning

To this point, we have discussed increasing course work, raising academic standards, changing individual schools, improving the quality of teaching, and more fairly distributing funding. Much of the motivation for these changes has come from a concern to improve education so that children will have a chance to be better prepared for an economic future of greater insecurity than was faced by their parents. The emphasis on the need for greater American economic competitiveness runs through the debate leading to many of these changes.

An entirely different reform involves encouraging students to volunteer in their communities. The motivation for this reform is not economic at all. Rather, it is rooted in a concern that youth must be taught to think of the needs of others in society. According to the Association for Supervision and Curriculum Development, learning through serving in the community is a fast-growing phenomenon. Only Maryland requires community service for a student to graduate from high school, but ten other states allow districts to award credit for service. Ten more states encourage student service, such as Hawaii's inclusion of service-learning in the curriculum framework for middle school students. Some school districts are also taking action. For instance, the Chicago Public Schools announced in 1997 that 60 hours of community service will be required for high school students to graduate.

HOW REFORM IS AFFECTING STUDENTS

Those have been the major reforms in elementary and secondary education over the course of the last decade or so. The first two —

increasing course work required for high school graduation and standards-based reform — are aimed at bringing about comprehensive, system-wide change among all schools within a state. The school-oriented reforms take the opposite approach by focusing on bringing about change building-by-building. The governance changes are meant to reform whole school districts while takeover strategies are aimed at particular districts or schools within districts. The movement to improve teacher quality is obviously intended to have a wide impact, as is the effort to require state legislatures to fund the schools more equitably.

While no one has yet demonstrated the connection between each of these education reforms and the desired higher academic achievement, there are some encouraging signs, even in our largest urban school districts. According to the data gathered by the Council of Great City Schools, significant achievement gains have been registered in San Francisco, Seattle, Philadelphia, Milwaukee and other cities. For example, Milwaukee reported that the pass rate on its comprehensive math test had risen from 21 to 98 percent. Major declines in the dropout rate — some as much as 40 percent from just few years ago — have also been recorded in Broward County, Florida, Denver, Fresno and El Paso.

One additional measure of progress in major school systems is the rising public support for new bond issues and higher operating levies, sometimes with approval margins of 70 percent. Among the cities where this has recently happened are Los Angeles, Detroit, Tulsa, Oakland, Las Vegas, San Antonio, Charlotte, Cleveland, Columbus and Seattle. While the crisis in urban education is far from over, the public's increasing vote of confidence in their schools is still worthy of note.

National Assessment of Educational Progress

Figure 5-2: Average Mathematics Proficiency of 13-Year Olds By Race/ Ethnicity, 1978 and 1992

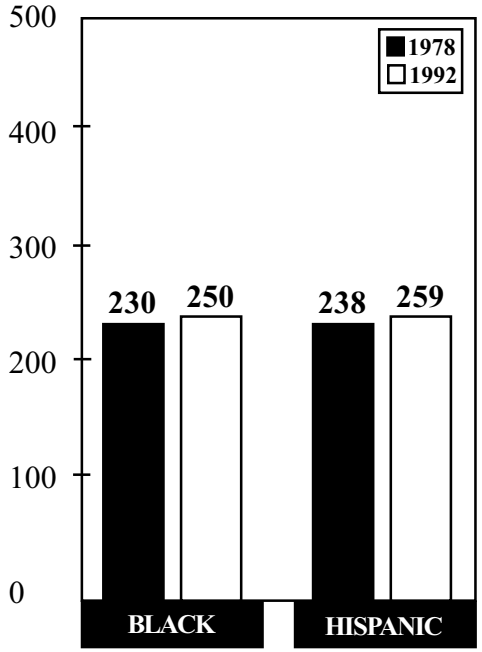
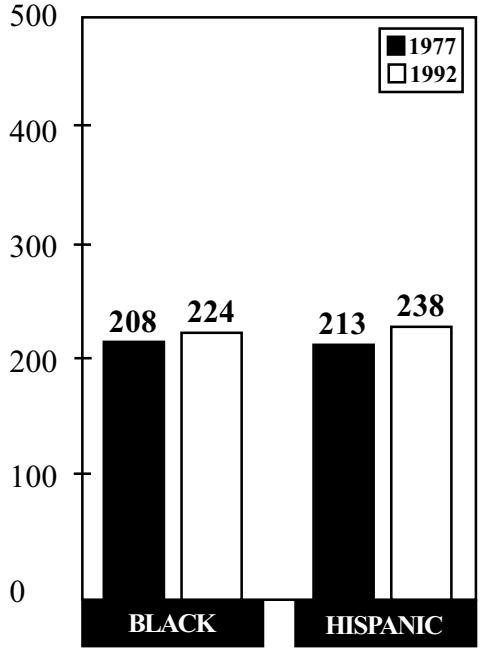


