

Technology & Learning -- "Condition of
Education"

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NEWS

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CONDITION OF EDUCATION IMPROVING, RILEY REPORTS

America's schools have made steady progress in many areas as a result of education improvement efforts begun following the landmark A Nation at Risk report in 1983, U.S. Secretary of Education Richard W. Riley said today.

The annual Condition of Education report, released today by the Education Department's National Center for Education Statistics, indicates that significantly more students are taking difficult courses, math and science test scores are up, and the dropout rate is declining.

"Areas on which schools, communities and states have focused attention are now showing results of greater student achievement," Riley said. "We're on the right path. This is no time to retreat from our efforts to keep education a national priority."

Riley said, however, that schools aren't progressing quickly enough to give all students a good foundation. Although minority students have made significant gains, there remains a persistent proficiency gap between white and minority students.

"We must continue our efforts to reach children who need to learn the basics and core academics," he said. "By helping schools improve the basics and raise standards through Title I and the Goals 2000: Educate America Act, more young people will have an opportunity to pursue the American Dream."

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But Riley expressed dismay at "huge" education budget cuts passed recently by the U.S. House of Representatives, coming just before a new school year and at a time when student enrollments are "skyrocketing." The cuts particularly target Title I, Goals 2000, Safe and Drug-Free Schools, and vocational education.

"Many states and communities also are concerned with budget cuts and getting the most for their tax dollars -- and they need all the help they can get to provide better schools," Riley said. "The House should not plan to severely cut the federal contribution just as student enrollment reaches an all-time high. We hope the Senate will do the right thing and restore these funds."

The House has voted to cut education spending nearly \$4 billion in the coming fiscal year and has proposed cuts of \$36 billion over the next seven years in order to fund tax cuts for the wealthiest Americans, Riley said. In contrast, President Clinton's balanced budget plan would erase the budget deficit, while increasing education spending by \$40 billion over the seven-year period.

At the same time, Education Department projections indicate that K-12 enrollments will reach record levels in 1997 and continue increasing to 55 million by 2002. The previous peak of 51 million students occurred in 1971. This fall's enrollment is expected to exceed 50 million.

The Condition of Education 1995 contains 60 indicators related to preschool, elementary, secondary and postsecondary education. Included are data on enrollment, student achievement, curricula, the transition from school to work, revenues and

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expenditures, school climate, staffing and salaries, degrees conferred, and tuition.

Deputy Secretary of Education Madeleine M. Kunin said, "In the 50 years since the end of World War II, no single institution has done more than American public education to improve the standard of living and quality of life of millions of Americans. As parents send their children back to school this fall, they should know that there are many reasons to feel good about public education.

"Of course, there's much work still to be done. We must help our students and schools keep up with the changing times because, more and more, the education standards students meet influence the living standards they achieve."

Among the findings reported in the Condition of Education:

High school students are taking harder courses, especially in math and science.

- Between 1982 and 1992, the percentage of high school graduates taking the core courses recommended in A Nation At Risk increased sharply, from 13 to 47 percent. This increase was broadly based, with increases observed for both sexes and in all racial/ethnic groups. [Indicator 25, page 78]
- More students are taking algebra, geometry, trigonometry, and calculus -- courses emphasized in many recent school reform efforts -- as well as advanced science courses, including chemistry and physics. For example, the percentage of high school graduates who took geometry increased from 48 to 70 percent between 1982 and 1992; the percentage of graduates who took chemistry increased from 32 to 56 percent. [Indicator 26, page 80]

The mathematics and science proficiency of students has increased.

- Between 1982 and 1992, the mathematics and science proficiency scores of 17-year-olds on the National Assessment of Educational Progress (NAEP) increased 9 and 11 points, respectively, on each assessment. This is roughly equivalent to an additional year of learning in high school. Riley noted that the new math standards and an emphasis on improving science and math instruction are focuses of many education improvement strategies. [Indicators 15 and 16, pages 58-61]

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- Although proficiency scores in reading and writing have not shown similar increases [Indicators 13 and 14, pages 54-57], U.S. students compared favorably to those in other countries in an international assessment of basic reading literacy in 1991-92. [Indicator 17, page 62]
- Even though the number of Scholastic Assessment Test (SAT) test-takers as a percentage of high school graduates has increased 8 percentage points since 1983, the average mathematics score has increased and the average verbal score has remained stable. [Indicator 20, page 68]

More high school graduates go to college immediately after high school, even though college costs continue to rise relative to family income.

- Between 1980 and 1993, the proportion of high school graduates going directly to college increased from 49 to 62 percent. Most of this increase was in enrollments in 4-year colleges and universities. Increasing preparation for college and promoting college participation are continuing to be at the heart of many education reforms, Riley said. [Indicator 9, page 42]
- Between 1980 and 1993, tuition, room, and board at public institutions increased from 10 percent to 14 percent of median family income. This increase was larger for low-income families than for high-income families. Over the same time period, tuition, room and board at private institutions rose from 22 to 39 percent of median family income [Indicator 7, page 38].

The U.S. population compares favorably with other countries with regard to educational attainment. [Indicator 23, page 74]

- In 1992, the percentage of 25- to 34-year-olds who had completed at least secondary education (high school in the U.S.) ranged from 42 percent in Italy to 91 percent in Japan. In the United States, 87 percent of this age group had completed high school.
- The percentage of 25- to 34-year-olds who had completed higher education (a bachelor's degree in the U.S.) ranged from 7 percent in Italy to 23 percent in both Japan and the United States.
- A higher percentage of young women had completed higher education in the United States (23 percent) than had their counterparts in other industrialized countries (12 percent in Japan and 11 percent in Germany).

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Commissioner's Statement

The National Center for Education Statistics (NCES) gathers and publishes information on the status and progress of education in the United States. The Congressional authorization for these activities (with antecedents to 1867) states that the purpose of the Center is to collect and report "...statistics and information showing the condition and progress of education in the United States and other nations in order to promote and accelerate the improvement of American education."—Section 402(b) of the National Education Statistics Act of 1994 (20 U.S.C. 9001). This law also mandates an annual statistical report on the subject from the Commissioner of Education Statistics. This 1995 edition of *The Condition of Education* responds to the requirements of that law.

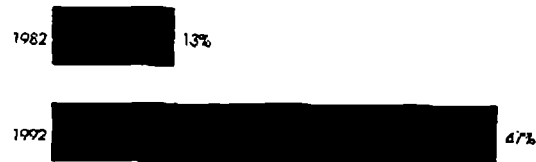
This report contains 60 indicators that shed light on the condition of education in the United States. These indicators represent a consensus of professional thinking on the most significant national measures of the condition and progress of education to date, but tempered by the availability of current, valid information. In the text that follows, I will summarize some of the positive developments in American education and point out areas that continue to raise concern. In addition, I will discuss what we know about school quality and describe how the conditions facing the schools have changed.

For some issues of public concern, however, there are no data available that can provide a satisfactory national picture of recent educational developments. One such area where additional work remains is in developing measures of learner outcomes that go beyond the core content areas. These might include measures of integrative reasoning and of attitudes such as tolerance, self-direction, and responsibility. A second area where work remains is in developing better measures of school quality and student learning opportunities.¹

What are high school students studying and how are they performing?

In the 12 years since *A Nation At Risk* advocated tougher course requirements for high school graduation, states and students have responded dramatically. High school graduates are taking more courses overall, particularly academic

Percentage of high school graduates earning the recommended credits in *A Nation At Risk*

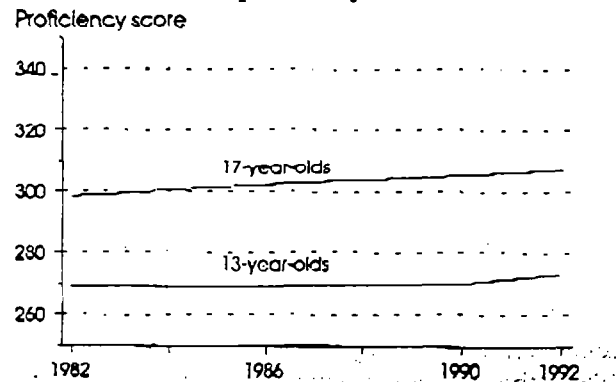


courses.² The proportion of students completing the recommended core courses in English, math, science, and social studies has increased (*Indicator 25*), and a greater percentage is taking Advanced Placement (AP) courses.

In addition, more students are taking algebra, geometry, trigonometry, and calculus as well as advanced science courses, including chemistry and physics (*Indicator 26*). Both college-bound and non-college-bound students are taking more foreign language courses than their counterparts did a decade before. Furthermore, as of 1990, 42 of the 50 states had raised course requirements for high school graduation since the publication of *A Nation At Risk*, and 47 states had mandated student testing standards.³ Of course, these increases can only be considered good news if the content of these courses is at least as rigorous as it was when the National Commission on Excellence in Education made their recommendations. There is some evidence that it is, but we have no national data on the content of courses.⁴

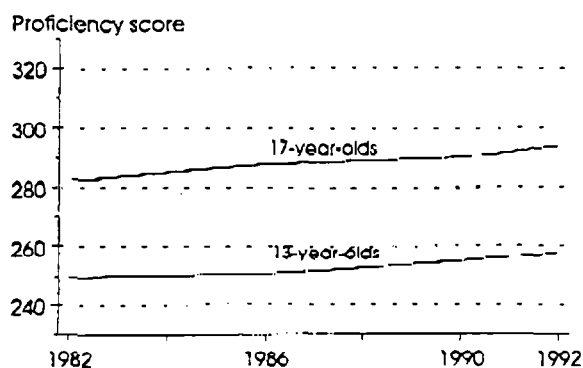
It is also encouraging to see these improvements in high school course taking reflected in gains in mathematics and science achievement. Between 1982 and 1992, the mathematics and science proficiency scores of 17-year-olds on the National

Mathematics proficiency scores of students



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Science proficiency scores of students



Assessment of Educational Progress (NAEP) increased (9 points on each assessment). One way to get a sense of how much improvement these gains represent is to compare them to variations in proficiencies between different-aged high school students. Using this comparison, we find that the improvement for 17-year-olds from 1982 to 1992 was roughly equivalent to an additional year or two of learning in high school (*Indicators 15 and 16*). These gains in NAEP proficiency scores are one indication that 17-year-olds in 1992 have made substantial progress in mathematics and science relative to their peers in 1982.

