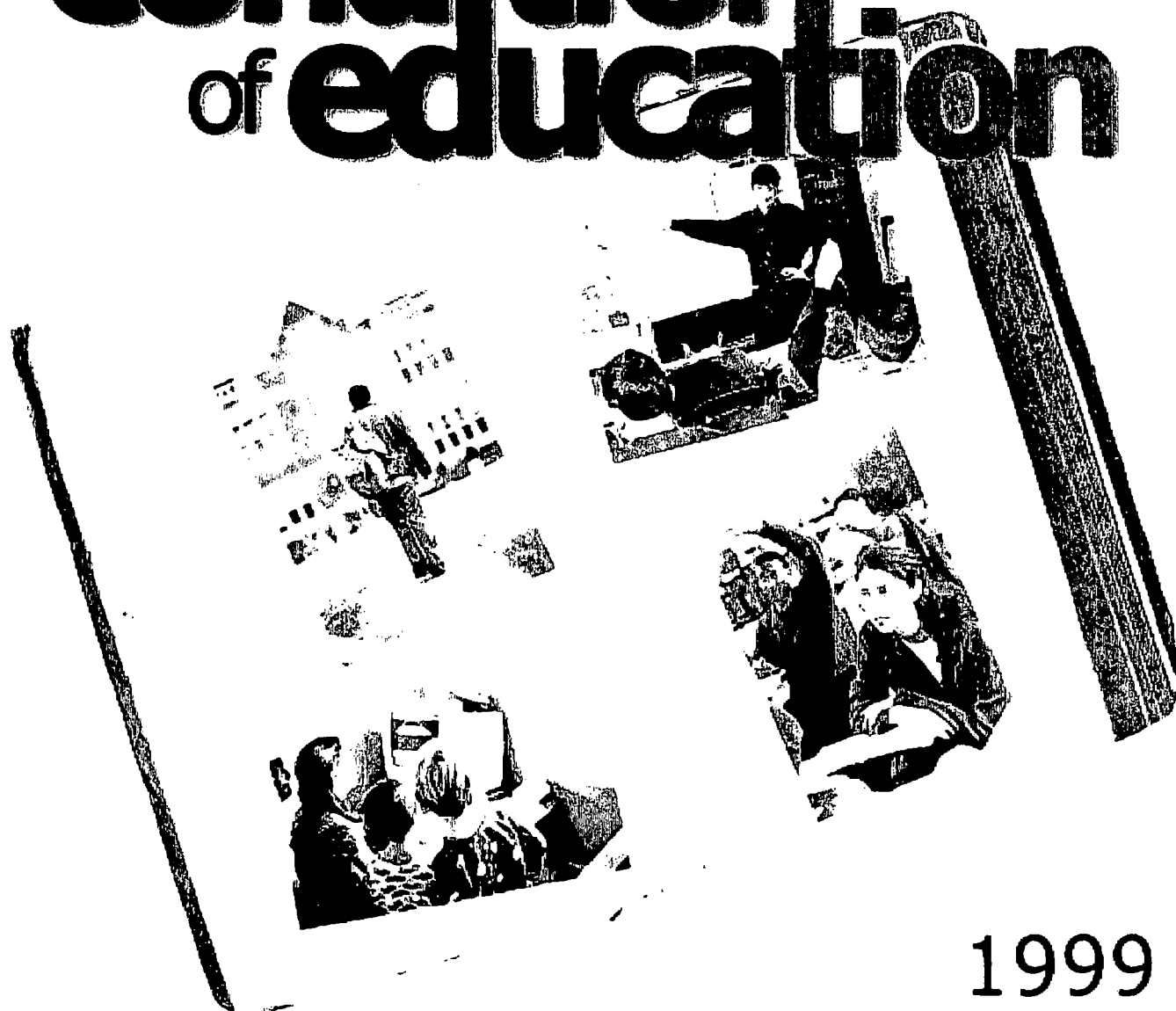

NATIONAL CENTER FOR EDUCATION STATISTICS

the condition of education



1999

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the
condition
of **education**
1999

U.S. Department of Education
Office of Educational Research and Improvement NCES 1999-022

U.S. Department of Education

Richard W. Riley

Secretary

Office of Educational Research and Improvement

C. Kent McGuire

Assistant Secretary

National Center for Education Statistics

Pascal D. Forgione, Jr.

Commissioner

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

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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 1999 edition of *The Condition of Education* responds to the requirements of that law.

Interest in education data and indicators:

Federal, state, and local policymakers require a variety of information to develop, implement, and monitor policies designed to improve education. Education and business organizations, as well as community groups and citizens, generally want to know how to make and support efforts designed to bring about that improvement. Informed decisions cannot be made without valid information, however. As various groups voice their desires and concerns about our schools, NCES continually seeks to define efficient and effective measures that can meet the demand for timely, useful information, while maintaining high statistical standards. At the same time, the interest in data about new topics has not lessened the need for basic statistical information about educational institutions and trends.

Developing education indicators in one way the Center has participated in widening national discussion about the types of measures needed to serve these diverse purposes. *The Condition of Education* is an indicator report, analyzing key data that measure the health of education, monitor important developments, and show trends in major aspects of education. Unlike most other statistics, an indicator is policy relevant and problem oriented; it usually incorporates a standard against which to judge progress or regression. Indicators cannot, however, identify causes or solutions and should not be used to draw conclusions without other evidence.

Organization of this report: The format of *The Condition of Education*, 1999 differs from that of previous years in order to better communicate the contents of the publication to the reader as well as to identify areas in which more research and attention are needed in the field of education research. The *Condition* first presents an overview essay of the information that the reader will find in the individual indicators. The purpose of this essay is to create links between the numerous topics discussed in this publication and construct a comprehensive statistical picture of the condition of education. Following the overview essay are the indicators, with each one appearing on two facing pages: the first page presents statistical results and one or two tables with supporting data, while the second page presents one or more figures that illustrate the major findings of the indicator.

The indicators are organized into five sections: (1) Learner Outcomes; (2) Quality of Education Environments (Elementary/Secondary); (3) Quality of Education Environments (Postsecondary); (4) Social Support for Education; and (5) Educational Participation and Progress. Additional tables and supplemental notes that support the indicators follow the five indicator sections. For those interested in delving deeper into the supporting data, further supplemental tables are available on-line at the NCES Internet site at <http://www.nces.ed.gov>.

Indicator selection: Each year, about 60 indicators are carefully selected and presented in *The Condition of Education*. The indicators represent a consensus of professional judgement on the most significant national measure of the condition and progress of education at this time, but are tempered necessarily by the availability of current and valid information. The indicators presented here reflect a basic core that can be repeated with updated information on a yearly or cyclical bases, supplemented by a more limited set of indicators based on infrequent or special studies.

The indicators presented in this report were developed using data from various studies carried out by NCES, as well as surveys conducted elsewhere, both within and outside of the federal government. Although indicators may be simple statistics, more often they are analyses—examining relationships; showing relationships; showing

changes over time; comparing or contrasting subpopulations, regions, states, or countries; or studying characteristics of students from different backgrounds. New to the *Condition* this year are indicators with statistically adjusted data, such as *Indicator 25*, which presents data on the relationship between the age and level (elementary or secondary) of teachers and their salaries during a period of 28 years. These statistically adjusted indicators demonstrate complex relationships between several variables.

This year's edition contains 22 new indicators, which are integrated throughout the report. In the Learner Outcomes section there are new indicators on reading and arts performance, citizenship skills, and educational outcomes and employment status after college graduation. In the Quality of Educational Environments section on Elementary and Secondary Education, there are several new indicators on the instructional methods used by teachers, the mainstreaming of students with disabilities, and teacher characteristics. In the companion section on the Quality of Educational Environments in Postsecondary Education, there is a new indicator on distance education. The Social Support for Learning section contains new indicators about father's involvement, family characteristics of students, and trends in student financing of higher education. The final section, Educational Participation and Progress, has a new indicator on racial and ethnic isolation in school and several new indicators focusing on the progress of students through higher education.

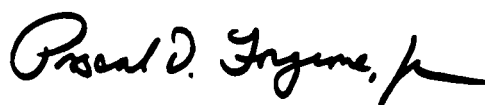
The utility of *The Condition of Education* should increase as more diverse, high quality data become available, especially as new time series data can be constructed. For example, in early 1999, new data on Internet access in public schools were released in a report from the Fast Response Survey System (FRSS).

Data on early childhood education will greatly expand with the start of the Early Childhood Longitudinal Study, which will follow a sample of children from kindergarten through the 5th-grade, which began in 1998. Plans are also under way for the next wave of the Schools and Staffing Survey (SASS), National Study of Postsecondary Faculty (NSOPF), and National Adult Literacy Survey. In addition, the next round of secondary and postsecondary longitudinal studies will enable us to update what we have learned from the National Education Longitudinal Study of 1988 (NELS:88),

the Beginning Postsecondary Students Longitudinal Study (BPS), and the Baccalaureate and Beyond Longitudinal Study (B&B). New data from each of these studies will help us better understand the educational experience in our Nation's schools and colleges.

Availability of NCES data and information: We strive to make our products available in a variety of formats and in language that is appropriate to our diverse audiences. All new NCES publications and many data sets are available on-line through the NCES Internet site at <http://www.nces.ed.gov>. I hope you find this medium a useful way to access our data. In addition, the National Education Data Resource Center (NEDRC) performs special statistical analyses and tabulations of NCES data sets. NEDRC services are free of charge for state education personnel, education researchers, and others requesting special tabulations. In addition, NCES publications can be obtained at no cost from ED Pubs. To contact ED Pubs, call their toll-free phone number: 1-877-4ED-PUBS (877-433-7827), TTY/TDD: 877-576-7734 or e-mail them at EDPubOrders@aspensys.com or send them a written request at ED Pubs, P.O. Box 1398, Jessup, Md 20794-1398.

I hope that you find the material in this document useful and invite you to send us comments on how we can improve future editions of this report.



Pascal D. Forgione, Jr., Ph.D.
Commissioner of Education Statistics

Acknowledgments

For many years, one name has appeared in these acknowledgments of *The Condition of Education* whose contributions far exceeded the few words accorded to her efforts. As the technical reviewer of NCES's Data Development Division and before that as an NCES staff member and author, no one has contributed more to the technical quality, educational substance, and writing of this publication over the years than Mary Frase.

Dr. Frase recently left NCES to accept a senior management position with the National Science Foundation. In recognition of her many contributions to the development and success of *The Condition of Education* over the years, this volume is hereby dedicated to her. The high standards she has set for the publication will be carried on to the best ability of those to whom this responsibility has passed.

This volume of *The Condition of Education* was authored by a team of analysts under the general direction of John Wirt and Tom Snyder with technical review by Mary Frase, Ellen Bradburn, Marilyn McMillen (Chief Statistician of the NCES), and many others. The authors are mostly from Pinkerton Computer Consultants, Inc., MPR Associates, Inc., and the American Institutes for Research. Rebecca Pratt of Pinkerton Computer Consultants, Inc. was the managing editor of the publication. Graphic design, desktop publishing, and print production for the volume were coordinated by Pinkerton Computer Consultants, Inc.