Figure 5-3: Average Science Proficiency of 13-Year Olds By Race/ Ethnicity, 1977 and 1992

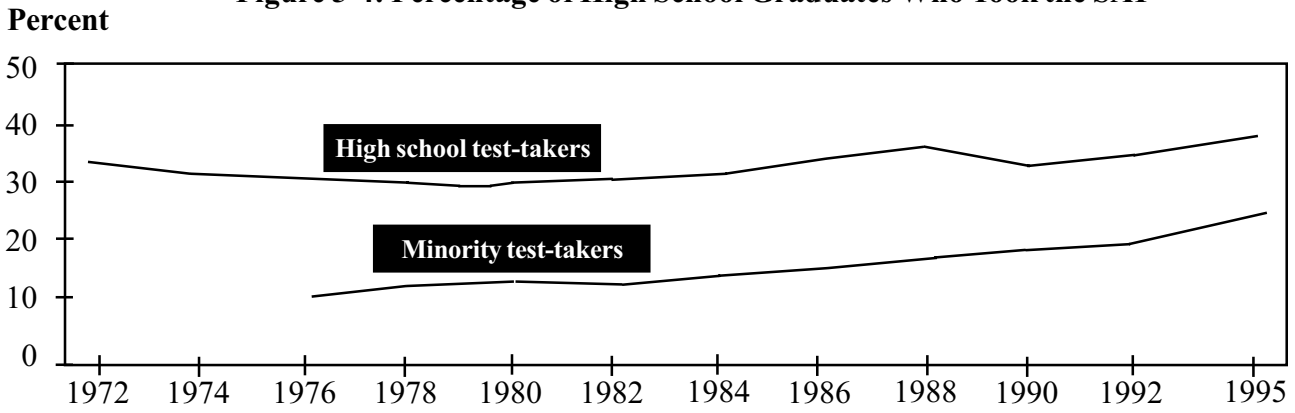


SOURCE: Center on Education Policy, *The Good — and the Not-So-Good — News About American Schools,* p. 19.

The 1980s and the 1990s have been years of rhetoric and specific actions calling for improvement in public schooling. Our description indicates how many reforms there have been and how varied they are. Many schools have tried to improve. School districts have implemented changes. State legislatures have mandated increased course-work and permitted charter schools. The federal government has funded innovative programs, encouraged states to raise their academic standards, and funded voluntary national certification of teachers.

In this description of changes in schooling, we have tried to show the effects of particular reforms on students in middle and high schools but, frequently, the discrete reforms are too new, too isolated, or too hard to quantify to show a direct effect on students due to any specific change. Consequently, it might be better to look at the condition of students more broadly, especially those students who were the

Figure 5-4: Percentage of High School Graduates Who Took the SAT



SOURCE: U.S. Department of Education, *Condition of Education 1996,* p. 87.

focus of *TFH*. That is the important question because change is not meant to be achieved for itself; it is meant to bring about improvement in educational opportunities. The question, then, is: Are teenagers, and especially those who would not have formerly gone on to college, better or worse off today due to all these reforms of the last fifteen years?

We will not include data on the increasing numbers of poor children and the rising numbers of minority students and immigrants because that data has been included in earlier chapters. The point must be made, though, that increasing test scores and related indicators are noteworthy achievements because today's student body presents greater challenges than did those of the past.

Course-Taking

We have already seen the effects on course-taking of the legal changes mandated in the 1980s and early 1990s, but they are worth repeating since they are so dramatic. Several states are currently taking further action to increase the requirements for graduation from high school.

NAEP Scores

The National Assessment of Educational Progress, the only reliable national test we now have, shows progress in mathematics and science reflecting increased demands for more difficult course-work but NAEP does not show much improvement for reading and writing. When broken out by racial and ethnic groups, the results show improvements for African-Americans and Hispanics in all subject areas.