Although proficiency scores in reading and writing have not shown similar increases (*Indicators 13 and 14*), U.S. students compared favorably to those in other countries in an international assessment of basic reading literacy in 1991-92 (*Indicator 17*).

Low-performing students have also progressed academically since the publication of *A Nation At Risk*. For example, dropout rates have declined (*Indicator 6*); fewer high school students are taking remedial mathematics courses before graduating (*Indicator 26*); and the mathematics and science proficiencies of the lowest performing 17-year-olds have increased (tables 15-3 and 16-3). However, between 1984 and 1992, the reading and writing proficiencies of the lowest performing students remained relatively stable (tables 13-3 and 14-3).

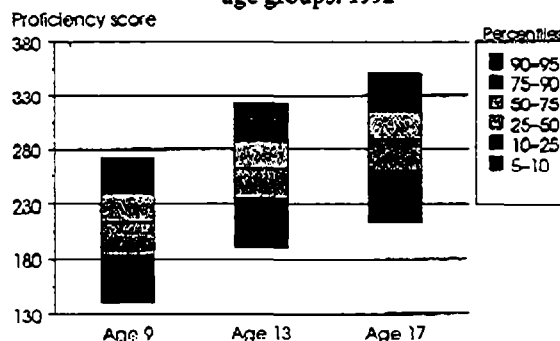
Not only are more students are taking AP examinations, but the science proficiency scores of the highest performing 17-year-olds have increased (table 16-3). In addition, since the early 1980s, the reading and mathematics proficiency

scores of the highest performing 17-year-olds have remained relatively stable (tables 13-3 and 15-3).

It is significant that even though the number of Scholastic Assessment Test (SAT) test-takers as a percentage of high school graduates has increased 8 percentage points since 1983, the average mathematics score has increased and the average verbal score has remained stable (*Indicator 20*). These findings are considered by many to be positive because increasing participation tends to push down scores.

When examining differences in averages across NAEP scores, we should keep in mind that the performance among students of the same age or in the same grade varies considerably. For example, in reading, mathematics, and science, many students score no higher at age 17 than many of their peers did at age 9, despite the fact that they differ by 8 years of schooling.⁵ Schools must cope with this variation while trying to help each student learn as much as possible. It is not surprising, then, that there is also a large degree of variation across schools in the type of curriculum offered to students with different abilities and interests.⁶

Distribution of reading proficiency within age groups: 1992



As a nation, we put great value on mathematics and science. Recently, this is evident in Goal 5 of the National Education Goals: "U.S. students will be first in the world in science and mathematics achievement." Although, as noted above, the mathematics and science scores of U.S. students have increased since the early 1980s, they remain low compared to their counterparts in many other countries (*Indicators 18 and 19*). Moreover, considerable variation exists across states. On the one hand, 8th grade students in some states perform as well as 13-year-old

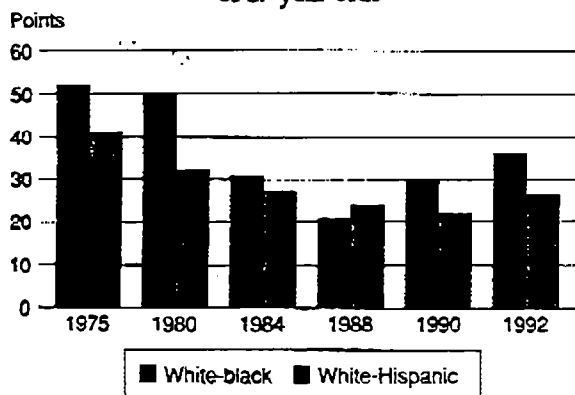
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students from the best performing nations in an international comparison of mathematics achievement. On the other hand, students in other states are performing at levels similar to students in developing countries.⁷

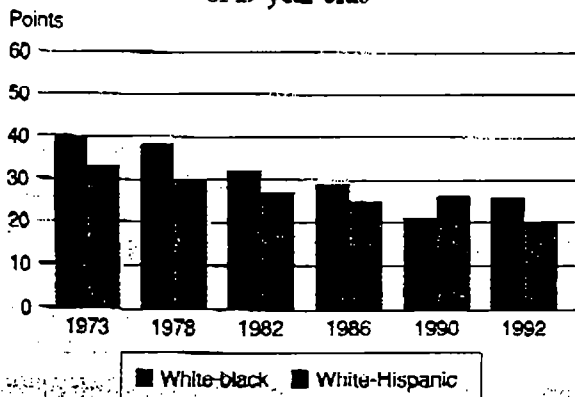
Another area of continuing concern is the academic achievement of minority students in elementary and secondary school. For example, in 1992, the average reading proficiency scores of black 17-year-olds were 36 points below white 17-year-olds and were similar to the average proficiency scores of white 13-year-olds. The white-Hispanic reading gap at age 17 was a little narrower. White-black and white-Hispanic proficiency score differences were of similar magnitudes in science, although they were smaller in mathematics (*Indicators 13, 15, and 16*).

It is also worrisome that despite a narrowing in the white-minority gap in achievement during the 1980s, particularly in mathematics, recent data raise the possibility that the gap is no longer closing. For instance, the most recent (1994) NAEP results in reading suggest that

White-minority difference in reading achievement
of 17-year-olds



White-minority difference in math achievement
of 17-year-olds



minority groups lost some of the earlier gains they had made relative to whites.⁸

In addition to a narrowing in the white-minority achievement gap, there are other positive developments with regard to the achievement and attainment of black and Hispanic students. The indicators in this volume contain far more information on different subpopulations than has been reviewed here. For example, an essay reviewing the educational progress of Hispanic students begins on page 6 and an essay reviewing the educational progress of black students is contained in the 1994 edition. A review of the considerable educational advances made by women over the past several decades can be found starting on page 13.

Social scientists attribute much of the white-minority differences in achievement to the higher incidence of poverty in the families of minority children and the lower average educational levels of their parents. It is difficult for schools to compensate for such disadvantages. However, there is evidence that extraordinary schools and teachers make a difference in how all students perform. For example, research on early intervention and on one-to-one tutoring demonstrates that at-risk students can achieve at far higher levels than they have in the past.⁹ There is also some evidence, particularly in math and science, that taking more challenging courses is related to higher performance and achievement.¹⁰

Are more young people finishing high school?

Despite curricular changes that may have made school more difficult, students are persisting in their studies. Overall, the percentage of high school students who leave before graduating has gradually declined and differences between dropout rates for blacks and whites have also narrowed, although most of these changes occurred before the mid-1980s (*Indicator 6*). This is encouraging because schools provide young people with the opportunity to explore their interests and develop their talents. It is also encouraging because staying in school is an important indication that a young person is learning to be a productive member of U.S. society and is less likely to suffer from poverty and unemployment (*Indicators 28 through 32*).

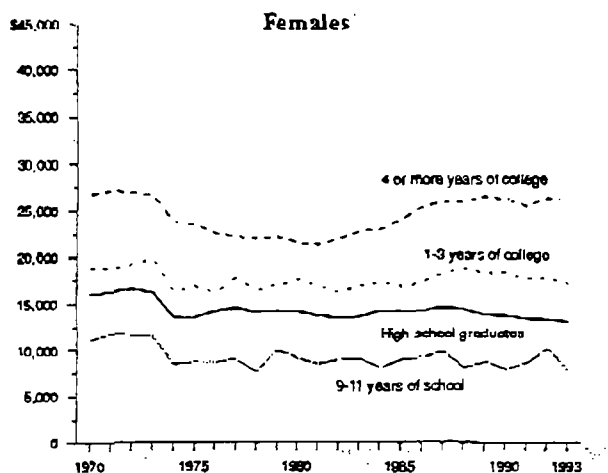
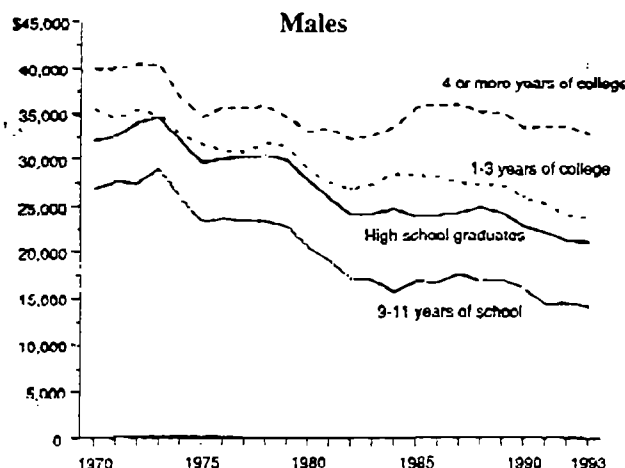
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Time of high school completion for 1980 10th-graders



High school completion rates have gradually risen, and for some subgroups are near or over the 90 percent National Education Goal (Indicator 22). The rise is, in part, a result of greater student persistence in high school (discussed above), but may also be a result of more dropouts earning a GED credential. The rise is a positive development, but we must also be cautious because in today's economy a high school diploma or a GED credential may not be sufficient to avoid low earnings, unemployment, and, possibly, poverty. Since the early 1970s, the

Median earnings of wage and salary workers 25 to 34 years old (in 1994 constant dollars)



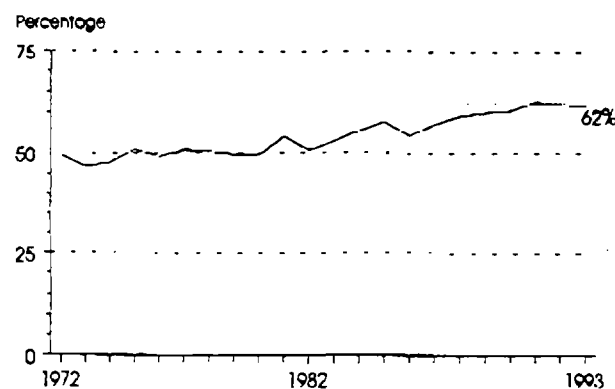
real wages of young adults with only a high school diploma or GED have declined (table 30-3), and the proportion of this group receiving AFDC or public assistance has increased (Indicator 32). The labor market opportunities for high school graduates are still better than those who complete 9-11 years of education, however.