Many people have contributed to this volume. From Pinkerton Computer Consultants, Inc., Yupin Bae, Jennifer Sable, and Daniel Troy authored and edited indicators. Janis Stennett supported Dr. Wirt in coordinating the review process and working with authors to satisfy reviewer comments. Sonia Connor and Ross Pfile of Pinkerton Computer Consultants, Inc. carefully edited the manuscript. Allison Pinckney and Mark Ricks designed the layout of the publication, and desktopped the publication and prepared it for printing. Mark Ricks also designed and created the cover. Dorene Taylor designed the Web-enabled version of the volume, and worked with Jeff Hewitt, Chris Stahnke, and Michael Duignan to produce that volume.

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Many people have reviewed this volume. Their ideas, high professional standards, discerning eyes, and commitment to quality are crucial to the quality and relevance of this volume.

To a greater extent than in the past, NCES Division staff and external reviewers were involved in developing and reviewing the individual indicators. Each indicator was assigned to at least two NCES staff members, who followed it through all phases of development from initial plans to final review. Robert Atanda, Samuel Barbett, Marilyn Binkley, Stephen Broughman, Robert Burton, Kathryn Chandler, Chris Chapman, Michael Cohen, Willam Fowler, Debra Gerald, Arnie Goldstein, Patrick Gonzales, Bernie Greene, Kerry Gruber, Charles Hammer, Elvie Hausken, Lee Hoffman, William Hussar, Frank Johnson, Daniel Kasprzyk, Paula Knepper, Ralph Lee, Laura Lippman, Andrew Malizio, Edith McArthur, Howard Nelson, Larry Ogle, Martin Orland, Eugene Owen, Michael Ross, Thomas Snyder,

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Mary Frase, formerly of NCES, and Ellen Bradburn of ESSI reviewed the entire manuscript through several drafts and made many important suggestions that improved the technical accuracy and clarity of the final volume.

Individuals within the Department who provided reviews were Richard Foster, Carol Sue Fromboluti, Naomi Karp, Jack Klenk, Carol Lacampagne, Jeannette Lim, Patricia McNeil, and Val Plisko.

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Commissioner's Statement	i
Acknowledgments	iii

Section I. Learner Outcomes

Core Content

1	Trends in the science performance of 9-, 13-, and 17-year-olds	2
2	Mathematics performance of 4 th -, 8 th -, and 12 th -grade students	4
3	International comparisons of student performance in mathematics and science	6
4	Trends in the reading performance of 9-, 13-, and 17-year-olds	8
5	Reading performance of 4 th -, 8 th -, and 12 th -grade students	10
6	Trends in the writing performance of 4 th -, 8 th -, and 11 th -grade students	12
7	Arts performance of 8 th -grade students	14

Social and Cultural Effects

8	International comparisons of adult literacy	16
9	Citizenship skills	18

Economic Consequences

10	Employment of noncollege youth	20
11	Employment of young adults, by educational attainment	22
12	Annual earnings of young adults, by educational attainment	24
13	Educational outcomes and employment status 4 years after college graduation	26

Section II. Quality of Education Environments (Elementary/Secondary)

Coursetaking and Standards

14	Students who took Advanced Placement (AP) examinations	30
----	--	----

Learning Opportunities

15	Teachers' use of higher-level tasks in instruction	32
16	International comparisons of instructional activities in mathematics	34
17	Internet access in public and private schools	36
18	Student computer use	38
19	Uses of computers for mathematics instruction	40

Special Programs

20	Inclusion of students with disabilities in the least restrictive environment	42
----	--	----

Learning Outside of School

21	Reading and writing habits of students outside of school	44
----	--	----

Teacher Characteristics

22	Requirements in teacher hiring	46
23	Teachers' feelings of preparedness	48
24	Teachers' participation in collaborative activities	50
25	Salaries of teachers	52

Disciplined Environment

26	Student victimization at school	54
27	Student alcohol and drug use	56

Parental Choice

28	Tuition and enrollment in private schools	58
----	---	----

Section III. Quality of Education Environments (Postsecondary)**Coursetaking and Standards**

29	Remedial education in higher education institutions	62
----	---	----

Learning Opportunities

30	Instructional methods of postsecondary faculty	64
31	Distance education in higher education	66

Faculty Characteristics

32	Part-time instructional faculty and staff at postsecondary institutions	68
33	Teaching workload of full-time postsecondary faculty	70

Section IV. Social Support for Learning**Family Background**

34	Early reading activities in the home	74
35	Fathers' involvement in their children's education	76
36	Family characteristics of 6- to 12-year-olds	78

Public Support

37	National indicators of public investment in education	80
38	Public elementary and secondary expenditures per student	82
39	Higher education revenues per student	84
40	Higher education expenditures per student	86
41	International comparisons of expenditures for education	88

Access to Postsecondary Education

42	Trends in student borrowing: Subsidized and unsubsidized loans	90
43	Student financing of graduate and first-professional education	92

Section V. Educational Participation and Progress**Enrollments**

44	Preprimary education enrollment	96
45	Elementary and secondary school enrollment	98
46	Racial and ethnic distribution of elementary and secondary students	100
47	Racial-ethnic isolation of students in public schools	102
48	College and university enrollment, by control and type of institution	104
49	Racial and ethnic distribution of college enrollments	106
50	Enrollment characteristics of graduate and first-professional students	108

Transitions

51	Recent school dropouts	110
52	High school dropouts, by race-ethnicity and recency of migration	112
53	Immediate transition from high school to college	114
54	Racial and ethnic differences in the transition to college	116

Persistence

55	Persistence and attainment of first-year college stopouts.....	118
56	Persistence and attainment of first-generation students.....	120

Educational Attainment and Degrees

57	Bachelor's degrees conferred, by field of study and race-ethnicity	122
58	Graduate field of study, by sex and race-ethnicity	124
59	Educational attainment	126
60	International comparisons of educational attainment, by age	128

Appendices

Supplemental Tables and Notes	131
Standard Error tables	255
General Information about Standard Errors.....	256
Sources of Data	331
Glossary	345
Index	365

Section I. Learner Outcomes

1	Trends in the science performance of 9-, 13-, and 17-year-olds	2
2	Mathematics performance of 4 th -, 8 th -, and 12 th -grade students	4
3	International comparisons of student performance in mathematics and science	6
4	Trends in the reading performance of 9-, 13-, and 17-year-olds	8
5	Reading performance of 4 th -, 8 th -, and 12 th -grade students	10
6	Trends in the writing performance of 4 th -, 8 th -, and 11 th -grade students	12
7	Arts performance of 8 th -grade students	14
8	International comparisons of adult literacy	16
9	Citizenship skills	18
10	Employment of noncollege youth	20
11	Employment of young adults, by educational attainment	22
12	Annual earnings of young adults, by educational attainment	24
13	Educational outcomes and employment status 4 years after college graduation	26

Trends in the science performance of 9-, 13-, and 17-year-olds

Competence in science is an important outcome of education. The ability to apply scientific information, interpret data, and make inferences about scientific findings is required in a world that relies on technological and scientific advances.

- In 1996, average science performance was higher at all three age levels than in 1982. However, due to declining science scores in the 1970s, scores for 13-year-olds were about the same in 1996 as in 1970 and, for 17-year-olds, were lower in 1996 than in 1970. For 9-year-olds, science performance was higher in 1996 than in 1970.
- In 1996, the average science performance of blacks and Hispanics remained well below that of whites. Nonetheless, the performance gap between whites and blacks at age 9 was smaller in 1996 than in 1970. Between whites and Hispanics at age 13, the gap was smaller in 1996 than in 1977.
- Evidence shows that the difference in science performance scores between the ages of 9 and 13 is similar across racial-ethnic groups, while between the ages of 13 and 17, the change is much greater for white students than it is for black students. For example, on average, white and black 13-year-olds who were assessed in 1990 scored 32 and 30 points higher, respectively, than did 9-year-olds who were assessed 4 years earlier, in 1986. In 1994, however, white 17-year-olds scored 42 points higher than white 13-year-olds did in 1990, while black 17-year-olds scored 31 points higher than their 13-year-old counterparts in 1990.

Average science performance (scale score), by sex and age: 1970–96

Year	Total			Male			Female		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1970	225	255	305	228	257	314	223	253	297
1973	220	250	296	223	252	304	218	247	288
1977	220	247	290	222	251	297	218	244	282
1982	221	250	283	221	256	292	221	245	275
1986	224	251	289	227	256	295	221	247	282
1990	229	255	290	230	259	296	227	252	285
1992	231	258	294	235	260	299	227	256	289
1994	231	257	294	232	259	300	230	254	289
1996	230	256	296	232	261	300	228	252	292

Average science performance (scale score), by race-ethnicity and age: 1970–96

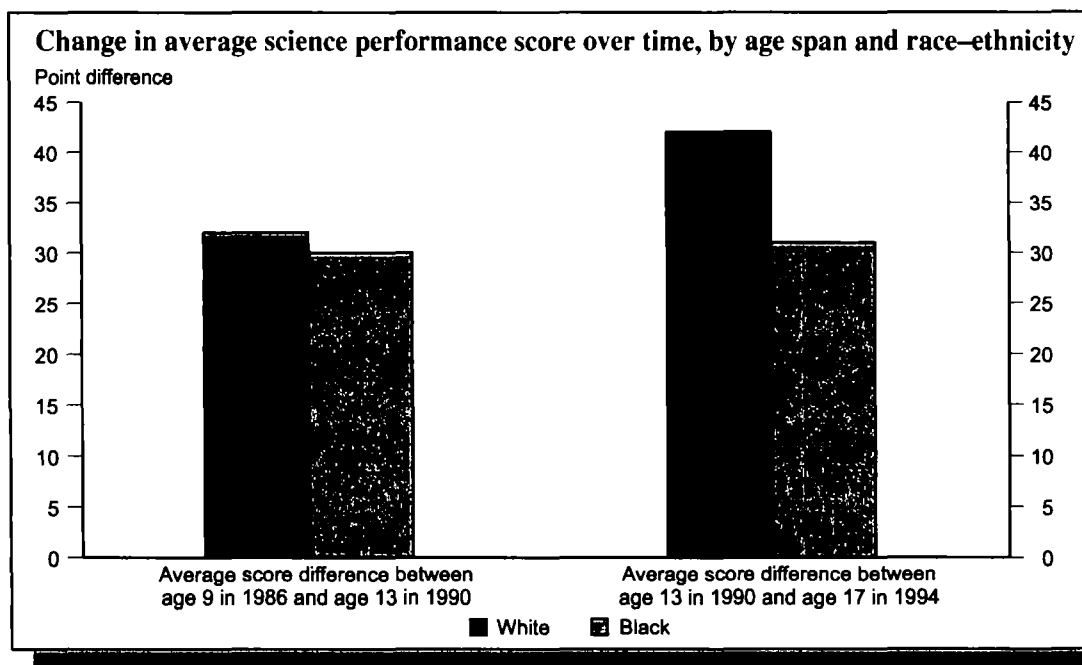
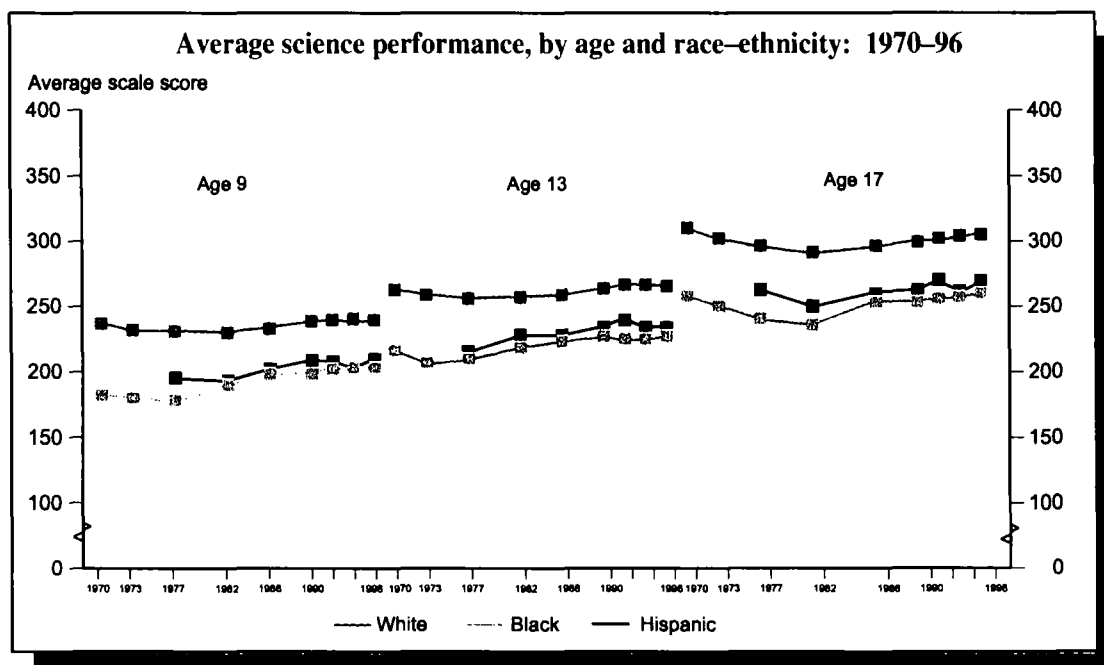
Year	White			Black			Hispanic		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1970	236	263	312	179	215	258	—	—	—
1973	231	259	304	177	205	250	—	—	—
1977	230	256	298	175	208	240	192	213	262
1982	229	257	293	187	217	235	189	226	249
1986	232	259	298	196	222	253	199	226	259
1990	238	264	301	196	226	253	206	232	262
1992	239	267	304	200	224	256	205	238	270
1994	240	267	306	201	224	257	201	232	261
1996	239	266	307	202	226	260	207	232	269