Scholastic Aptitude Tests

The tests which high school students take as they apply for college are not nationally representative since students opt each year whether to take them or not, and so the pool of students varies by year. The general trend though is for gradual improvement in these scores, especially for minority groups. An important point to be emphasized is that more students traditionally not considered college-bound are taking these tests, which may be due to raised expectations of college-going and also to these students taking more difficult course work in high school. Both the College Board (which sponsors the SATs) and ACT, Inc. (which sponsors the ACTs) have pointed to students taking more demanding high school courses as the reason for higher SAT and ACT scores.

International Comparisons

A note of caution about increasing test scores comes from the Third International Mathematics and Science Study (TIMSS). In that comprehensive international comparison, American twelfth graders scored lower than the students of most participating countries in general knowledge of both mathematics and science. Even advanced American students scored below advanced students in other countries.

These findings about twelfth graders are especially disturbing because American fourth graders were found by the same study to be at or near the top of all countries in the same subjects, and eighth graders were shown to be in the middle. Deterioration happens between fourth and eighth grade and then again between eighth and twelfth, leading to a downward trend in test scores using this international comparison.

The experts have not as yet reached definite conclusions, but preliminary evidence points to the sequence of courses and their timing in

American schools and also to the lack of depth of content in these courses. In other words, the curriculum may have to be altered to expose American students to more difficult subjects earlier and to teach them in more depth than is now evident.

Dropout Rates

Earlier reference was made to the rates showing dropouts from high school. Improvements in school retention were made in the late 1980s but since the early 1990s the rate appears to have leveled off.

College-Going Rates

A dramatic change has occurred in the last ten years in terms of high school graduates going on to postsecondary education. In 1987, 57 percent of such students enrolled in two- or four-year colleges, and in 1997 over two-thirds (67%) of such students began higher education studies. (See the next chapter.)

"In that comprehensive international comparison, American twelfth graders scored lower than the students of most participating countries in general knowledge of both mathematics and science. Even advanced American students scored below advanced students in other countries."

Figure 5-5: Mathematics General Knowledge Achievement of 12th Grade Students

NATIONS WITH AVERAGE SCORES SIGNIFICANTLY HIGHER THAN THE U.S.	
NATION	**AVERAGE**
(NETHERLANDS)	560
SWEDEN	552
(DENMARK)	547
SWITZERLAND	540
(ICELAND)	534
(NORWAY)	528
(FRANCE)	523
NEW ZEALAND	522
(AUSTRALIA)	522
(CANADA)	519
(AUSTRIA)	518
(SLOVENIA)	512
(GERMANY)	495
HUNGARY	483

NATIONS WITH AVERAGE SCORES NOT SIGNIFICANTLY DIFFERENT THAN THE U.S.	
NATION	
(ITALY)	476
(RUSSIAN FEDERATION)	471
(LITHUANIA)	469
CZECH REPUBLIC	466
(UNITED STATES)	**461**

NATIONS WITH AVERAGE SCORES SIGNIFICANTLY LOWER THAN THE U.S.	
NATION	
(CYPRUS)	446
(SOUTH AFRICA)	356

INTERNATIONAL AVERAGE = 500

NOTE: Nations not meeting international sampling and other guidelines are shown in parenthesis.
SOURCE: *Pursuing Excellence, A Study of U.S. Twelfth-grade Mathematics and Science Achievement in International Context,* Office of Educational Research and Improvement, U.S. Department of Education, February 1998, p. 26.

Figure 5-6: Science General Knowledge Achievement of 12th Grade Students

NATIONS WITH AVERAGE SCORES SIGNIFICANTLY HIGHER THAN THE U.S.	
NATION	**AVERAGE**
SWEDEN	559
(NETHERLANDS)	558
(ICELAND)	549
(NORWAY)	544
(CANADA)	532
NEW ZEALAND	529
(AUSTRALIA)	527
SWITZERLAND	523
(AUSTRIA)	520
(SLOVENIA)	517
(DENMARK)	509

INTERNATIONAL AVERAGE = 500

NATIONS WITH AVERAGE SCORES NOT SIGNIFICANTLY DIFFERENT THAN THE U.S.	
NATION	
(GERMANY)	497
(FRANCE)	487
CZECH REPUBLIC	487
(RUSSIAN FEDERATION)	481
(UNITED STATES)	**480**
(ITALY)	475
HUNGARY	471
(LITHUANIA)	461

NATIONS WITH AVERAGE SCORES SIGNIFICANTLY LOWER THAN THE U.S.	
NATION	
(CYPRUS)	448
(SOUTH AFRICA)	349

NOTE: Nations not meeting international sampling and other guidelines are shown in parenthesis.
SOURCE: *Pursuing Excellence, A Study of U.S. Twelfth-grade Mathematics and Science Achievement in International Context,* Office of Educational Research and Improvement, U.S. Department of Education, February 1998, p. 31.