Are more young people going to college?

In 1992, the rates of attainment in higher education for U.S. men and women were among the highest in the world (Indicator 23).¹¹ This is an indication that higher education is broadly accessible in the United States in comparison to other countries. It is also an indication of the rewards to college attendance. Even though college graduates have faced a difficult labor market over the past few years, their job opportunities and earnings are much better than those of high school graduates. The earnings advantage has grown stronger throughout the 1980s, particularly for males (Indicator 34).

It is not surprising that despite a rapid rise in tuition levels (Indicator 7) more high school graduates are choosing to go immediately to college after high school graduation (Indicator 9). It should be noted, however, that enrollments do not always translate into completions.

High school graduates enrolling in college the October following graduation



Although, more students are going on to college after high school, the data show that it is very common for college students to enroll, leave, possibly return, and not finish within the expected period of time.¹² For example, in 1990, only one-quarter of first-year community college students were enrolled in some form of higher education the next year. And, about one-fifth of

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second-year community college students transferred to 4-year colleges or universities (*Indicator 10*).

Noncompletion is not necessarily an indication of failure or a waste of resources. Often students, particularly in the 2-year sector, enter and withdraw from college because of economic opportunities, or they may have begun a program with limited objectives that they were able to achieve. Also, many students attend part time, which can extend the time it takes them to complete a program. Nevertheless, the high rates of noncompletion and interrupted attendance may indicate that students do not have enough information about the actual skills in demand in the labor market before making decisions regarding their education. Moreover, they may have unrealistic views as to how much time, effort, and money will be needed to complete postsecondary education programs and acquire these skills.

High levels of participation in higher education are made possible by generally low tuition levels at public institutions and a financial aid system that is primarily based, particularly the federal component, on need. Average tuition and fees are also much lower at public institutions, where four out of five students are enrolled, than they are at private institutions (*Indicators 8 and 36*).

But to attend postsecondary education on a full-time basis requires that the student not only pay the direct costs of education but also finance living expenses. For example, the *total cost* a student had to finance, including both educational and living expenses, was about \$9,200 for dependent full-time students attending public 4-year institutions in 1992-93. Total aid, including grants, loans, and work-study, reduced the amount that needed to be financed to \$7,300. In addition, most financial aid is sensitive to family income, so this *net cost* was lowest (\$5,070) for students from low income families and highest (\$8,879) for those from high income families.

Although net cost varies a great deal with family income, the question remains whether it varies enough to make higher education equally affordable to all students. One way to answer this question is to estimate *unmet need* as net cost

Costs incurred by dependent full-time undergraduates: 1992-93

	Tuition and fees	Total cost	Net cost
Public 2-year	\$1,072	\$6,410	\$5,717
Public 4-year	2,947	9,187	7,326
Private 4-year	11,004	17,301	11,552

less "expected family contribution;" this is generally considered a reasonable and affordable amount for the family and student to contribute toward the cost of higher education, and it is also used by the student financial aid system. For dependent undergraduates attending 4-year colleges, unmet need is greater, especially when compared to family income, for students from low income families than for those from high income families. It appears that by this test, at least, higher education is still more difficult for students from low and lower middle income families to afford than for those from upper middle and high income families.

Net cost incurred by and unmet need of dependent full-time undergraduates, by family income: 1992-93

Family Income	Net cost		Unmet need	
	Public 4-year	Private 4-year	Public 4-year	Private 4-year
All	\$7,326	\$11,552	\$1,952	\$4,171
Less than \$27,000	5,070	5,872	3,132	4,425
27,000-44,999	6,426	8,590	2,429	4,980
45,000-59,999	7,598	10,407	1,784	4,204
60,000 or more	8,879	15,752	836	3,633

Clearly, the increasing enrollment rates and rising tuition costs are profoundly affecting the nature of higher education. First, colleges are providing much remedial instruction to students who arrive with weak academic skills.¹³ This may indicate that more students who once would not have considered continuing on to higher education are now enrolling, even though they must take remedial courses. Second, the percentage of full-time college students who report working more than 20 hours a week has increased since the early 1980s (*Indicator 51*). Although working during the school year leaves less time for students to concentrate on their studies or to participate in extracurricular activities, some of the experience that students gain from working may benefit them after graduation. There is

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evidence, however, that working long hours while in college may reduce a student's likelihood of completing college or lengthen the time it takes for those who do complete it. Third, there is some evidence that college students are feeling increasingly stressed by the demands placed on them.¹⁴

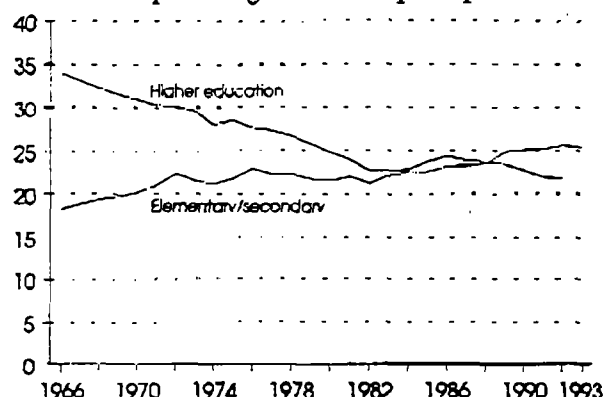
What do we know about the quality of schools?

The information presented so far has been about students and what they are or are not achieving. Because of the impact of family income and support on student performance, academic achievement is only a partial indicator of the quality of the schools that U.S. students attend. But what can be said directly about the quality of schools? Are schools providing a safe and supportive environment so that student energies can be devoted to learning? Are schools attracting people with enthusiasm, creativity, and commitment to teaching and supporting them with competitive salaries and sustained professional development? These are also important aspects of school quality.¹⁵ Without question, much work remains to be done to produce reliable statistical measures of school quality.

Expenditures per student are often used as a proxy measure of the quality of education. But, this can only be considered a crude measure, because the results of hundreds of studies that examine the relationship between spending and outcomes such as achievement test scores, dropout rates, and so forth are mixed.¹⁶ Neither a strong nor consistent relationship is found. However, no one can deny the importance of money to build schools, hire teachers, buy textbooks, and otherwise acquire the resources needed to create a safe, supportive learning environment. Among these resources are the intangible qualities of dedicated teachers, principals, and parents who create the learning environment.

At the elementary and secondary levels, revenues per student have increased substantially since the early 1980s, a sign that even with the strains of slower economic growth, our nation is willing to continue supporting its schools (*Indicator 52*). Yet, revenues per student vary widely across states: state governments, not the federal

Revenues per student from public sources
as a percentage of income per capita



government, have responsibility for funding education, and they vary in their capacity and willingness to do so. In addition, there is considerable variation within states because states delegate authority for operating and funding schools to local school districts. For instance, one estimate is that the wealthiest districts have about 16 percent more cost-of-living adjusted revenue per student than the poorest districts. However, other factors such as the educational needs of the students require consideration before disparities in the allocation of education resources can be adequately measured. Districts with a large percentage of school age children in poverty, however, do receive a much larger share of their revenue from federal and state sources than from local governments (*Indicator 53*).

An advantage of state and local funding of schools is that parents and citizens have more say in deciding how much education their children get and with what emphasis. A disadvantage is that wealth varies across school districts, leading to imbalances in the resources available to schools even when citizens are equally willing to fund them. This has resulted in complicated state formulas to assist poor school districts and many court challenges to state education financing systems as insufficiently compensatory. The supreme courts of several states have declared the state education financing system unconstitutional because of funding inequities, and more than half the states have cases pending. For example, as a result of a court challenge to its funding arrangements, Kentucky has completely overhauled its educational system from teacher certification requirements to governance

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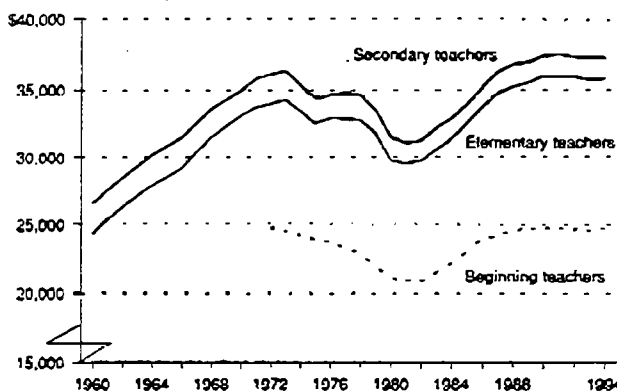
structures. And Michigan recently decided to stop using the property tax to finance its schools, and instead to use a combination of income and sales taxes. Since poor school districts receive most of their revenue from the state, another disadvantage of state and local funding is that economic conditions may cause the state to change its support level at the very moment poor school districts need the funds the most.

Although the level and distribution of education resources is very important, it is equally important that the resources be used effectively. Teacher salaries are a major portion of the elementary and secondary budget, and good teachers are central to a high quality education system. Most of what we consider formal childhood education takes place in classrooms through interactions between teachers and students. Teachers are one conduit through which education and societal values are passed.