— Not available.

NOTE: The science performance scale has a range from 0 to 500. See supplemental table 1-1 for detailed explanations of levels.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, *NAEP 1996 Trends in Academic Progress*, revised 1998.

Average science performance



NOTE: The science performance scale has a range from 0 to 500. See supplemental table 1-1 for detailed explanations of levels. The data in the second graph are not longitudinal and should not be interpreted as such. For example, students assessed at age 9 are different from students assessed at age 13 or 17.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, *NAEP 1996 Trends in Academic Progress*, revised 1998.

Mathematics performance of 4th-, 8th-, and 12th-grade students

For the past 25 years, the National Assessment of Educational Progress (NAEP) has assessed student performance in mathematics. A new NAEP framework has evolved due to advances in assessment methodology and changes in curricular and educational approaches in mathematics. This new framework reflects the National Council of Teachers of Mathematics Curriculum and Evaluation Standards for School Mathematics.

- Overall, average mathematics performance scores improved between 1990 and 1996 for all students in grades 4, 8, and 12. Similarly, the percentage of students scoring at or above the basic levels also increased during the period at all three grade levels (see supplemental tables 2-1 and 2-2).
- Improvement in mathematics performance scores varies by state. Of the 38 jurisdictions that participated in the 4th-grade assessment in 1992 and 1996, 15 jurisdictions showed significant improvements in the mathematics scores of public school students during that period. Of the 36 jurisdictions that participated in the 8th-grade assessment, 13 showed significant improvements in student scores between 1992 and 1996. The remaining jurisdictions showed either decreases or no change (see supplemental table 2-3).
- Average scores for white students have remained higher than those for black and Hispanic students at all three grade levels; the gaps in scores between black or Hispanic and white students also remained similar between 1990 and 1996.
- While the mathematics scores for males and females were similar in the 4th and 8th grades, males outscored females in the 12th grade in 1990 and 1992. In 1996, scores for 12th-grade males and females were similar.

Average mathematics performance (scale score), by grade and selected student characteristics: 1990, 1992, and 1996

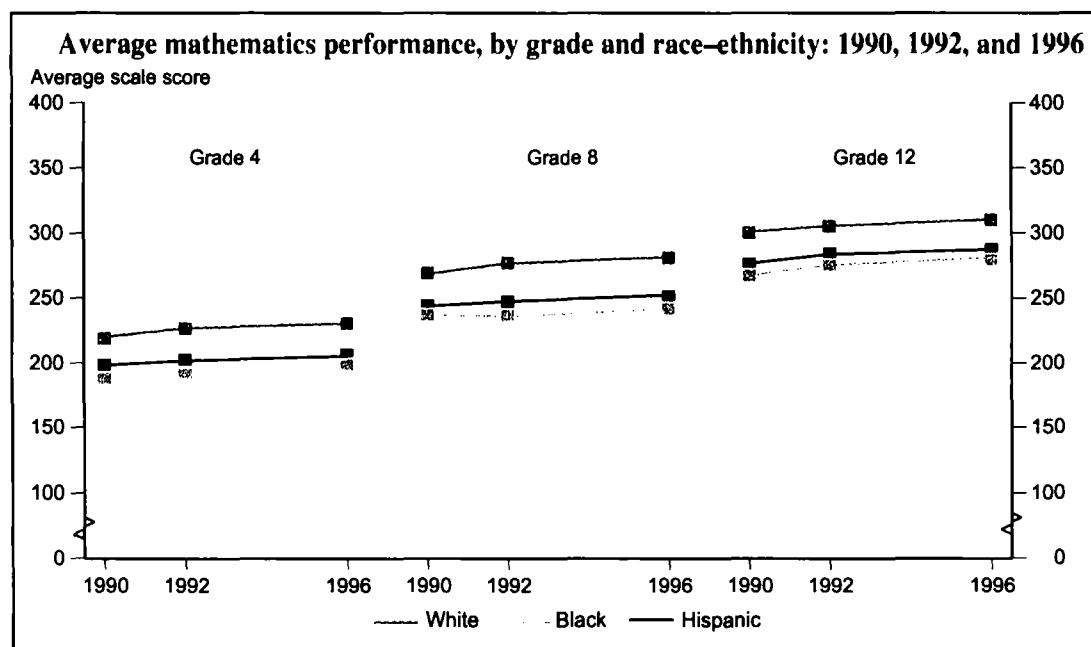
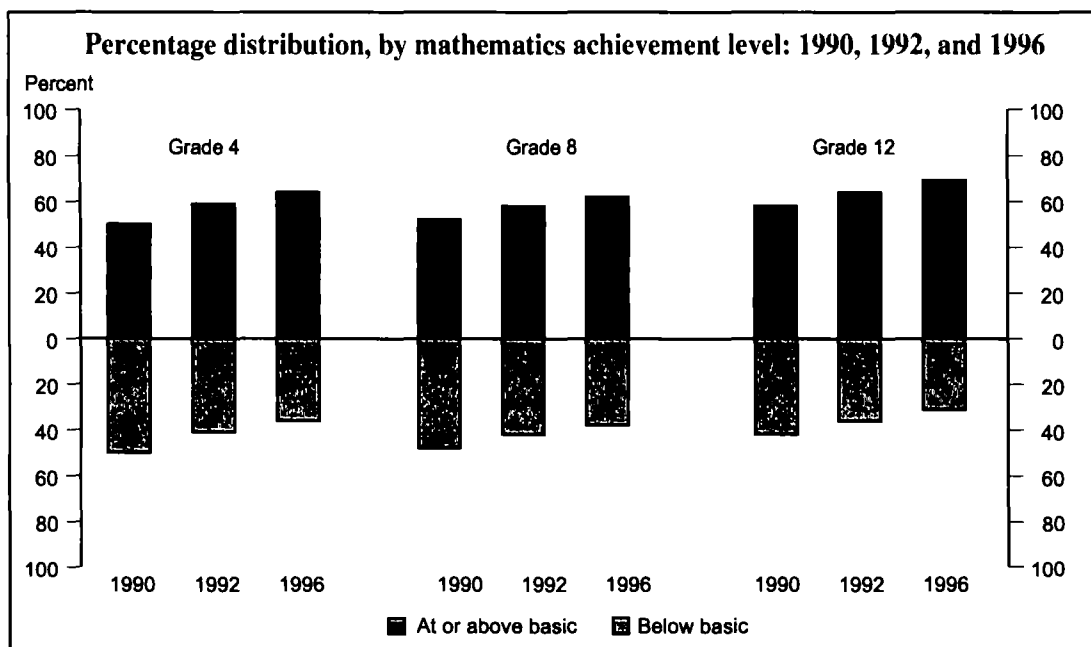
Selected student characteristics	Grade 4			Grade 8			Grade 12		
	1990	1992	1996	1990	1992	1996	1990	1992	1996
Total	213	220	224	263	268	272	294	300	304
Sex									
Male	214	221	226	263	268	272	297	301	305
Female	213	219	222	262	269	272	292	298	303
Race-ethnicity									
White	220	228	232	270	278	282	301	306	311
Black	189	193	200	238	238	243	268	276	280
Hispanic	198	202	206	244	247	251	276	284	287
Asian/Pacific Islander	228	232	232	279	289	274	311	316	319
American Indian/ Alaskan Native	208	211	216	246	255	264	—	—	297
Parents' highest education level									
Less than high school	202	205	205	242	249	254	272	279	282
Graduated high school	209	215	219	255	257	261	283	288	294
Some education after high school	222	225	232	268	271	279	297	299	302
Graduated college	221	227	232	274	281	282	306	311	314
Type of school									
Public	212	219	222	262	267	271	294	297	303
Nonpublic	224	228	237	272	281	284	300	314	315

— Too few sample observations for a reliable estimate.

NOTE: The mathematics performance scale has a range of 0 to 500. See supplemental table 2-1 for detailed explanations of levels.

SOURCE: U.S. Department of Education, National Center for Education Statistics. NAEP 1996 Mathematics Report Card for the Nation and the States: Findings from the National Assessment of Educational Progress, 1997.

Mathematics performance of 4th-, 8th-, and 12th-grade students



NOTE: The mathematics performance scale has a range of 0 to 500. See supplemental table 2-1 for detailed explanations of levels.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *NAEP 1996 Mathematics Report Card for the Nation and the States: Findings from the National Assessment of Educational Progress*, 1997.

International comparisons of student performance in mathematics and science

The technical and scientific skills of a nation's work force are a significant component of its economic competitiveness. The Third International Mathematics and Science Study (TIMSS) assessed the mathematics and science performance of students around the world. By comparing the mathematics and science achievement of students in countries around the world, it is possible to monitor the progress of the United States toward the National Education Goal of being first in the world in mathematics and science achievement.

- Fourth-graders in the United States scored above the 26-nation average in both mathematics and science. In science, only students in Korea outperformed U.S. 4th-graders, while in mathematics, U.S. 4th-graders outperformed their peers in 12 countries and scored below their peers in 7 countries (see supplemental table 3-1).
- Eighth-graders in the United States scored above the 41-nation average in science and below the international average in mathematics. In science, U.S. 8th-graders outperformed their peers in 15 countries and scored below their peers in 9 countries. In mathematics, 8th-graders in 20 countries outperformed 8th-graders in the United States.
- Eighth-graders in the United States had higher mathematics scores than their peers in 7 countries (see supplemental table 3-2).
- Compared with students in their last year of secondary school, U. S. 12th-graders scored below the 21-nation average in both mathematics and science. In science, U.S. 12th-graders scored below students in the final year of secondary school in 11 countries and outperformed students in the final year of secondary school in 2 countries. In mathematics, U. S. students scored below students in the final year of secondary school in 14 countries and outperformed students in the final year of secondary school in 2 countries.