"Deterioration happens between fourth and eighth grade and then again between eighth and twelfth, leading to a downward trend in test scores using this international comparison."

"A dramatic change has occurred in the last ten years in terms of high school graduates going on to postsecondary education."

Figure 5-7: Percentage of High School Graduates, Ages 16-24, Enrolled in College the October Following Graduation, by Type of College: Selected Octobers 1972-97

		Type of college	
October	Total	2-year	4-year
1972	49.2	—	—
1973	46.6	14.9	31.7
1975	50.7	18.2	32.6
1977	50.6	17.5	33.1
1979	49.3	17.5	31.8
1981	53.9	20.5	33.5
1983	52.7	19.2	33.5
1985	57.7	19.6	38.1
1987	56.8	18.9	37.9
1989	59.6	20.7	38.9
1990	60.1	20.1	40.0
1991	62.5	24.9	37.7
1992	61.9	23.0	38.9
1993	61.5	22.4	39.1
1994	61.9	21.0	40.9
1995	61.9	21.5	40.4
1996	65.0	23.1	41.9
1997	67.0	22.8	44.2

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys, *The Condition of Education 1996,* p. 52; Bureau of Labor Statistics Web Page.

Figure 5-8: Average Annual Income by Educational Attainment for Persons Age 18 and Over, March 1995