The pupil-teacher ratio has declined steadily since the mid 1950s.¹⁷ Average teacher salaries in public schools were also higher in 1994 than in 1960 although most of the gain since 1981 only recouped losses incurred during the 1970s (*Indicator 57*). As most elementary and secondary teachers are women and the labor market opportunities of women have improved over the last two decades, larger increases in salaries may have been necessary for teachers, relative to those in other occupations, to keep teachers in teaching and to induce college students to choose teaching as a career. Nevertheless, using a variety of measures it appears that teacher earnings are relatively low compared to those of many other professions that college students could pursue.¹⁸ Policymakers have expressed some concern over whether this discourages the best and the brightest students from choosing teaching as a profession. Evidence of this is mixed. Some research indicates that those accepting teaching positions were more likely to have lower scores on the SAT and NTE (National Teacher Examination) than non-teaching college graduates and that those leaving teaching were more likely to have higher SAT and NTE scores than those remaining.¹⁹ Evidence from the 1992 National Adult Literacy Survey (NALS) points in the opposite direction, however. In NALS, the prose literacy scores of teachers are similar to the scores of many of their colleagues in other

professions, including private sector executives and managers, engineers, physicians, writers and artists, social workers, sales representatives, education administrators, and registered nurses. With respect to at least prose literacy, there is little evidence that low salaries are attracting only the least able college graduates into teaching (*Indicator 59*).

Average annual salaries of public school teachers
(in constant 1994 dollars)



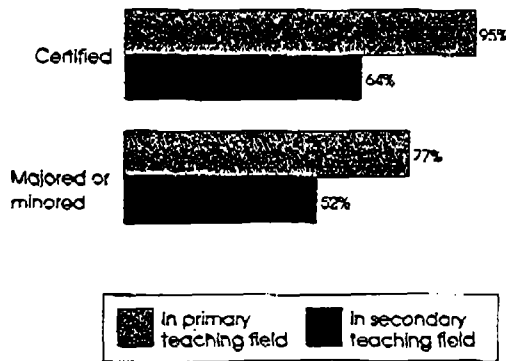
Although many of the characteristics that determine the quality of a teacher are not easily measured, some teacher qualifications can be measured. Many analysts argue that one of the most important characteristics is training and preparation in the subject or field in which the teacher is teaching. Research has shown moderate but consistent support for the reasonable proposition that subject knowledge (knowing what you teach) and teaching skills (knowing how to teach) are important predictors of both teaching quality and student learning.²⁰ Knowledge of subject matter and of pedagogical methods does not, of course, guarantee quality teaching, but it is a necessary prerequisite.

Almost all teachers are certified to teach in their primary assignment field, and a large majority have majored or minored in this field. In fact, most teachers have a graduate degree. About one-quarter of teachers has a secondary assignment field and lower proportions are certified or have majored or minored in this field (*Indicator 58*). There is considerable variation in teacher qualifications across states, however. For example, the percentage of high school mathematics teachers who majored in mathematics or mathematics education ranged from 44 percent in California to about 90 percent

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in Alabama and Minnesota.²¹ Although teacher qualifications and credentials may be an indication of minimal competency, these may be poor measures of subject matter and instructional competence.

Certification and educational background of teachers in 1990-91



Considerable policy discussion has addressed the ability of schools to keep qualified teachers, both in general and in specific subject areas such as mathematics and science. Overall, teacher attrition in public elementary and secondary schools seems to be low. Only 1 in 20 full-time public school teachers left the teaching profession in a recent year. Furthermore, keeping mathematics and science teachers in the profession does not seem to be as big a problem as was once suggested. The percentage of full-time teachers in public secondary schools in 1990-91 who left teaching in the next year was no higher in mathematics and science than in other teaching fields (*Indicator 60*).

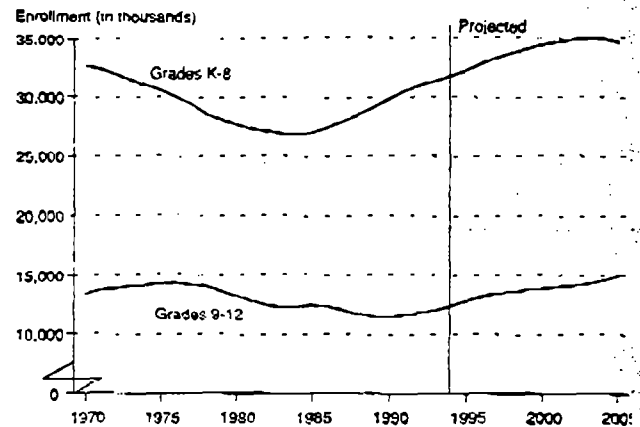
A high level of education and associated professional commitment among teachers benefits both students and the education system. These benefits come at a cost, however, because teachers must be paid enough to justify the investment they have made in their education. Nevertheless, education policymakers must address the more difficult issue of how to make best use of available resources under changing conditions.

How have conditions facing the schools changed?

Changing conditions that schools must confront are putting additional strains on revenues, even though revenues have increased.

First, schools are facing a period of rising enrollments after a long period of decline (*Indicator 35*). It is important to monitor these increases because they will affect school budgets as well as policies of teacher recruitment and retention.

Public school enrollment



Second, many more disabled students, particularly those with learning disabilities, are receiving special services (*Indicator 42*). This has major financial implications for school districts. There is some evidence that the average cost of serving a special education student is as much as 2.3 times the cost of serving regular students (ranging from 1.9 times for students in resource programs to 10.6 times for students in residential programs).²²

Children served in federally supported programs for students with disabilities

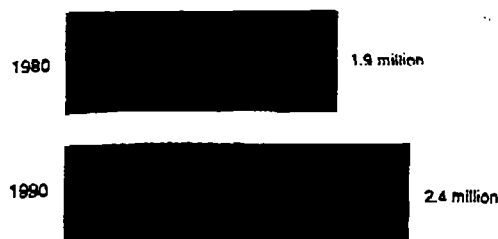


Third, many more students speak a language other than English at home and have difficulty speaking English, a likely indication that even more students may have difficulty reading and writing English.²³

By law, school systems nationwide must provide services for children from non-English-language

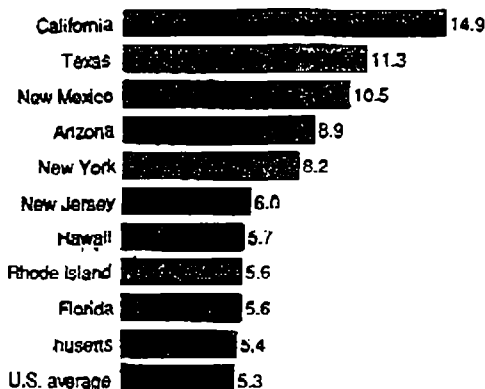
Commissioner's Statement

Children who have difficulty speaking English



backgrounds. Because these students are disproportionately concentrated in a few states (California, Texas, New Mexico, Arizona, and New York), the education systems in these states are under particular strain to respond to the special needs of these children.

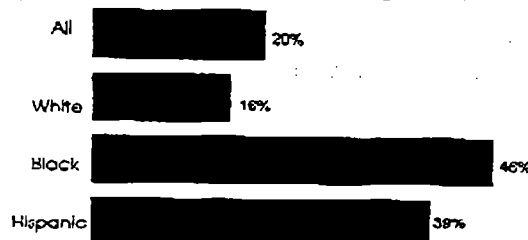
Percentage of children who have difficulty speaking English



Fourth, many children live in poverty (22 percent or 14.6 million), and these children typically live in neighborhoods and attend school together. Thus, the schools in these neighborhoods are also facing heavy demands.

Fifth, crime in the schools remains a problem. Violence in and around schools directly affects educators and students by reducing school effectiveness and inhibiting students' learning. In 1993, more than one in five high school seniors were threatened at school. However, between 1976 and 1993, there was little change in victimization rates in schools, except for a slight increase in the percentage of students who reported being threatened, both with and without a weapon. And although generally few differences were seen in school victimization rates among black and white high school seniors, black seniors were more likely than their white

Percentage of children living in poverty in 1992



counterparts to have been threatened with a weapon at school (24 versus 14 percent, *Indicator 47*).

As this discussion indicates, there is not one answer to the complex question of whether the condition of education is improving. Some conditions are improving, while others are not. In a number of areas, research has not been able to disentangle the influences of several factors, so we cannot be certain whether conditions are actually improving or not. However, this volume can help Americans interested in education policy to pose more sophisticated questions. In doing so, we can make progress toward understanding what produces high quality educational institutions, an educated citizenry, and a skilled work force.

E. Elliott

Emerson J. Elliott
Commissioner of Education Statistics

NOTES:

¹ Special Study Panel on Education Indicators. *Education Counts: An Indicator System to Monitor the Nation's Educational Health*. Washington, D.C.: National Center for Education Statistics. September 1991.

² See *Indicator 23 in The Condition of Education 1994*.

³ R. Coley and M. E. Goetz. *Educational Standards in the Fifty States: 1990*. Princeton, N.J.: Educational Testing Service; and Elliott A. Medrich, Robin R. Henke, and Cynthia L. Brown. *Overview and Inventory of State Requirements for School Coursework and Attendance* (NCES 92-663). Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, 1992.

WASHINGTON TIMES AUG 22 1995

U.S. students faring better in math, science

REUTERS NEWS AGENCY

P. A4

U.S. high school students are taking tougher courses and scoring better on math and science tests, according to an Education Department study released yesterday.

"More students are taking algebra, geometry, trigonometry and calculus ... as well as advanced science courses, including chemistry and physics," the department said in a summary of its annual Condition of Education report.

It said the percentage of high school graduates taking the department's recommended "core" courses soared from 13 in 1982 to 47 in 1992.

In 1983, the department's landmark "A Nation at Risk" report recommended major reforms to reverse declining academic performance. The core courses recommended in the 1983 report were four years of English, three each of science, social studies and mathematics and half a year of computer science.

Based on the National Assessment of Educational Progress, mathematics and science proficiency also increased between 1982 and 1992, the study showed.

It found that math scores of 17-year-olds rose nine points and science 11 points, "roughly equivalent

"This is no time to retreat from our efforts to keep education a national priority."

lent to an additional year of learning in high school," the department said. Proficiency scores in reading and writing did not show similar increases.