Average mathematics and science performance scores of students in the final year of secondary school, by sex and country: 1995

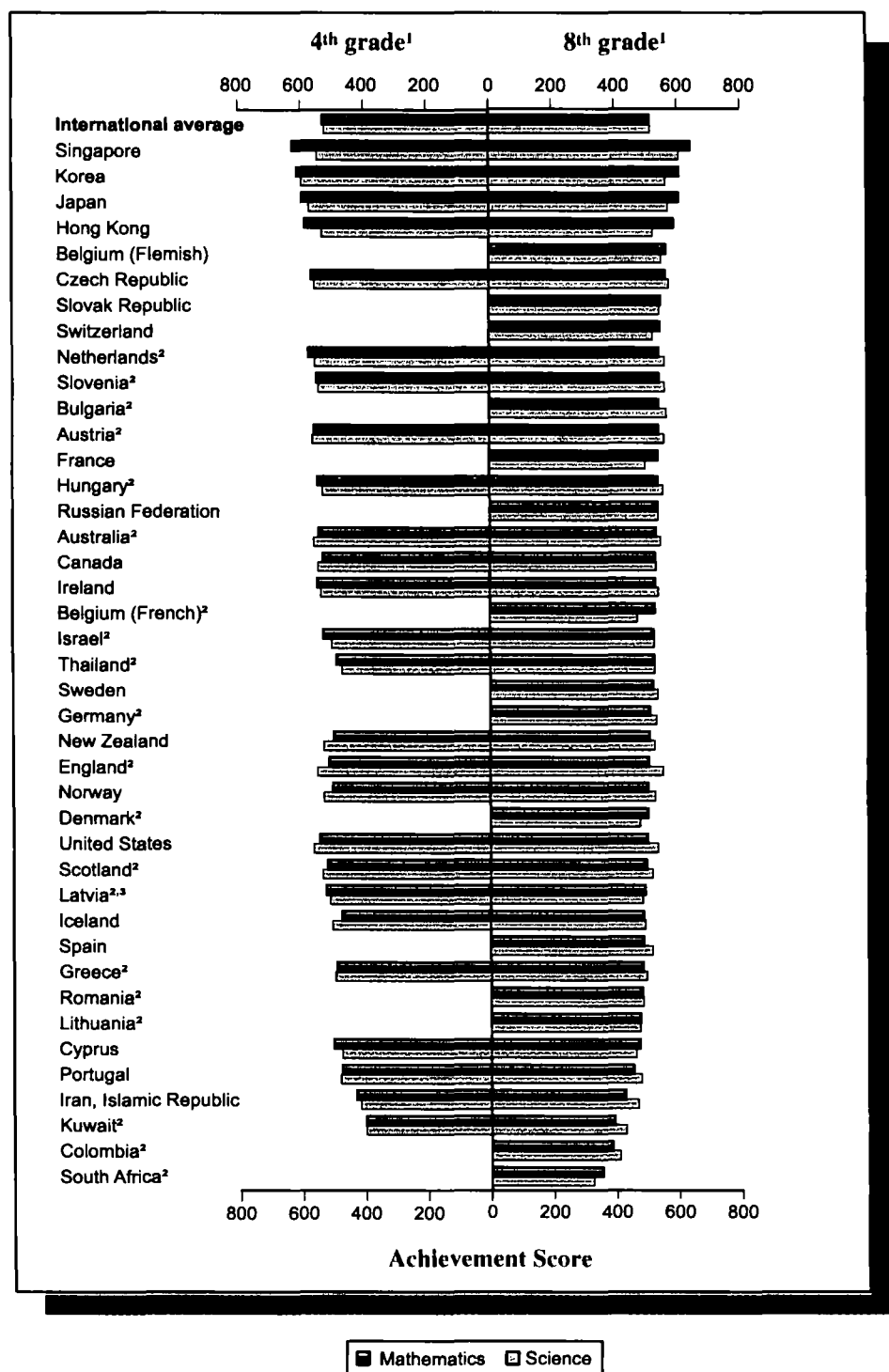
Country	Mathematics			Science		
	Overall	Male	Female	Overall	Male	Female
International average	500	518	485	500	521	482
Netherlands*	560	585	533	558	582	532
Sweden	552	573	531	559	585	534
Denmark*	547	575	523	509	532	490
Switzerland	540	555	522	523	540	500
Iceland*	534	558	514	549	572	530
Norway*	528	555	501	544	574	513
France*	523	544	506	487	508	468
Australia*	522	540	510	527	547	513
New Zealand	522	536	507	529	543	515
Canada*	519	537	504	532	550	518
Austria*	518	545	503	520	554	501
Slovenia*	512	535	490	517	541	494
Germany*	495	509	480	497	514	478
Hungary	483	485	481	471	484	455
Italy*	476	490	464	475	495	458
Russian Federation*	471	488	460	481	510	463
Lithuania*	469	485	461	461	481	450
Czech Republic	466	488	443	487	512	460
United States*	461	466	456	480	492	469
Cyprus*	446	454	439	448	459	439
South Africa*	356	365	348	349	367	333

* Country did not satisfy one or more of the sampling or other guidelines. See the supplemental note to this indicator for detailed explanations.

NOTE: Nations are sorted from highest to lowest by average mathematics score.

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

Average mathematics and science performance scores, by grade and country: 1995



¹ Fourth or 8th grade in most nations.

² Country did not satisfy one or more of the sampling or other guidelines for either the 4th- or 8th-grade assessment. See the supplemental note to this indicator for detailed explanations.

³ Latvian-speaking schools.

NOTE: Nations are sorted from highest to lowest average mathematics scores for 8th grade. Only 26 nations participated at the 4th-grade level of the 41 nations participating at the 8th-grade level.

SOURCE: International Association for the Evaluation of Educational Achievement, TIMSS International Study Center, *Mathematics Achievement in the Primary School Years*, *Science Achievement in the Primary School Years*, IEA's Third International Mathematics and Science Study, 1997; *Mathematics Achievement in the Middle School Years*, *Science Achievement in the Middle School Years*, IEA's Third International Mathematics and Science Study, 1996.

Trends in the reading performance of 9-, 13-, and 17-year-olds

Reading ability is essential to students' educational progress. Since the early 1970s, the National Assessment of Educational Progress (NAEP) has assessed the trends in students' reading performance. These trends provide a picture of how student performance in reading has changed over time, specifically among students of different ages and racial-ethnic groups.

- For 9- and 13-year-olds, average reading scores improved slightly between 1971 and 1980 and showed little or no change between 1980 and 1996. Scores for 17-year-olds have remained relatively consistent since 1971.
- Females outscored males in reading performance across all age groups.
- During these periods, reading scores of black and Hispanic students were lower than those of white students for all age groups. However, the black-white score gap, in particular, changed over time. For all age groups, the gap decreased between 1971 and 1988, yet showed no significant change between 1988 and 1996 for 9- and 17-year-olds and increased for 13-year-olds.

Average reading performance (scale score), by sex and age: 1971–96

Year	Total			Male			Female		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1971	208	255	285	201	250	279	214	261	291
1975	210	256	286	204	250	280	216	262	291
1980	215	259	286	210	254	282	220	263	289
1984	211	257	289	208	253	284	214	262	294
1988	212	258	290	208	252	286	216	263	294
1990	209	257	290	204	251	284	215	263	297
1992	211	260	290	206	254	284	215	265	296
1994	211	258	288	207	251	282	215	266	295
1996	212	259	287	207	253	280	218	265	294

Average reading performance (scale score), by race-ethnicity and age: 1971–96

Year	White			Black			Hispanic		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1971	214	261	291	170	222	239	—	—	—
1975	217	262	293	181	226	241	183	232	252
1980	221	264	293	189	233	243	190	237	261
1984	218	263	295	186	236	264	187	240	268
1988	218	261	295	189	243	274	194	240	271
1990	217	262	297	182	242	267	189	238	275
1992	218	266	297	185	238	261	192	239	271
1994	218	265	296	185	234	266	186	235	263
1996	220	267	294	190	236	265	194	240	265

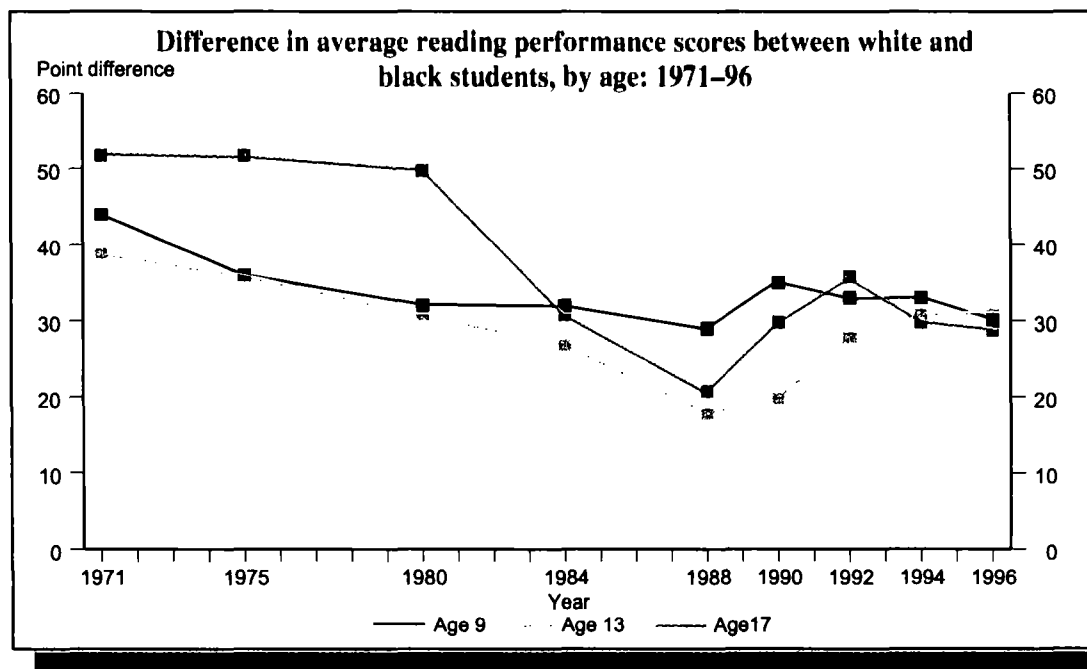
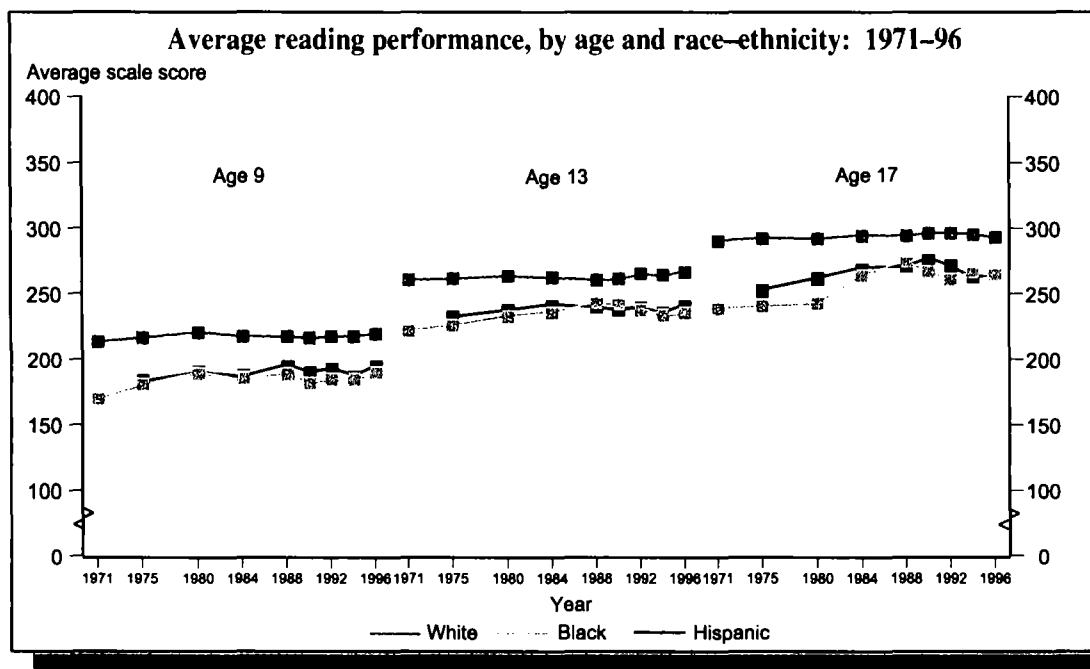
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NOTE: The reading performance scale has a range from 0 to 500. See supplemental table 4-1 for detailed explanations of levels. See the supplemental note to Indicator 5 for a description of the differences between the main NAEP reading assessment, on which Indicator 5 is