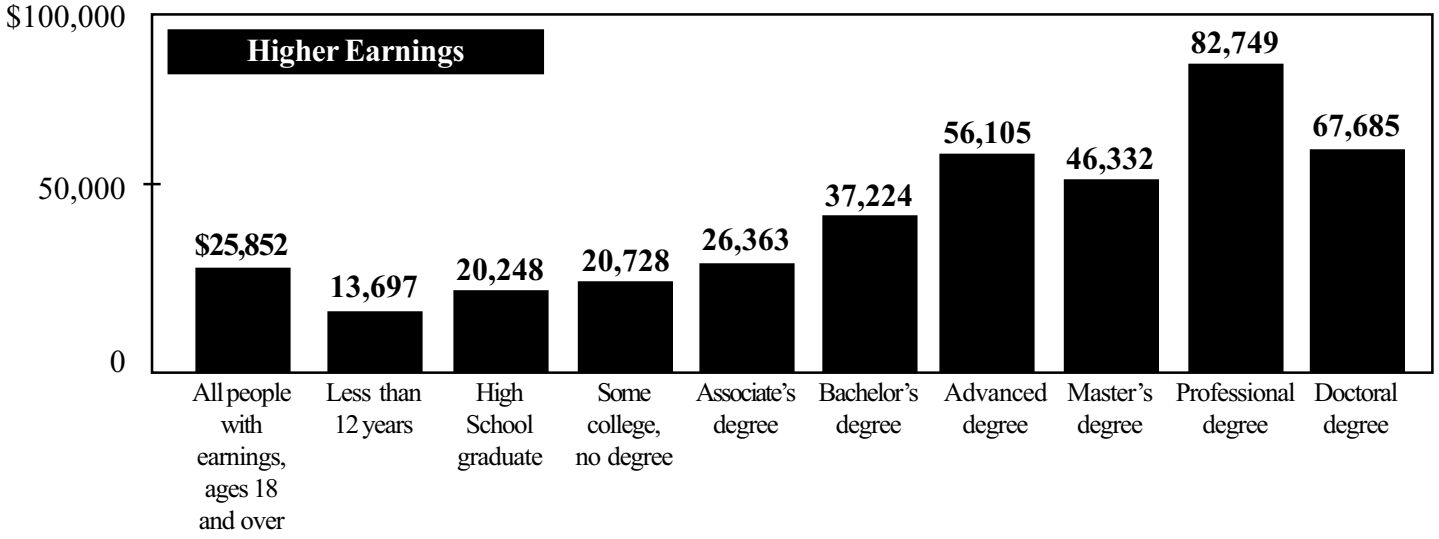
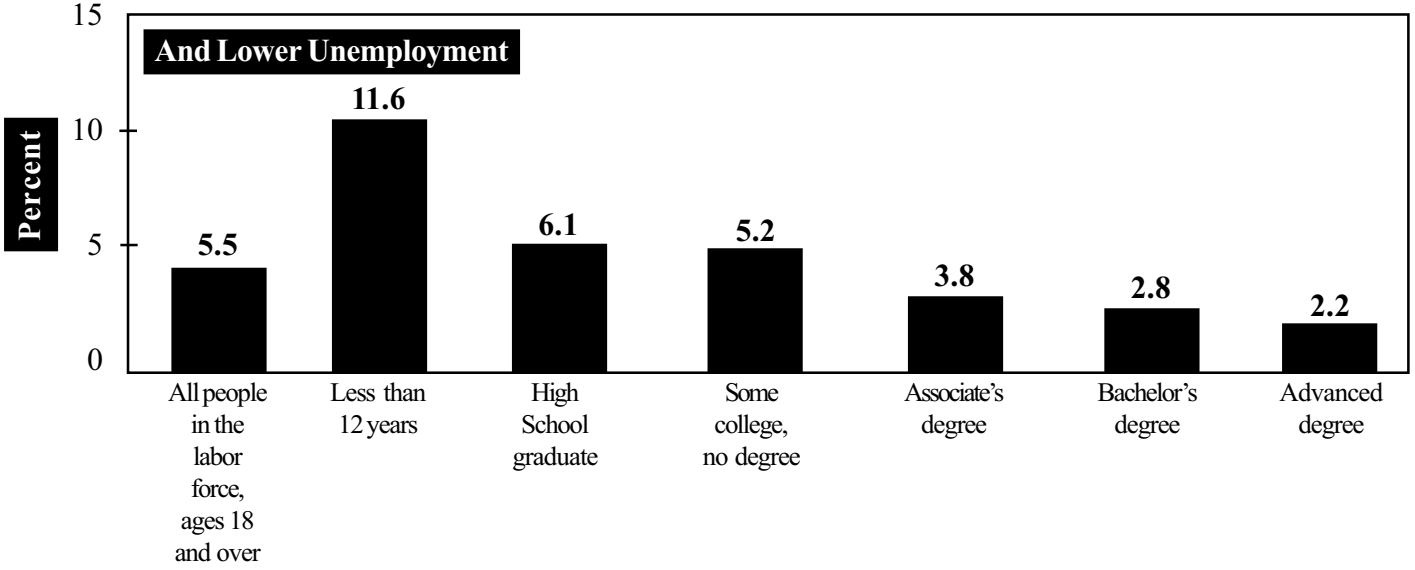


Figure 5-9: Unemployment Rate by Educational Attainment, March 1995



SOURCE (for both figures): U.S. Department of Labor, Bureau of Labor Statistics, *Occuapational Outlook Quarterly.* Winter 1996-97, p. 52.

"Those students not going on to postsecondary education or training are facing low-paying jobs."

CONCLUSIONS AND RECOMMENDATIONS

During the last ten years, there has been general improvement in the test scores of students in elementary and secondary schools in the areas of mathematics and science. In other subject-matter areas, such as reading, there has been no major improvement, but, contrary to popular impressions, there have been no major declines. In addition, students from racial and ethnic minority groups have improved their scores in all subject areas, especially in mathematics and science.

These broad improvements by racial and ethnic minorities and these increases in mathematics and science by the general student population result from the requirements for more demanding course-work in high school, the movement to raise academic standards in elementary and secondary education, and the curricular reforms in mathematics and science.

Furthermore, many more high school graduates are going on to some postsecondary education and there has been no increase in the dropout rate from high school, despite a more demanding curriculum. As with the increases in test scores, the most noteworthy improvements in high school retention and in college-going have been made by students from racial and ethnic minority groups.

A note of caution about the increases in test scores in mathematics and science comes from the TIMSS study which revealed a relative decline in the scores of American students in those subjects as they progress in school, compared to the scores of students in other countries. In other words, American scores in mathematics and science may be getting better, but we have a way to go compared to what students are learning in other countries.