Education Secretary Richard Riley hailed the accomplishments of schools, communities and states in bringing about the improvements. He said the academic areas they targeted were the ones showing the most improvement.

"We're on the right path," Mr. Riley said. "This is no time to retreat from our efforts to keep education a national priority."

Mr. Riley criticized a vote in the Republican-controlled House of Representatives to cut education spending nearly \$4 billion in the next fiscal year and as much as \$36 billion over the next seven years in the drive to pare the national debt.

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Is America Still 'A Nation At Risk?'

By LAURA MYERS

Associated Press Writer

WASHINGTON (AP) - Is America still "A Nation at Risk" because of a failing educational system? Not according to Education Secretary Richard W. Riley who points to a report that shows increasing success.

Students are taking tougher math and science courses now than a decade ago, testing better and dropping out of school less, the record indicates. But Riley cautioned Monday that minority students still must improve their performance to attain the same academic levels as their white classmates.

And all students, from kindergarten through 12th grade, need to increase their English skills, which have shown little or no improvement for two decades, he said.

"We must continue our efforts to reach children who need to learn the basics and core academics," Riley said.

"We're on the right path," he added. "This is no time to retreat from our efforts to keep education a national priority."

The annual "Condition of Education" report pulls together statistics from the most recent available data, including academic testing scores, dropout rates and what courses students are taking.

Some highlights:

-Between 1982 and 1992 the number of high school graduates who had taken a package of recommended "core courses" - English, sciences, social studies, math and computer science - increased from 12.7 percent to 46.8 percent. The numbers increased from 19.8 percent to 50.7 percent for Asians and Pacific Islanders; from 13.8 percent to 48.5 percent for whites; from 10.8 percent to 43.7 percent for blacks; from 6.7 percent to 36 percent for Hispanics; and from 6 percent to 30.6 percent for American Indians and Alaska natives.

-More students are taking more difficult math and science courses. The percentage of high school graduates who had taken geometry increased from 48 percent in 1982 to 70 percent in 1992. The percentage who had taken chemistry rose from 32 percent to 56 percent.

-Between 1982 and 1992, math scores of 17-year-olds on the National Assessment of Educational Progress increased 9 points and on science 11 points - equivalent to a full year's education, the department said.

-Scholastic Aptitude Test scores for college-bound seniors increased for math, from 467 in 1982 to 478 in 1993, but dropped slightly for verbal skills, from 426 to 424. Again racial differences show up, with Asian Americans testing highest on math at 513 in 1982 and 535 in 1993. Blacks tested lowest in verbal skills, with 341 in 1982 and 353 in 1993.

-The high school dropout rate improved from 13.9 percent in 1982 to 11 percent in 1993. For whites, the dropout rate fell from 11.4 percent to 7.9 percent; for blacks from 18.4 percent to 13.6 percent; and for Hispanics from 31.7 percent to 27.5 percent.

-Between 1980 and 1993, the proportion of high school graduates going directly to college increased from 49 percent to 62 percent.

The 1983 "A Nation at Risk" report painted a dire picture of national education, with falling test scores and attendance, prompting federal and state governments to increase spending and improve school programs.

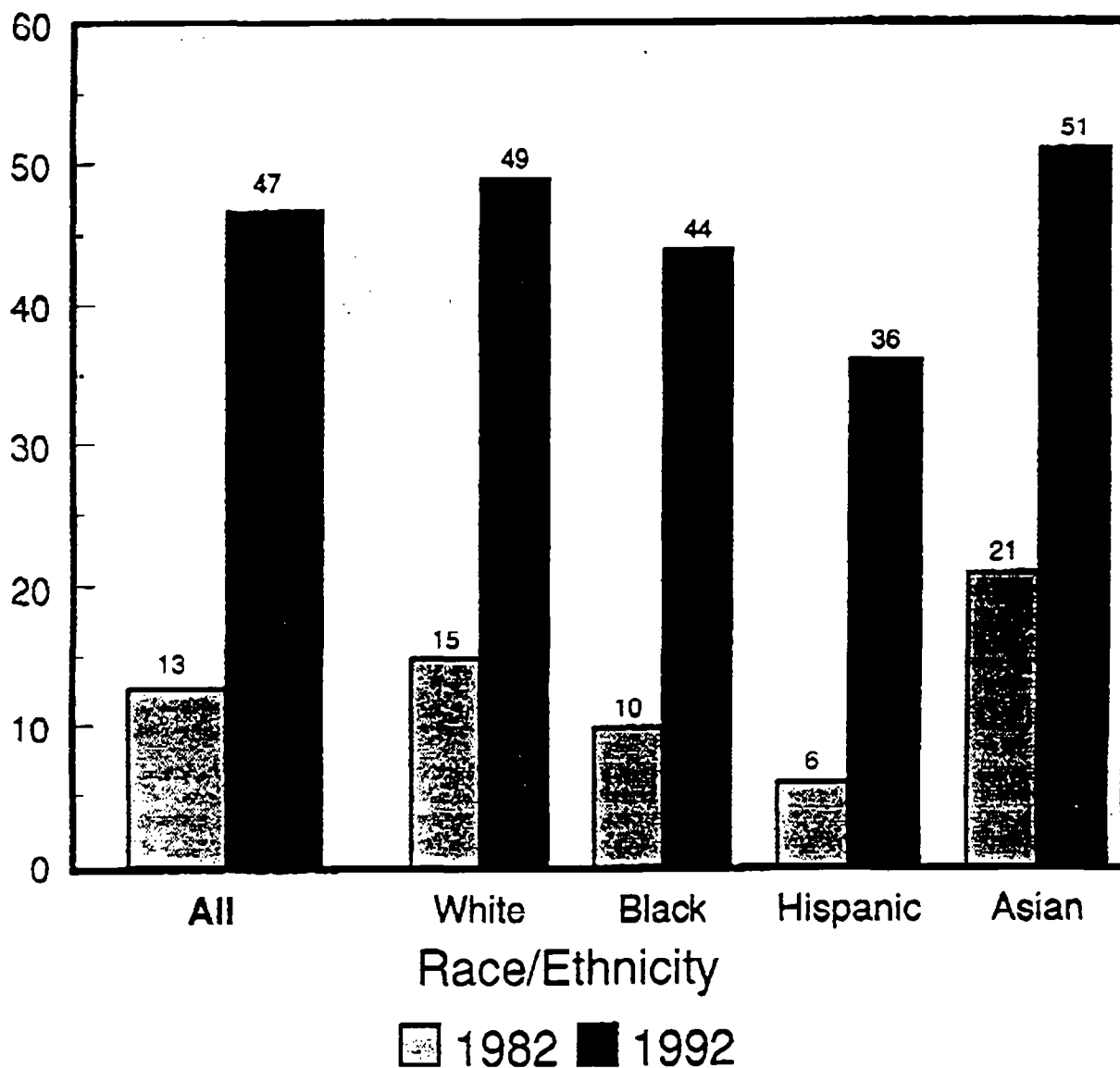
"If you listen to critics you would think we're still on a downward slope. We're not," said Deputy Secretary of Education Madeleine Kunin. "We have made progress. We need to maintain the momentum for change."

Riley said Congress is threatening harmful budget cuts that could impede progress. The House has voted to reduce education spending by nearly \$4 billion in the coming fiscal year and has proposed cuts of \$36 billion over the next seven years. President Clinton's budget plan would increase education funding by \$40 billion during the same period.

Chart 2

**Percentage of High School Graduates Taking the
Number of Courses Recommended for All Students by
A Nation at Risk, by Race/Ethnicity: 1982 and 1992***