based, and the long-term trend NAEP assessment, on which this indicator is based.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, *NAEP 1996 Trends in Academic Progress*, revised 1998.

Trends in reading performance



NOTE: The reading performance scale has a range from 0 to 500. See supplemental table 4-1 for detailed explanations of levels. See the supplemental note to *Indicator 5* for a description of the differences between the main NAEP reading assessment, on which *Indicator 5* is based, and the long-term trend NAEP assessment, on which this indicator is based.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, NAEP 1996 Trends in Academic Progress, revised 1998.

Reading performance of 4th-, 8th-, and 12th-grade students

Since the early 1970s, the National Assessment of Educational Progress (NAEP) has assessed long-term trends in basic reading competencies. Beginning in 1992, and continuing in 1994 and 1998, a new "main NAEP" reading assessment was administered to reflect changing instructional practices in classrooms and standards of learning based on current curriculum frameworks. The data used in this indicator come from this new assessment, the purpose of which is to assess reading for literacy experience, reading to gain information, and reading to perform a task.

- Between 1992 and 1998, average reading performance scores remained relatively stable for 4th-grade students and increased slightly for 8th-grade students. The reading performance scores for 12th-grade students decreased between 1992 and 1994, but rose again in 1998. For both 8th- and 12th-grade students, the total percentage of students scoring below the basic level decreased between 1994 and 1998, while for 4th-grade students, the percentage scoring below this level remained the same (see supplemental tables 5-1 and 5-2).
- In all three years, female students outperformed male students in reading performance at the 4th-, 8th-, and 12th-grade levels.
- Average reading scores for white students were higher than those for black and Hispanic students at all three grade levels for all three years. The gap in scores between black and white students remained similar between 1992 and 1998 for all grades.
- Reading scores also varied by type of school and location. In all three years, on average, students attending nonpublic schools consistently scored higher than students attending public schools at the 4th-, 8th-, and 12th-grade levels. In 1998, 4th- and 8th-grade students in schools located in central cities generally scored lower than their peers in urban fringe or rural locations, while at the 12th-grade level, scores were generally the same for students in different types of locations.

Average reading performance (scale score), by grade and selected student characteristics: 1992, 1994, and 1998

Selected student characteristics	Grade 4			Grade 8			Grade 12		
	1992	1994	1998	1992	1994	1998	1992	1994	1998
Total	217	214	217	260	260	264	292	287	291
Sex									
Male	213	209	214	254	252	257	287	280	283
Female	221	220	220	267	267	270	297	294	298
Race-ethnicity									
White	225	224	227	267	268	272	298	294	298
Black	193	187	194	238	237	243	273	265	270
Hispanic	201	191	196	241	240	244	278	270	275
Asian/Pacific Islander	214	229	225	270	268	271	292	280	289
American Indian/ Alaskan Native	207	201	202	251	251	248	—	275	276
Type of school									
Public	215	212	215	258	257	261	290	286	289
Nonpublic	232	231	233	278	279	281	308	301	303
Type of location									
Central city	210	207	211	253	257	258	290	288	290
Urban fringe/ large town	221	221	222	265	262	268	294	289	293
Rural/small town	219	214	219	261	259	264	291	285	289

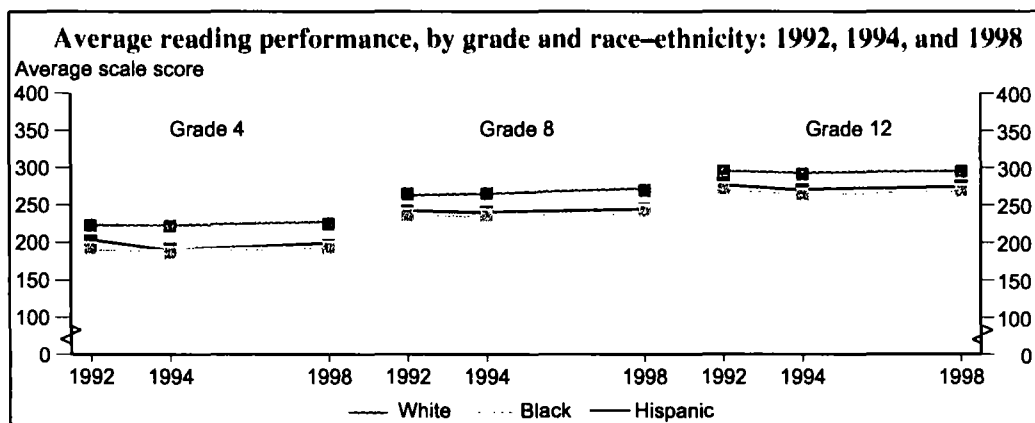
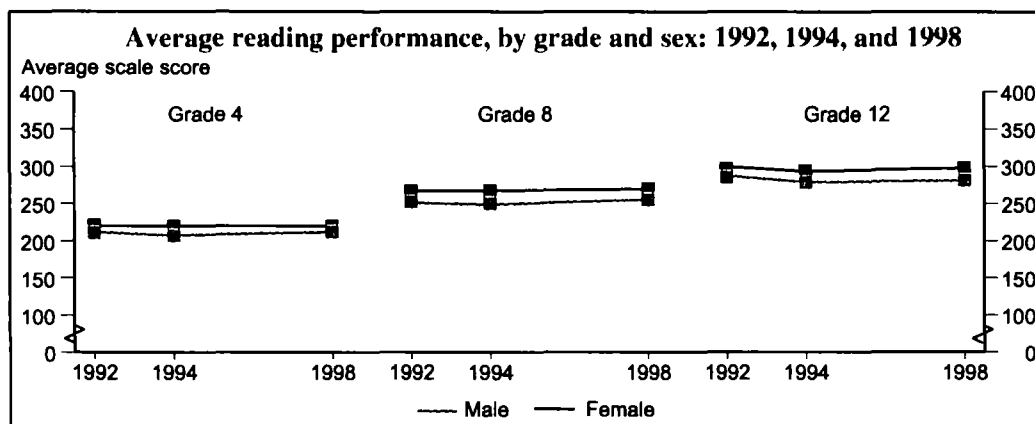
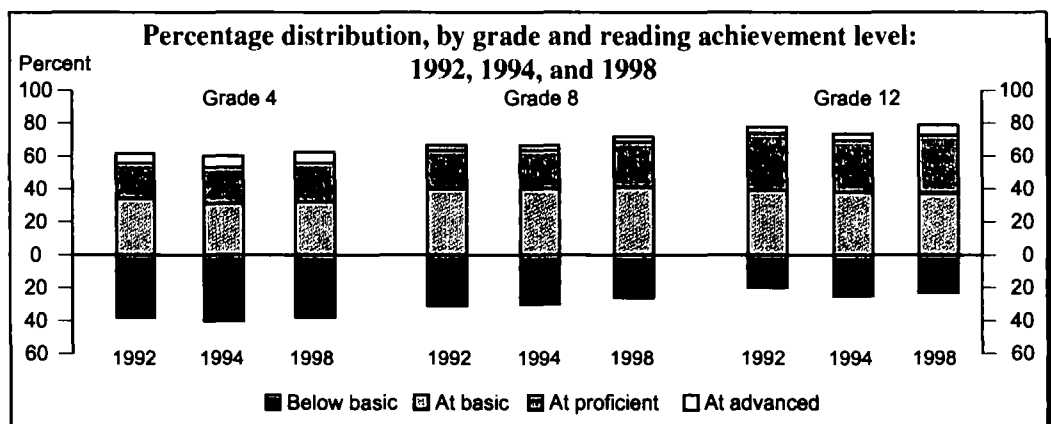
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NOTE: The reading performance scale has a range from 0 to 500. See supplemental table 5-1 for detailed explanations of levels. See the supplemental note to this indicator for a description of the differences between the main NAEP reading assessment, on which this indicator is

based, and the long-term trend NAEP assessment, on which *Indicator 4* is based.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *NAEP 1998 Reading. A Report Card for the Nation and the States, 1999.*

Average reading performance



NOTE: The reading performance scale has a range from 0 to 500. See supplemental table 5-1 for detailed explanations of levels.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *NAEP 1998 Reading, A Report Card for the Nation and the States*, 1999.

Trends in the writing performance of 4th-, 8th-, and 11th-grade students

Effective writing skills are important in all stages of life. In business, as well as in school, individuals often must convey complex ideas and information in a clear, succinct manner. In the business, good writing skills are essential for accurately communicating information, influencing others, and documenting tasks. In school, inadequate writing skills can inhibit achievement across the curriculum, while good writing can help students analyze information and convey ideas.

- Average writing performance scores remained relatively stable for 4th-grade students between 1984 and 1996. In contrast, scores for 8th-grade students declined between 1984 and 1990, increased in 1992, and then dropped back to their original level. The average writing scale score for 11th-grade students was slightly lower in 1996 than in 1984.
- In general, females outscored males in writing performance at all grade levels since 1984.
- Scores for black and Hispanic students remained relatively unchanged since 1984 at all grade levels. Although scores dropped slightly for white 11th-grade students between 1984 and 1996, white students continued to outscore black and Hispanic students at all grade levels.
- In 1996, 83 percent of 11th-grade students could write beginning, focused, clear responses (level 250); 31 percent were generally able to write complete, sufficient responses (level 300); and 2 percent provided effective, coherent responses (level 350; see supplemental tables 6-1 and 6-2).
- In 1996, average writing scale scores for 4th-grade students ranged from 142 at the 5th percentile to 268 at the 95th percentile. At the 8th-grade level, the median score (50th percentile) was 264, indicating that the highest scoring 4th-grade students achieved approximately the same performance as the average 8th-grade student (see supplemental table 6-3).