Looking at these results in the aggregate, we can conclude that many of the students whom *TFH* highlighted for attention ten years ago have increased their educational achievement and have raised their aspirations for further education. Those students took, and their successors are taking, more demanding academic course work, and their test scores are better in mathematics and science. Furthermore, many more are going on to some form of postsecondary education. These accomplishments are occurring in a student body which has more poor students, more minorities, and more immigrants than a decade ago. That is the good news.

At the other extreme there is the bad news: those who are now dropping out of high school or who are not going on to postsecondary education are facing job prospects with lower earnings than their predecessors did a decade ago when they dropped out or terminated their education with a high school diploma. So, we have solved part of the problem by raising the aspirations of many youngsters to acquire more education and training after finishing high school, but we still have not found a way to help those who drop out of high school or who end their formal education with a high school degree.

There is a third conclusion that is both good and bad news. The Forgotten Half has indeed shrunk to the "forgotten third" because about two-thirds of high school graduates now continue formal study after they finish high school. But too many of those going on to some institution of postsecondary education leave without finishing the course work needed for an associate degree, a skill certificate, or a bachelor's degree. Half of all students leave postsecondary institutions in their first year of attendance and only about one-fourth of all high school students eventually attain a college degree.

To state it differently, while the college-going rate has substantially increased, the rate at which young adults achieve a bachelor's degree has not increased as much. To illustrate, in 1994 60 percent of 25-29 year-olds had completed one or more years of college, compared to 44 percent in 1971. But only 27 percent completed four or more years of college compared with 22 percent in 1971. In other words, many more high school completers are going on to some college but there has not been a proportionate increase in the number completing.

Many of those students who leave these postsecondary schools in the first year do so because they were not adequately prepared in high school or because they find that postsecondary education is not for them. Other students leaving before finishing a degree or certificate do so for lack of financial resources. All these students may have somewhat improved their chances of getting a good job, but their odds may not have appreciably improved with this smattering of postsecondary education. In a way, these students from the former Forgotten Half are in between the success of the degree attainers and the serious earnings problems facing today's high school completers and dropouts.

The challenge ahead is more daunting because of the demographic changes which are now occurring in our elementary and secondary schools. Total public school enrollment is expected to increase from 46.4 million students in 1997 to 48.3 million by 2007. Hispanic Americans and Asian Americans, many of them from families with limited financial resources, will be the fastest growing segments of this student population.

In creating greater educational opportunities for all American students, we still must pay special attention to helping those highlighted in 1989 in *TFH:* those students who drop out of high school and those who terminate their formal education with only a high school diploma. Such students are a smaller percentage of the general student population than they were ten years ago, but their job prospects are bleaker than those faced then by earlier cohorts.

We should also pay attention to the "in-betweens"— those who begin postsecondary education and leave before obtaining a degree. Often with just a smattering of postsecondary education, many of these people are not adequately prepared for employment.

Solutions to these problems will, in part, build on the reforms in elementary and secondary education that we have outlined earlier, but they will also depart from them in some respects. Although most of these changes will have to come from the actions of the states, local school districts, employers, teachers, and others, the federal government due to its historic involvement in the area of work-related education is in a unique position to be of assistance.

The "In-Betweens"

As with the students who have succeeded in attaining a degree or certificate, those who have gone after high school to further education and training but who are leaving without attaining a degree or certificate have been helped by the increasing demands for academic coursework and by raising academic standards in elementary and secondary education. But they must be leaving postsecondary education for one of three reasons: they can't afford it, they are not adequately prepared, or they find that college does not interest them.

If they are leaving school due to financial reasons, then the next chapter, which addresses postsecondary education, has recommendations that can help them. In addition to existing federal student aid programs, a new tax credit, the Hope Scholarship, was enacted in 1997 which enables adult learners to claim a tax credit of 20 percent of the first $5,000 of the costs of education and training. Students who began postsecondary study but did not complete it should be encouraged to return to school. Federal student aid programs and tax credits and deductions will help them.

If the reasons that these students didn't complete their postsecondary study are that they were not adequately prepared for higher education or that they did not understand what they were getting into, then we must look for changes in elementary and secondary schools to help future students avoid the same pitfalls. First, the movements to raise academic standards and the number of required courses must be continued so that students will be adequately prepared for the academic demands of postsecondary education. But raising standards is not sufficient in itself. More qualified teachers, greater fairness in funding and changing the cultures of schools are also necessary reforms. In addition, students should be counseled early on about the proper sequence of courses that must be taken in middle and high school in order to qualify for enrollment in postsecondary course work. Higher academic standards and counseling will not only help students to succeed in postsecondary education, but will also greatly reduce the number of students who must take remedial courses in college because they lack a necessary mathematics or science course they should have taken in high school.