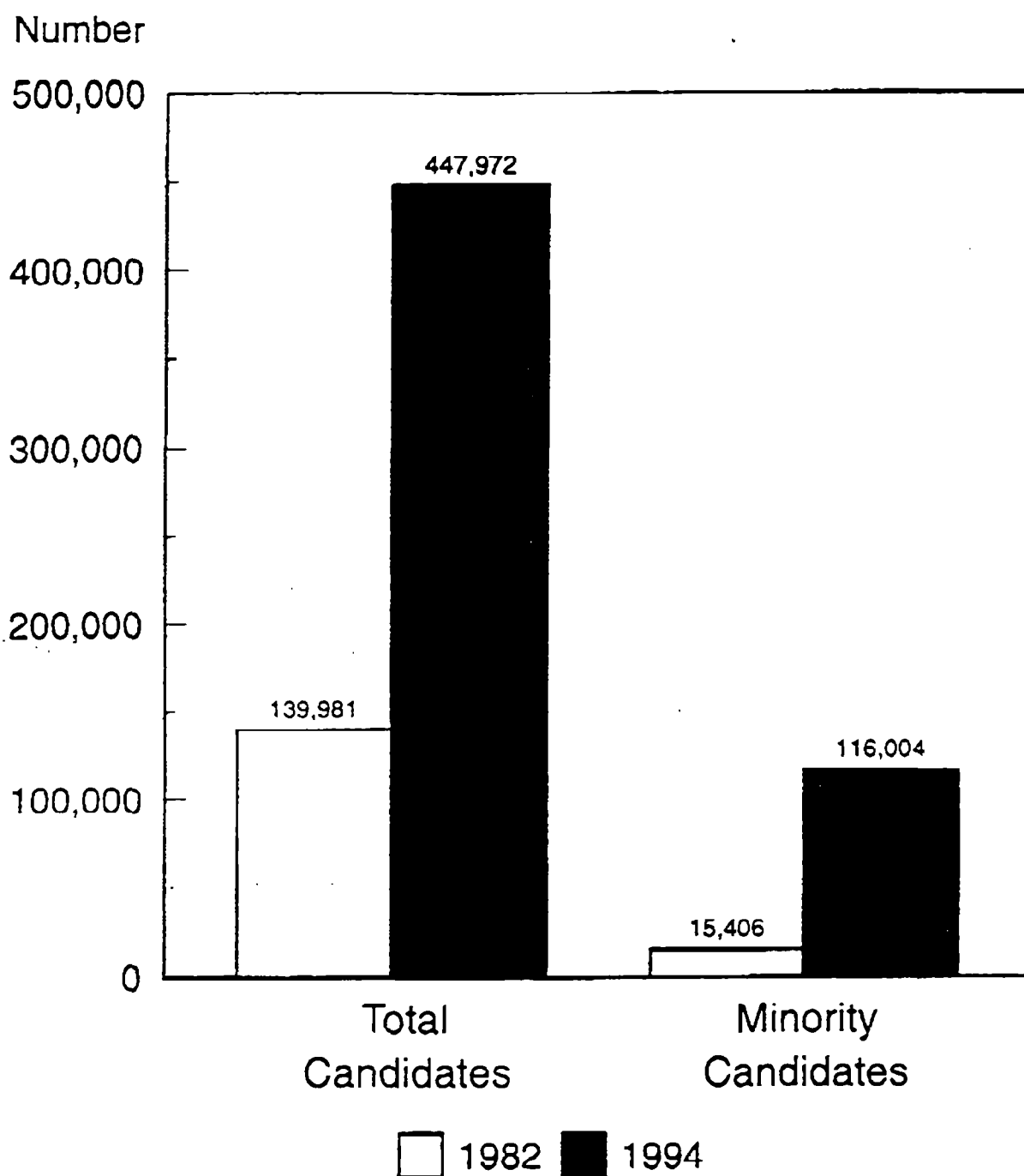
Percent



* Although *A Nation at Risk* included one half a unit of computer science in its recommendations, it is not included in this analysis because very few students participated in computer science classes in 1982. Its inclusion in this measure would exaggerate the change in academic course taking since 1982.

Note: Courses include 4 units in English, 3 units in social studies, 3 units in science, and 3 units in math, where a unit represents a year-long course.

Source: U.S. Department of Education, National Center for Education Statistics, *The 1990 High School Transcript Study*, Washington, D.C., 1993.

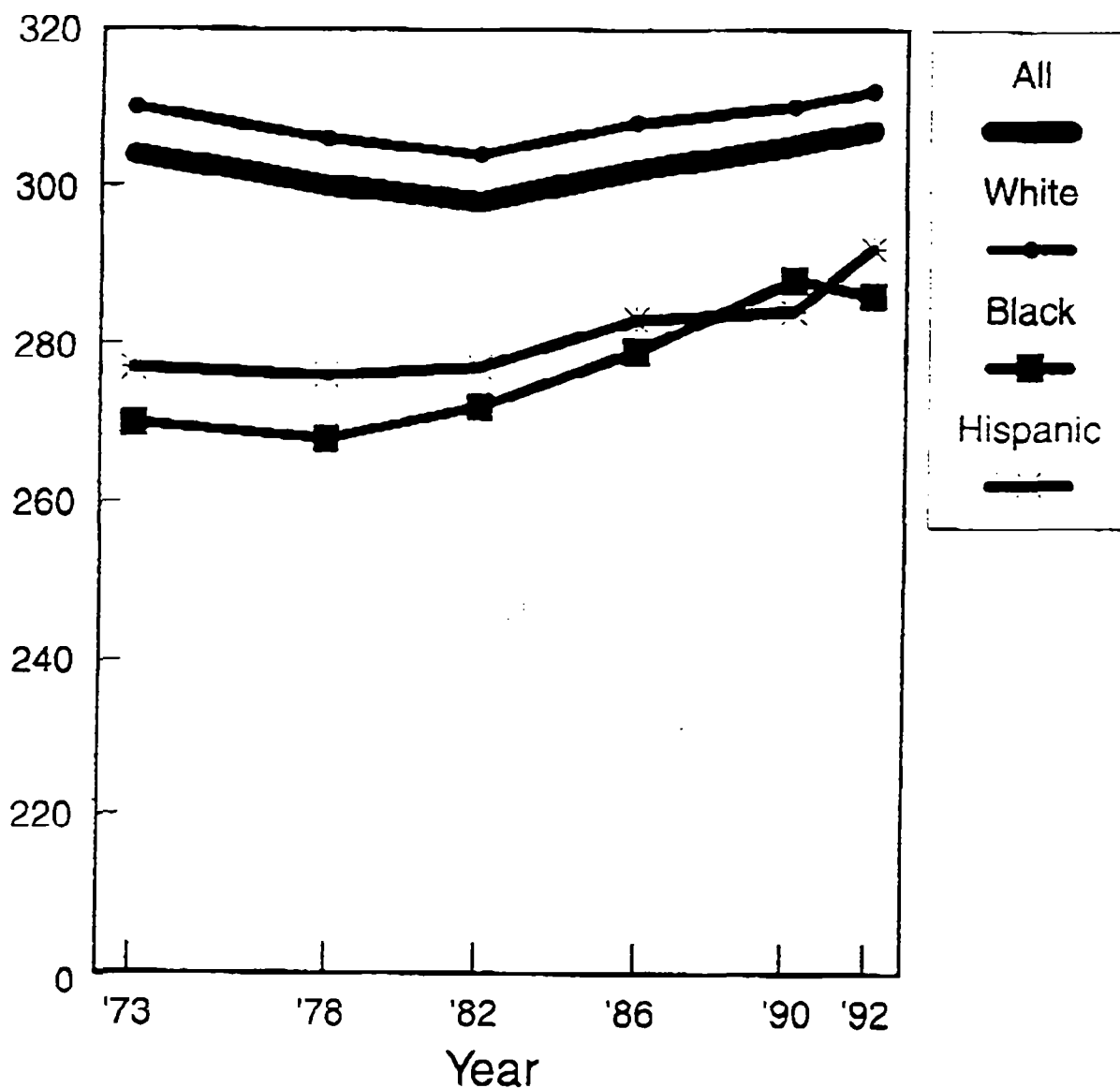
Chart 3**Number of Candidates Taking Advanced Placement Examinations: 1982 and 1994**

Source: The College Board, *The AP Program: National Summary*, 1982, 1993, and 1994.

Chart 4a

**Average Math Proficiency of 17-Year-Olds,
by Race/Ethnicity: 1973 to 1992**

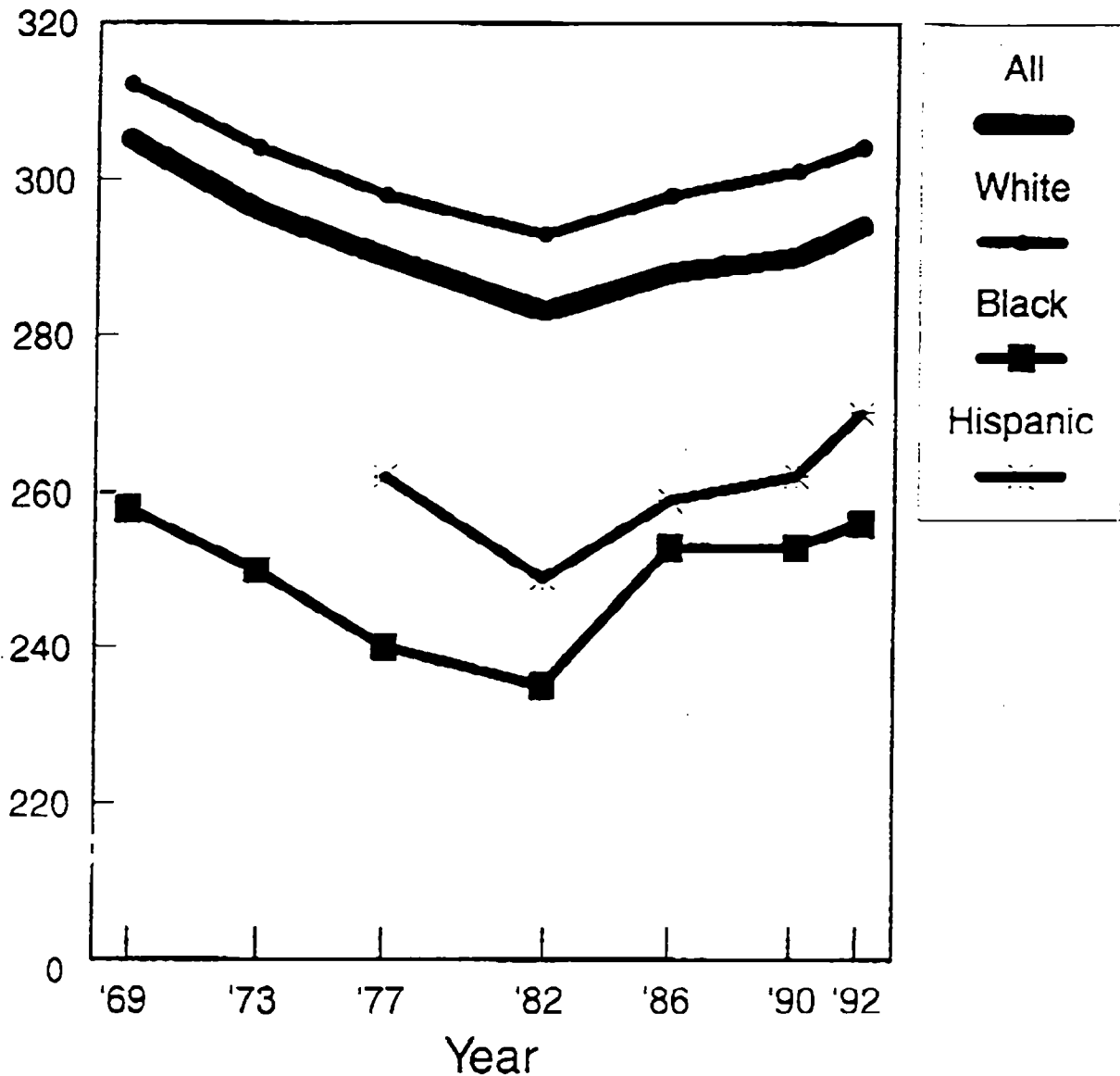
Scale Score



Source: U.S. Department of Education, National Center for Education Statistics, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; and Writing, 1984 to 1992*, Washington, D.C., July 1994.