Average writing performance (scale score), by sex and grade: 1984–96

Year	Total			Male			Female		
	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11
1984	204	267	290	201	258	281	208	276	299
1988	206	264	291	199	254	282	213	274	299
1990	202	257	287	195	246	276	209	268	298
1992	207	274	287	198	264	279	216	285	296
1994	205	265	285	196	254	276	214	278	293
1996	207	264	283	200	251	275	214	276	292

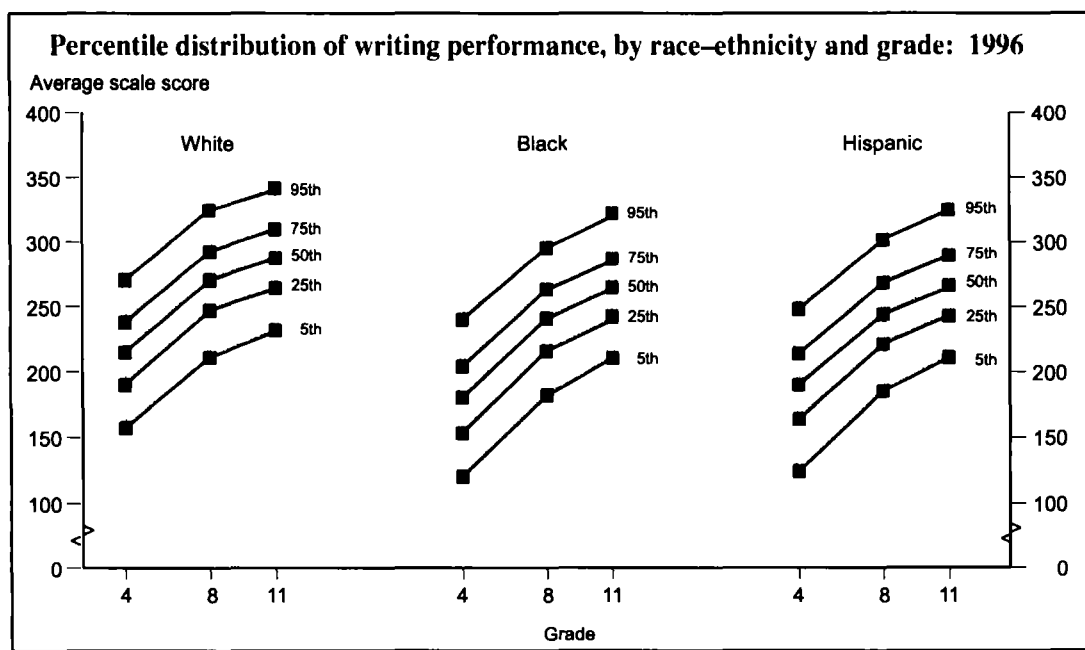
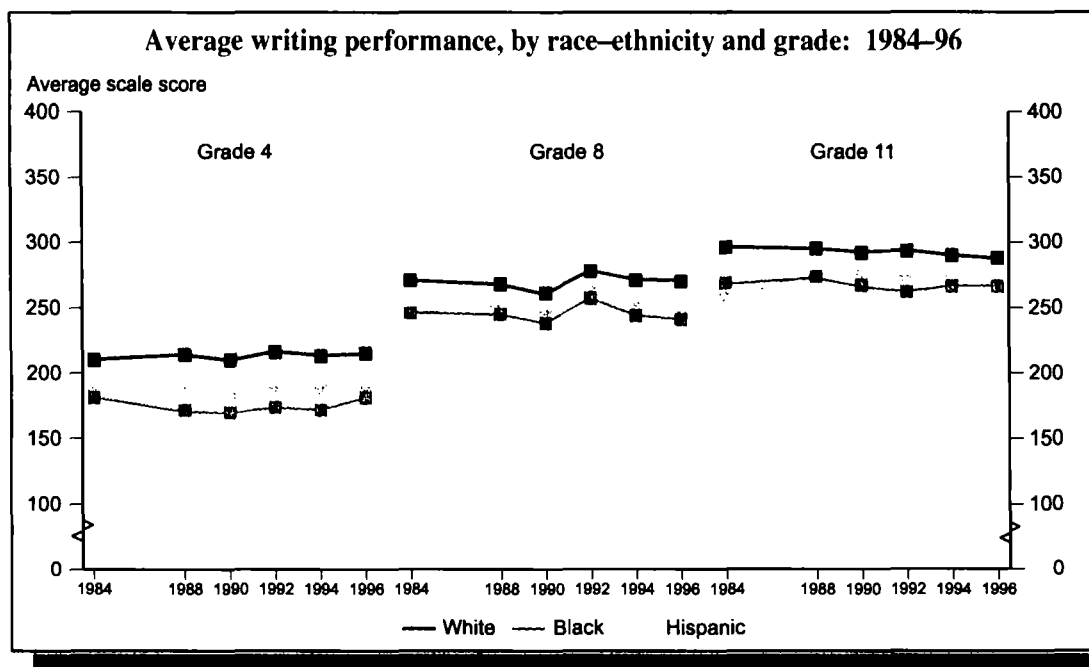
Average writing performance (scale score), by race-ethnicity and grade: 1984–96

Year	White			Black			Hispanic		
	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11	Grade 4	Grade 8	Grade 11
1984	211	272	297	182	247	270	189	247	259
1988	215	269	296	173	246	275	190	250	274
1990	211	262	293	171	239	268	184	246	277
1992	217	279	294	175	258	263	189	265	274
1994	214	272	291	173	245	267	189	252	271
1996	216	271	289	182	242	267	191	246	269

NOTE: The writing performance scale has a range from 0 to 500. See supplemental table 6-1 for detailed explanations of levels.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, NAEP 1996 Trends in Academic Progress, revised 1998.

Average writing performance



NOTE: The writing performance scale has a range from 0 to 500. See supplemental table 6-1 for detailed explanations of levels.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, *NAEP 1996 Trends in Academic Progress*, revised 1998.

Arts performance of 8th-grade students

Gaining experience in the visual arts, music, and theatre are all key components of a child's development and education. Through exposure to the arts, students are given opportunities to be creative, disciplined, and persistent; to develop skills; and to demonstrate these new skills to their teachers, parents, and peers. The purpose of the 1997 National Assessment of Educational Progress (NAEP) Arts Education Assessment was to provide a comprehensive picture of the arts performance of 8th-grade students, assessing the extent to which students are skilled in creating, performing, and responding to the visual arts, music, and theatre.

- In 1997, 8th-grade students' performance in the arts varied by certain student background characteristics. For example, females consistently outscored males in all categories of the NAEP arts assessment. Among racial-ethnic groups, whites outperformed blacks and Hispanics on all scales except for the creating score in music. In addition, students whose parents were college graduates scored higher on all arts assessment scales than those whose parents' highest level of education was a high school diploma or less.
- There appear to be no consistent relationships between performance in the arts and many characteristics of an arts education, such as frequency of instruction, curriculum availability, or staff certification. However, the type of space and facilities in which the arts were taught in schools was related to arts performance. Students in schools that taught music in rooms specifically dedicated to the subject scored higher in music creating and performing than their peers who took music in schools with no dedicated space for instruction (see supplemental table 7-1).

Average music, theatre, and visual arts performance percentage scores and scale scores of 8th-grade students, by selected student characteristics: 1997

Selected student characteristics	Music			Theatre*		Visual arts	
	Creating (0-100 percent)	Performing (0-100 percent)	Responding (0-300)	Creating/performing (0-100 percent)	Responding (0-300)	Creating (0-100 percent)	Responding (0-300)
Total	34	34	150	49	150	43	150
Sex							
Male	32	27	140	46	140	42	146
Female	37	40	160	52	158	45	154
Race-ethnicity							
White	36	36	158	52	159	46	159
Black	34	30	130	39	120	37	124
Hispanic	29	24	127	44	139	38	128
Asian	31	—	152	—	—	45	153
Type of school							
Public	34	34	149	48	146	43	148
Nonpublic	37	33	158	—	—	44	167
Parents' highest education level							
Did not finish high school	24	21	129	42	131	36	125
Graduated high school	29	29	139	42	130	41	138
Some education after high school	35	34	150	49	153	44	153
Graduated college	39	39	159	52	157	46	158

— Too few sample observations for a reliable estimate.

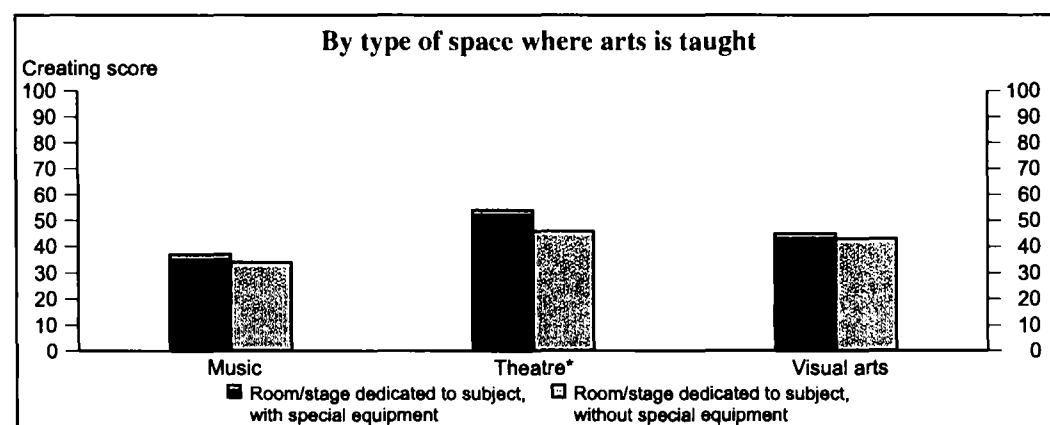
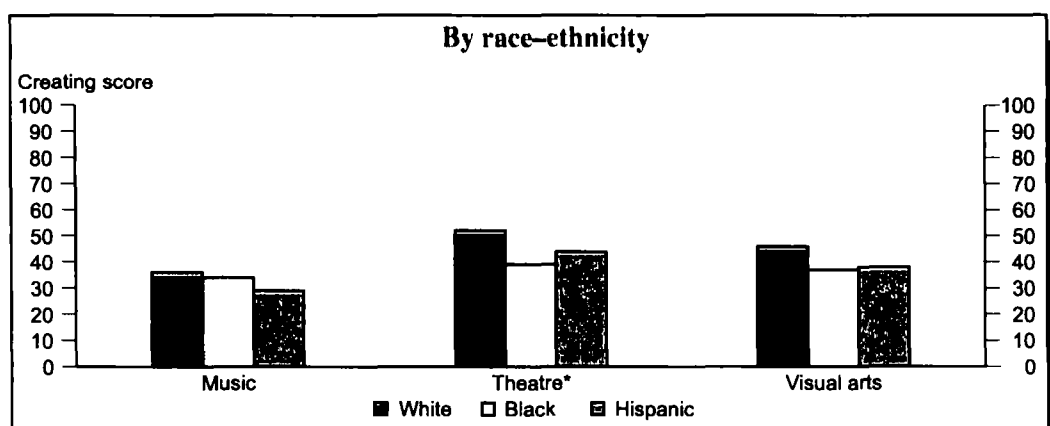
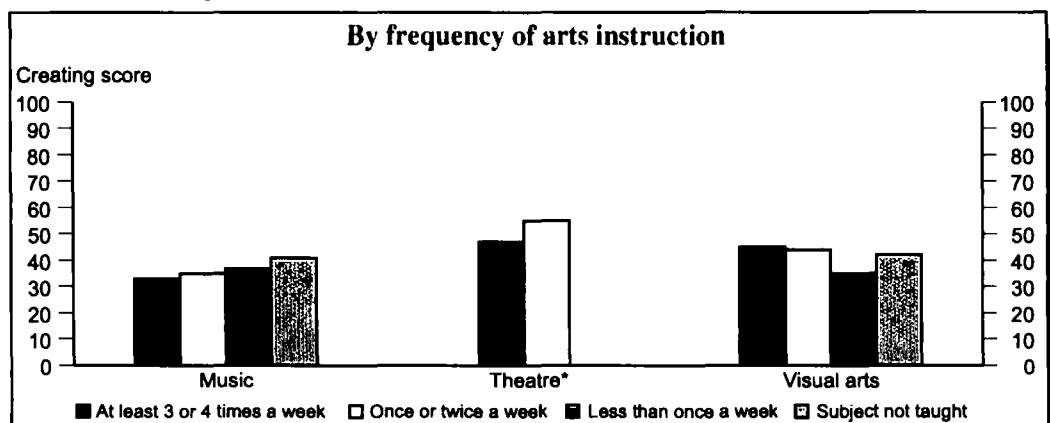
* The theatre assessment was administered to a targeted sample of students in schools with theatre instructional programs who had taken at least 30 hours of theatre classes.