Other students leave postsecondary schools because they did not understand what is required to be able to get an associate degree or a bachelor's degree. They had little concept of the demands of postsecondary education. These deficiencies argue for more and better counseling in middle and high school about what it means to go to college, both in terms of what they should be doing to prepare for further education and what will be expected of them in postsecondary studies. There should be a much more structured way for students and parents to think about education through middle and high school into college as a progression of academic studies. Unfortunately, too many students do not receive that assistance today.

The "in-betweens" can be especially helped in this regard if Tech-Prep were substantially expanded. The purpose of that effort is precisely to connect high schools and

postsecondary institutions so that they can provide a coherent sequence of courses leading to an associate's degree or a skill certificate.

Since the federal Tech-Prep program in the Perkins Act was so influential in the early 1990s in expanding such opportunities throughout the country, it would seem to be a perfect vehicle to encourage further work by school districts, community colleges, and other postsecondary institutions to mesh secondary and postsecondary education. For that reason, the President and the Congress should provide greatly increased appropriations for Tech-Prep and retain it as a separate program at the federal level.

"The Forgotten Third"

There may come a point when "the forgotten third" shrinks to "the forgotten fourth" or some other fraction, since the number of students completing high school and going on to some form of postsecondary education is rising. But whatever number of students that is left behind, high school dropouts and high school graduates without any further education or training will face a future of jobs paying low wages and the prospect of higher unemployment than for those who attain an advanced degree or skill certificate. Those students are truly the forgotten ones. Much more needs to be done to help them.

Some of these students are not interested in schooling. Some just want to get a job, and some have to get a job to support the family. We should accept the fact that not everyone should, or wants to, go on to college. This would be a major change in our current culture which devalues those who don't pursue postsecondary education.

We should also acknowledge that people who choose to enter the labor market after high school do benefit from having learned more mathematics, science, and other rigorous subjects while in school. Furthermore, many of these people can be helped in gaining good job skills while they are in high school, particularly if they develop computer skills demanded in today's workplace.

Two recent surveys confirm the need to raise the academic skills of all students and to provide an opportunity for them to gain good job skills. A survey of IBM managers found that the job skills they seek in entry-level employees include the ability to do mathematics, solve problems, communicate effectively, follow directions, and work as part of a team. Further, a National Association of Manufacturers survey indicates that many employers do not feel that current workers possess necessary job skills: 60 percent of manufacturers say that current workers lack basic math skills; 55 percent believe that current works have serious deficiencies in their basic writing and comprehension skills; and 63 percent report that current workers lack basic job skills, such as showing up at work on time and staying the whole day.

In a nutshell, what is needed for the "forgotten" is a good high school education with solid academic content. It must *not* be a watered-down curriculum which is what is being offered to many young people today in the form of a general course of studies.

The High Schools That Work program is an excellent model for what should be available to students everywhere in the country. That program is not universally successful, but its objectives are right on target. It is aiming for mastery of college-preparatory academic content by all students, including those who are job- rather than college-oriented. Furthermore, it often provides this content in applied academic settings which makes education more realistic to those who are not interested in abstract presentations. The program also demands the end of the general track, insists on counseling for both students and parents on the sequence of courses and on the goals of education and training, and emphasizes the integration of academic and vocational education.

High Schools That Work, when it is fully implemented, is an updated and improved form of vocational education, preparing students for employment after high school as well as for further education and training. Since the federal government has been very influential in funding and shaping vocational education since the early part of the century, the enactment of a revised Perkins Vocational Education Act, incorporating the essential elements of the High Schools That Work approach, would have a dramatic impact on the type of programs being offered in thousands of high schools across the country. An increased federal appropriation would help to spread that impact.

* * *

Often we get so involved in arguing among ourselves about what is wrong that we overlook what has gone right. Progress has indeed been made in the last decade in helping many high schoolers who would have been forgotten to go on to further education and

training. We should take pleasure in that. As a country, we did something right.