Chart 4b**Average Science Proficiency of 17-Year-Olds,
by Race/Ethnicity: 1969 to 1992**

Scale Score

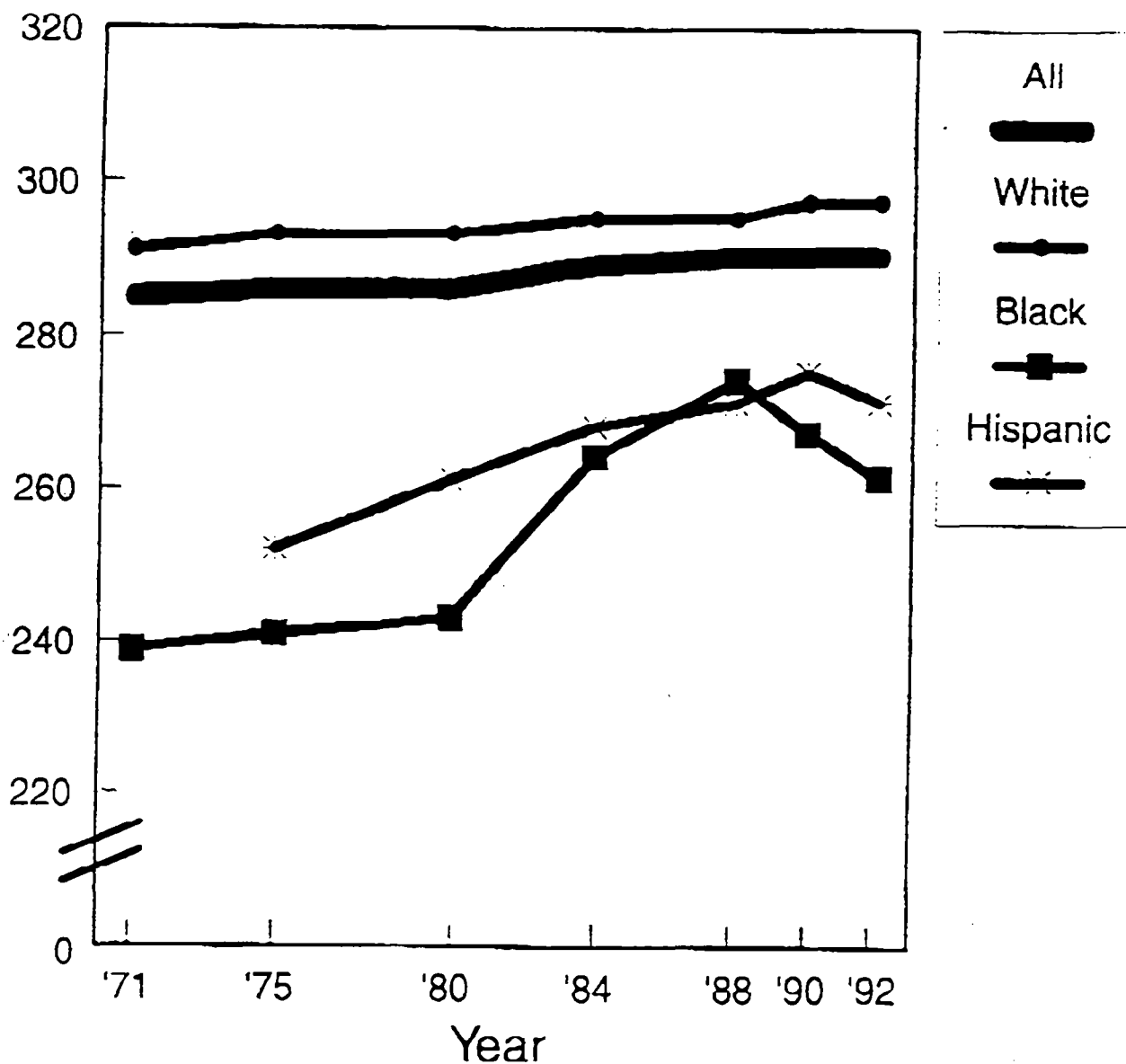


Source: U.S. Department of Education, National Center for Education Statistics, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; and Writing, 1984 to 1992*, Washington, D.C., July 1994.

Chart 4c

**Average Reading Proficiency of 17-Year-Olds,
by Race/Ethnicity: 1971 to 1992**

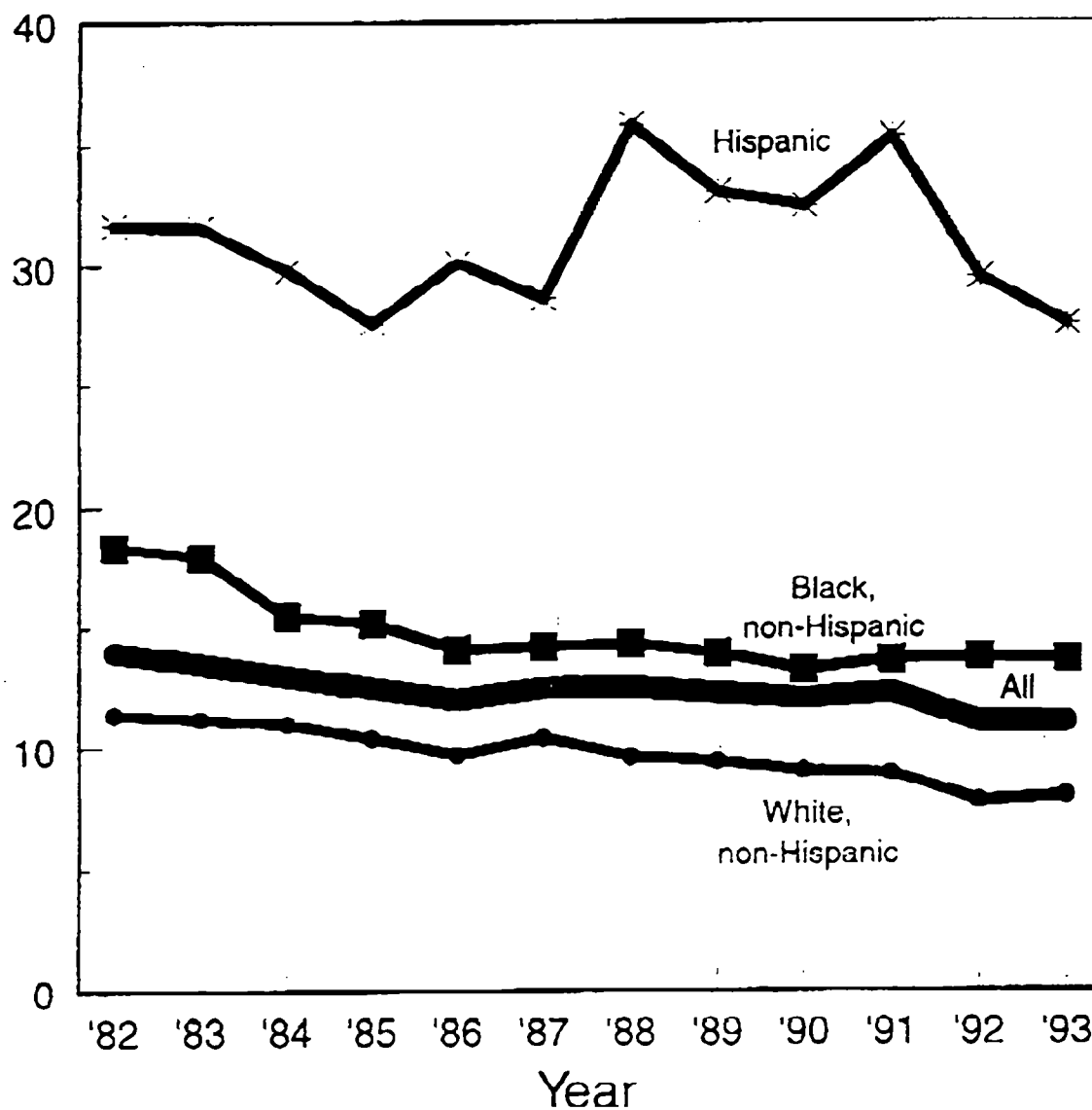
Scale Score



Source: U.S. Department of Education, National Center for Education Statistics, *Trends in Academic Progress: Achievement of U.S. Students in Science, 1969 to 1992; Mathematics, 1973 to 1992; Reading, 1971 to 1992; and Writing, 1984 to 1992*, Washington, D.C., July, 1994..