NOTE: Students were assessed in the arts on three separate scales: Responding, Creating, and Performing. Because sampling and scoring procedures varied by arts subject and arts performance type,

comparisons cannot be made across assessments. See the supplemental note to this indicator for a detailed explanation of the design of the NAEP Arts Education Assessment, including definitions for "Responding," "Creating," and "Performing."

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, *The NAEP 1997 Arts Report Card*, 1998.

Average music, theatre, and visual arts creating score of 8th-grade students, by selected instructional characteristics: 1997



* The theatre assessment was administered to a targeted sample of students in schools with theatre instructional programs. For measuring the frequency of arts instruction, there were too few sample observations for a reliable estimate of "less than once a week" and "subject not taught." The "creating" scale for theatre is defined as creating/performing.

NOTE: Students were assessed in the arts on three separate scales: Responding, Creating, and Performing. Because sampling and scoring procedures varied by arts subject and arts proficiency type, comparisons

cannot be made across assessments. See the supplemental note to this indicator for a detailed explanation regarding the design of the NAEP Arts Education Assessment, including definitions for "Responding," "Creating," and "Performing."

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, *The NAEP 1997 Arts Report Card*, 1998.

International comparisons of adult literacy

Literacy is viewed as one of the fundamental tools necessary for successful economic performance in industrialized societies. The International Adult Literacy Survey (IALS) assessed adult literacy in 12 countries. The five literacy levels expressed along three scales—prose, document, and quantitative—measure a range of literacy, from the basic ability to locate information within simple text to the ability to understand and use printed information in daily activities, at home, at work, and in the community. As society becomes more complex and demands for literacy in the job market continue to change, concern about adults' ability to use written information to function in society continues to increase.

- Approximately one-fifth of adults in the United States scored at or above level 4 on the prose, document, and quantitative literacy scales. Among the 11 other countries that participated in the IALS, the only countries exceeding the United States in the percentage of adults scoring at the highest levels of literacy were Sweden (on all three scales) and Canada (on the document scale).
- One-quarter or less of adults in the United States performed at level 1 on any of the three scales. Only Poland had a greater percentage of adults scoring at this lowest literacy level. Canada, Ireland, New Zealand, and the United Kingdom had similar percentages of adults scoring at the lowest level of literacy, but Germany, the Netherlands, and Sweden had lower percentages on all three scales.
- The proportion of U. S. adults scoring at level 3 or higher on the document scale increased at each level of education—from 17 percent for those with less than a high school education to 80 percent for those with a college degree. In all countries except Poland, at least three-quarters of adults who had a college education scored at level 3 or above (see supplemental table 8-1).
- Adults in the United States who had not completed a high school program were no more likely than their counterparts in other countries with similar education levels to perform at level 3 or above on the document scale. At the college level, only Belgium had a higher percentage of college graduates scoring at or above level 3 than did the United States, and only Poland had a smaller percentage (see supplemental table 8-1).

Percentage distribution of adults ages 16–65 scoring at each literacy level, by literacy scale and country: 1994 and 1995

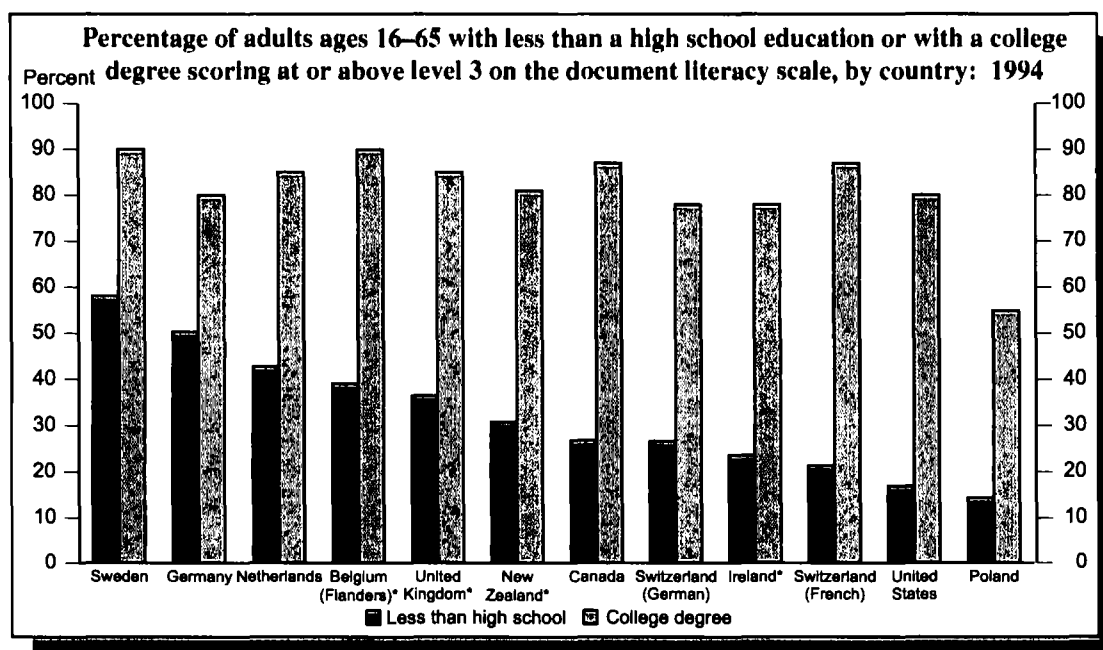
Country	Prose scale				Document scale				Quantitative scale			
	Level 1	Level 2	Level 3	Level 4/5	Level 1	Level 2	Level 3	Level 4/5	Level 1	Level 2	Level 3	Level 4/5
Belgium (Flanders)*	18.6	29.0	37.4	15.0	15.0	25.7	41.5	17.5	16.5	23.3	37.0	23.2
Canada	16.6	24.8	36.4	22.3	17.9	23.7	32.7	25.7	16.6	25.6	34.7	23.1
Germany	13.8	35.3	37.3	13.6	9.6	32.0	39.5	18.9	7.0	26.1	43.6	23.4
Ireland*	22.6	30.6	33.7	13.2	25.6	32.0	31.5	10.9	24.9	28.8	30.3	15.9
Netherlands	10.4	29.4	44.7	15.5	10.3	25.5	44.5	19.7	10.0	25.7	44.1	20.3
New Zealand*	18.2	28.5	34.5	18.8	21.1	29.6	32.5	16.8	20.3	28.9	33.9	16.9
Poland	42.7	34.3	19.2	3.7	45.4	30.3	18.5	5.8	39.0	30.6	23.2	7.2
Sweden	7.2	20.7	39.8	32.2	6.3	19.2	38.8	35.7	6.6	19.1	38.4	35.9
Switzerland (French)	18.5	34.3	37.7	9.6	16.4	29.6	37.6	16.3	12.8	25.4	42.7	19.1
Switzerland (German)	19.5	34.2	37.1	9.3	18.4	27.5	36.9	17.3	14.1	25.0	41.9	19.0
United Kingdom*	21.6	30.1	32.6	15.7	23.1	27.6	30.5	18.8	23.4	27.6	30.5	18.5
United States	20.8	24.4	32.8	22.0	23.6	25.0	31.5	19.9	21.0	24.0	31.6	23.5

* Data are for 1995.

NOTE: The individuals who performed at level 1 demonstrated the lowest literacy proficiency, while those at level 5 displayed the highest literacy proficiency. See the supplemental note to this indicator for a description of the literacy scales and levels. Details may not add to 100.0 due to rounding.

SOURCE: Organisation for Economic Co-operation and Development, *International Adult Literacy Survey*, unpublished tabulations, 1994, 1995.

International comparisons of adult literacy



Countries with a lesser, equal, or greater percentage of adults scoring at or above level 4 compared with the United States, by literacy domain

Literacy domain		
Prose	Document	Quantitative
Sweden	Sweden	Sweden
Canada	Canada	United States
United States	United States	Germany
New Zealand	Netherlands	Belgium
United Kingdom	Germany	Canada
Netherlands	United Kingdom	Netherlands
Belgium	Belgium	Switzerland (F)
Germany	Switzerland (G)	Switzerland (G)
Ireland	New Zealand	United Kingdom
Switzerland (F)	Switzerland (F)	New Zealand
Switzerland (G)	Ireland	Ireland
Poland	Poland	Poland

NOTE: Countries that are shaded do not differ significantly from the United States. Countries appearing above the shaded area had a higher percentage of adults in levels 4 and 5 than the United States, and countries appearing below the shaded area had a lower percentage.

Countries with a lesser, equal, or greater percentage of adults scoring at level 1 compared with the United States, by literacy domain

Literacy domain		
Prose	Document	Quantitative
Sweden	Sweden	Sweden
Netherlands	Germany	Germany
Germany	Netherlands	Netherlands
Canada	Belgium	Switzerland (F)
New Zealand	Switzerland (F)	Switzerland (G)
Switzerland (F)	Switzerland (G)	Belgium
Belgium	Canada	Canada
Switzerland (G)	New Zealand	New Zealand
United States	United Kingdom	United States
United Kingdom	United States	United Kingdom
Ireland	Ireland	Ireland
Poland	Poland	Poland

NOTE: Countries that are shaded do not differ significantly from the United States. Countries appearing above the shaded area had a lower percentage of adults in level 1 than the United States, and countries appearing below the shaded area had a higher percentage.

* Data are for 1995.

NOTE: The individuals who performed at level 1 demonstrated the lowest literacy proficiency, while those at level 5 displayed the highest literacy proficiency. See the supplemental note to this indicator for a description of the literacy scales and scores.

SOURCE: Organisation for Economic Co-operation and Development, *International Adult Literacy Survey*, unpublished tabulations, 1994, 1995.

Citizenship skills

In democratic societies, citizens are generally expected to be reasonably knowledgeable about how government operates; to be interested in and aware of politics; to be able to participate in government; to believe that they can influence what the government does; and to be tolerant of different opinions. Good citizenship must be developed and nurtured, and schools are expected to play a role in this process.