The tasks remaining are to help those who do not continue far enough after high school to gain sufficient education and training to improve their prospects in life and to assist those who do not want to go on to any further education after high school. We can succeed with those tasks as we did with helping those who are now succeeding. All it takes is the will to do so with the application of sufficient determination and persistence.

We should not forget, though, that education is not meant solely to prepare one for employment. Education is also meant to help create a better society. Consequently, we should encourage students, parents, and other adults to think of opportunities for national and community service as an integral part of growing up. Education is more than being prepared to earn dollars and cents, it is also about learning to be a responsible citizen.

SOURCES

Center on Education Policy. *The Good — and the Not So Good — News About American Schools.* Bloomington, IN: Phi Delta Kappa, 1996.

Center on Education Policy and American Youth Policy Forum. *A Young Person's Guide to Earning and Learning, Preparing for College, Preparing for Careers.* Washington, D.C.: American Youth Policy Forum, 1998.

Center for the Future of America's Children and the David and Lucile Packard Foundation. *The Future of Children: Financing Schools*, Vol. 7, No. 3, Winter 1997.

Council of the Great City Schools. *Urban Education,* March 1998, Vol. 7, No. 2. Washington, D.C.: Council of the Great City Schools, March 1998.

Education Daily, "IBM Carefully Weighs Work Needs, Academics," November 19, 1997, Vol 30, No. 224. Alexandria, VA: Capitol Publications, November 1997.

Education Week. *Quality Counts '98*, January 1998. Bethesda, MD: Editorial Projects in Education, Inc., January 1998.

Educational Testing Service. *ETS Developments*, Volume 43, Number 1, Fall 1997. Princeton, NJ: Educational Testing Service, 1997.

Forgione, Pascal D. "Achievement in the United States: Progress Since A Nation At Risk?" Remarks delivered before the Center for Education Reform and Empower America, April 13, 1998.

National Association of Manufacturers. *News Alert* "Major New Survey Sounds Alarm: America's Competitive Edge At Risk as Qualified Employees Become Precious Commodity," November 14, 1997.

National Commission on Teaching and America's Future. *What Matters Most: Teaching for America's Future*. New York: National Commission on Teaching and America's Future, September 1996. *Note: Updated information on the number of NBPTS-certified teachers comes from the National Board for Professional Teaching Standards.*

Public Agenda. *Assignment Incomplete: The Unfinished Business of Education Reform*, 1995. New York: Public Agenda, 1995.

Steinberg, Laurence. *Beyond the Classroom: Why School Reform Has Failed and What Parents Need to Do*, 1996. New York: Public Agenda, 1995.

U.S. Department of Education, National Center for Education Statistics. *A Back to School Special Report: The Baby Boom Echo*. Washington, D.C.: U.S. Government Printing Office, August 1996.

_____. *The Condition of Education 1995; 1996; 1997 editions.*

_____. *Digest of Education Statistics 1994.* Washington, D.C.: U.S. Government Printing Office, April 1983.

_____. National Commission on Excellence in Education, *A Nation At-Risk: The Imperative for Educational Reform.* Washington, D.C.: U.S. Government Printing Office, April 1983.

_____. Office of Educational Research and Improvement, *Dropout Rates in the United States: 1996.* Washington, D.C.: U.S. Government Printing Office, 1997.

_____. *The Emergence of Tech-Prep at the State and Local Levels.* Washington, D.C.: U.S. Government Printing Office, 1995. *Note: Updated information on the number of Tech-Prep consortia and the number of students participating in Tech-Prep programs comes from Mathematica Policy Research, Inc.*

_____. *A Study of Charter Schools: First Year Report - May 1997.* Washington, D.C.: U.S. Government Printing Office, 1997. *Note: Updated information on the number of states which grant charters and the number of charter schools comes from the Center for Education Reform, Washington, D.C.*

_____. Office of Educational Research and Improvement, *Pursuing Excellence: A Study of U.S. Twelfth-Grade Mathematics and Science Achievement in International Context*. Washington, D.C.: U.S. Government Printing Office, February 1998.

_____. *Urban and Suburban/Rural: Special Strategies for Educating Disadvantaged Children, First Year Report*. Washington, D.C.: Government Printing Office, February 1998.

U.S. Department of Labor, Bureau of Labor Statistics. "College Enrollment and Work Activity of 1997 High School Graduates," Press Release, May 1, 1998