Chart 5**Dropout Rates for Persons 16-24 Years Old
by Race/Ethnicity: 1982 to 1993**

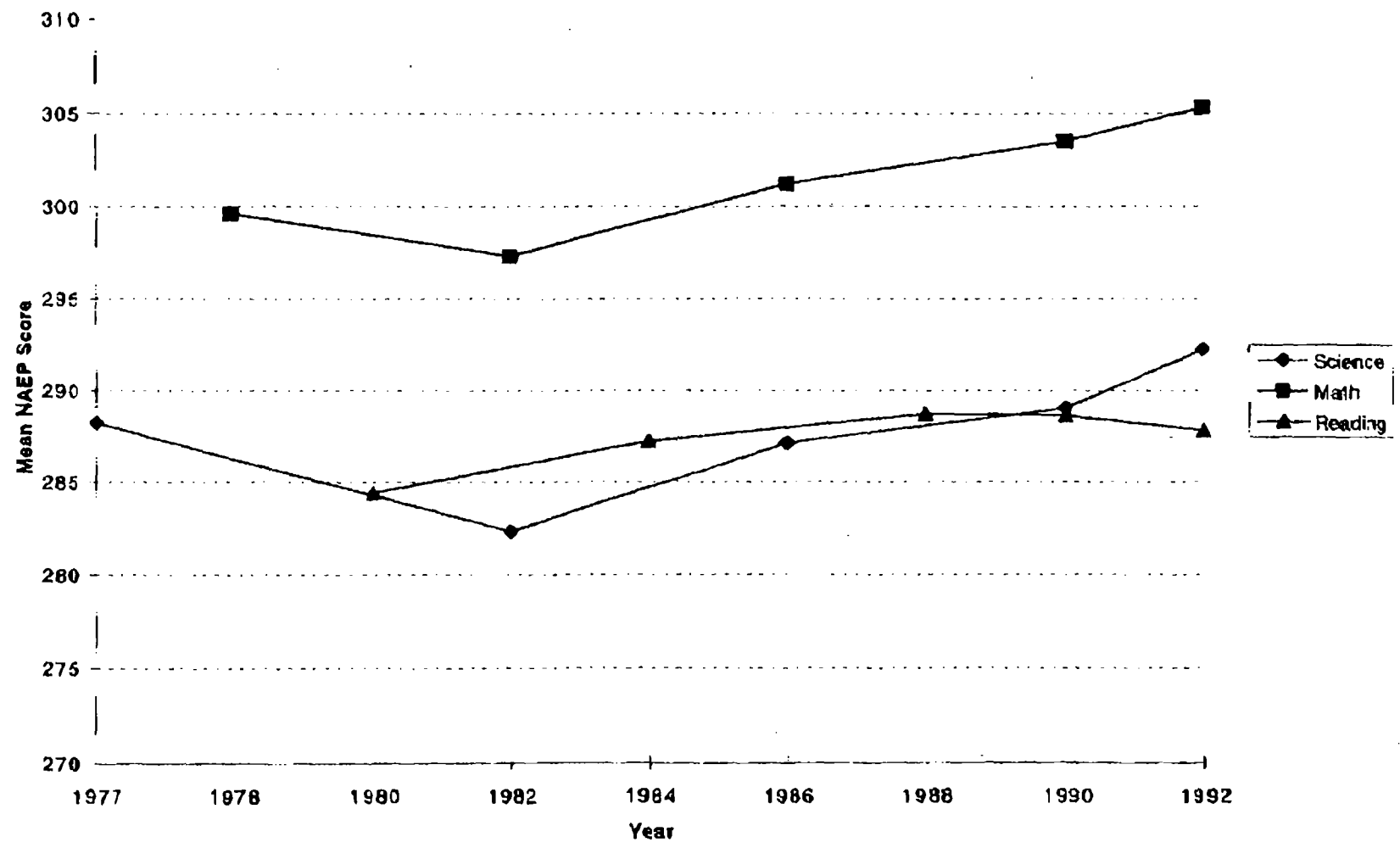
Percent



Note: The 1992 data reflect new wording of the educational attainment item on the CPS

Source: National Center for Education Statistics, *Dropouts in the U.S.: 1993, 1994*.

Mean NAEP Scores for Public School 17-year Old
1977-1992



Mean NAEP Scores for Public School 17-year Old
1980-1992

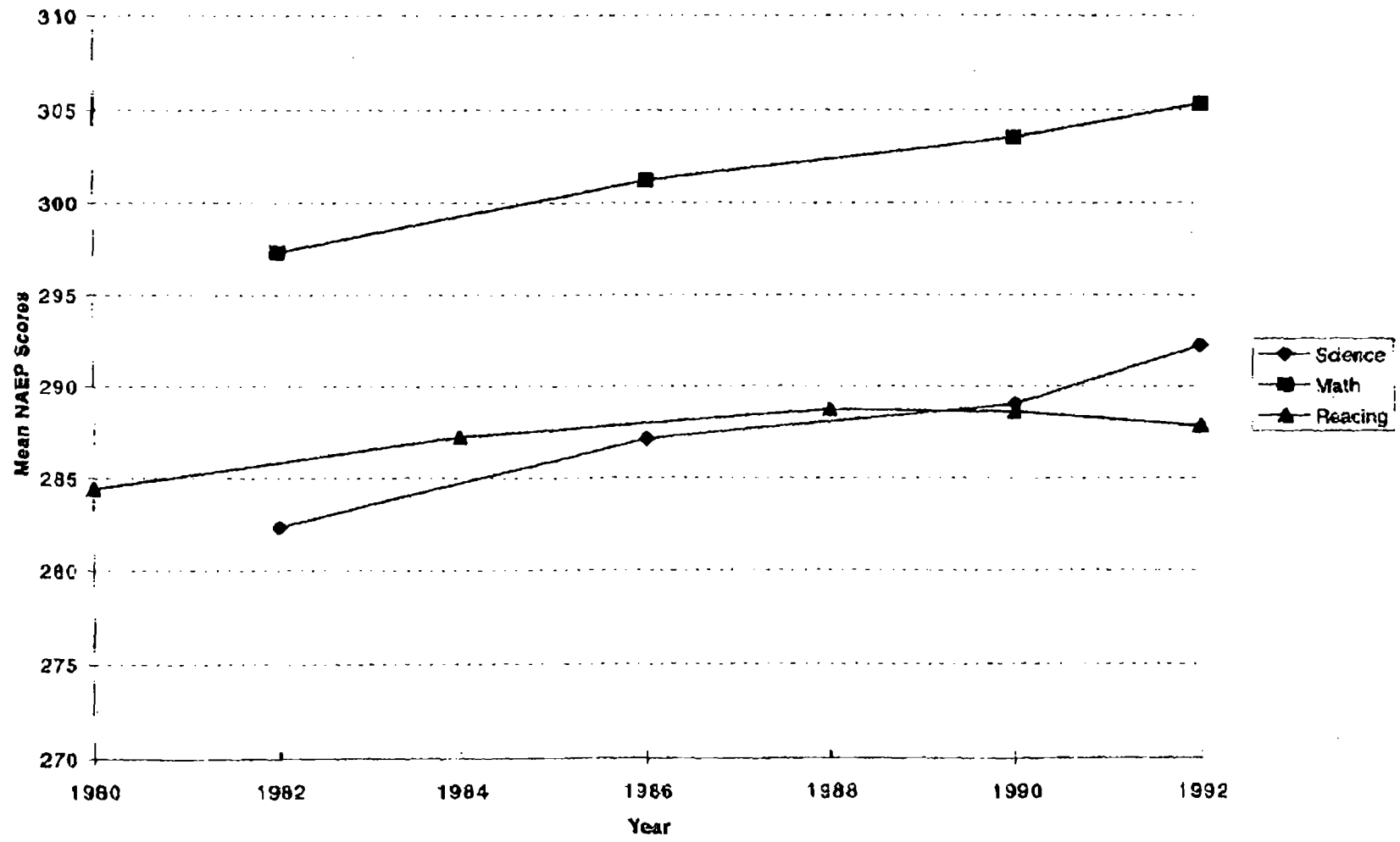
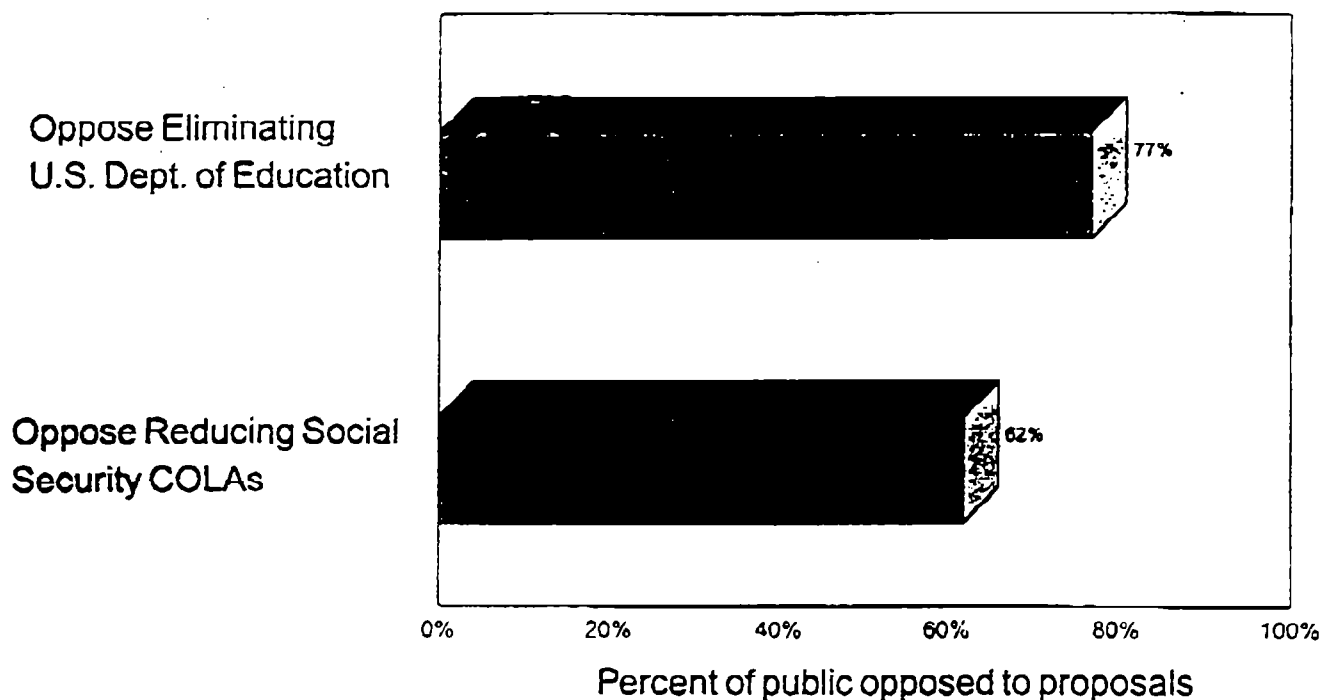


Chart 1

Public Opinion: Opposition to Proposals to Cut Deficit



Public Opinion: Preventing Cuts to Programs