- In 1996, 20 percent of students in grades 9–12 were able to answer four or five (out of five) political knowledge questions correctly. Less than half read national news weekly (41 percent) or watched or listened to news daily (40 percent), and over half claimed to understand politics (55 percent) or would tolerate a public library's carrying a controversial book (57 percent). However, large percentages of students were confident in their political participatory skills such as writing to government (93 percent) and speaking publicly (82 percent), and 88 percent indicated that they thought that people should be allowed to speak against religion or church.
- Parents knew more about politics than did students and were more likely than students to pay attention to politics and to claim that they understand politics. However, students were more likely than parents to believe that their family has a say in what government does.
- Compared with students in grades 9–10, students in grades 11–12 were more likely to be knowledgeable about politics, to read the national news every week, to be confident of their political participatory skills, to claim to understand politics, and to tolerate diversity.
- Regular participants in community service (35 hours or more during the school year) had higher levels of citizenship skills than did students who did not participate. Compared with students who did not participate in community service, regular participants were more likely to answer four or five political knowledge questions correctly, to pay attention to politics through reading, to trust their political participatory skills, and to be politically efficacious (see supplemental tables 9-1 and 9-2).

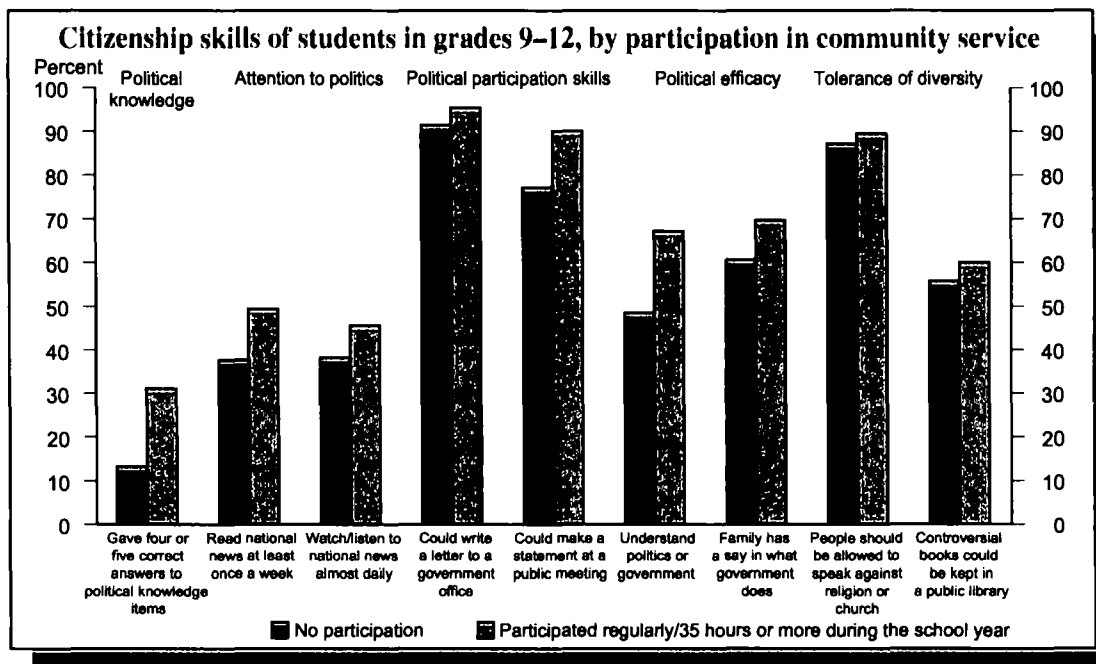
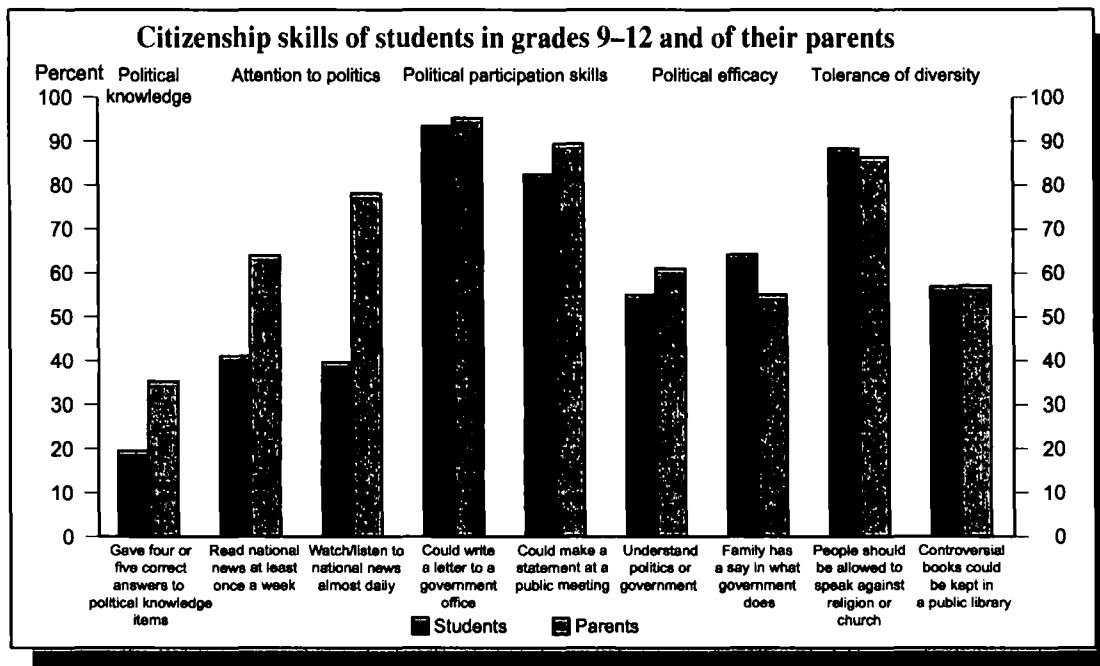
Percentage of students and parents with various citizenship skills, by grade level (students): 1996

Citizenship skill	Students			Parents
	Total	Grades 9–10	Grades 11–12	
Political knowledge (correct answers out of five)				
None or one	49.1	58.8	38.5	31.7
Two or three	31.3	28.7	34.2	33.0
Four or five	19.6	12.5	27.3	35.3
Attention to politics				
Read national news at least once a week	41.1	37.6	44.9	64.0
Watch/listen to national news almost daily	39.6	40.7	38.4	78.1
Participation skills				
I could write a letter to a government office	93.4	91.9	94.9	95.3
I could make a statement at a public meeting	82.4	79.2	86.0	89.4
Political efficacy				
I understand politics or government	55.0	49.6	61.0	61.0
My family has a say in what government does	64.2	63.7	64.8	55.0
Tolerance of diversity				
People should be allowed to speak against religion or church	88.3	86.4	90.3	86.3
Controversial books could be kept in a public library	56.9	51.3	63.1	57.2

NOTE: Details may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, Spring 1996 (Youth Civic Involvement Component and Parent and Family Involvement in Education and Civic Involvement Component).

Citizenship skills



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, Spring 1996 (Youth Civic Involvement Component and Parent and Family Involvement in Education and Civic Involvement Component).

Employment of noncollege youth

The transition from high school to work can be difficult. Without prior job experience or specialized training, school leavers may have difficulty finding jobs. Comparing the employment rates of high school completers with those of dropouts indicates the employment advantage noncollege high school completers have over high school dropouts.

- In 1997, 67 percent of recent high school completers not enrolled in college were employed, compared with 45 percent of recent high school dropouts.
- Since 1972, the employment rates for both recent high school completers not enrolled in college and recent high school dropouts have declined, on average, by approximately 0.3 percentage points per year. These declines were greater for males than for females (see supplemental table 10-1).
- Since 1972, the employment rates for black recent high school dropouts have been 25 percentage points lower than the rates for their white counterparts, on average. In 1997, the employment rate for black recent high school dropouts was 17 percent.
- Between 1960 and 1997, the gap in employment rates between male and female recent high school completers narrowed (see supplemental table 10-1).

Employment rates for recent high school completers not enrolled in college and for recent high school dropouts, by race-ethnicity: October 1972-97

October	Recent high school completers not enrolled in college				Recent high school dropouts			
	Total ¹	White	Black	Hispanic ²	Total ¹	White	Black	Hispanic ²
1972	70.1	73.5	48.3	(²)	46.8	47.0	42.8	(²)
1974	69.1	72.9	46.0	56.2	49.3	53.9	36.2	49.9
1976	68.8	73.1	38.6	65.3	44.8	49.6	20.9	52.7
1978	74.9	79.0	45.8	67.8	51.2	54.2	22.3	56.1
1980	68.9	74.6	34.7	62.3	44.6	51.2	20.9	52.2
1982	60.4	68.4	29.3	56.6	38.0	44.6	16.2	45.5
1984	64.0	70.7	44.8	55.4	44.0	51.4	24.2	41.0
1986	65.2	71.5	41.1	53.7	48.0	50.4	31.5	41.0
1988	71.9	78.2	55.8	53.6	43.6	47.6	17.6	44.7
1989	71.7	77.6	53.7	54.6	46.7	57.6	26.4	42.1
1990	67.8	75.0	45.2	56.3	46.3	56.3	30.9	39.9
1991	59.6	67.0	32.3	57.9	36.8	38.6	24.7	36.2
1992	62.7	71.9	37.0	53.2	36.2	43.1	—	41.4
1993	64.2	71.8	42.3	47.7	46.9	52.6	27.1	34.5
1994	64.2	73.1	38.0	43.7	42.9	51.7	34.1	41.2
1995	63.1	71.4	51.5	43.0	47.7	51.6	33.5	43.9
1996	59.0	68.5	41.7	45.1	42.3	45.3	21.5	54.5
1997	66.9	73.8	53.3	(²)	44.9	48.8	17.4	(²)

— Too few sample observations for a reliable estimate.

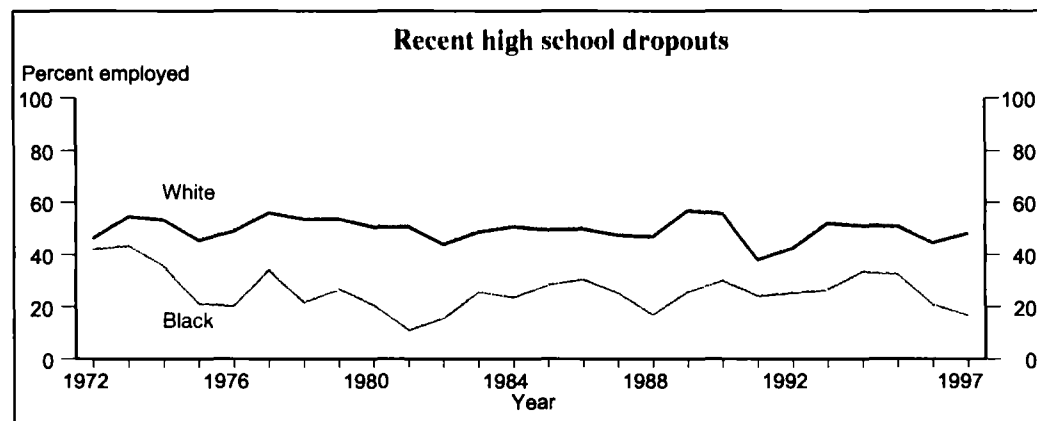
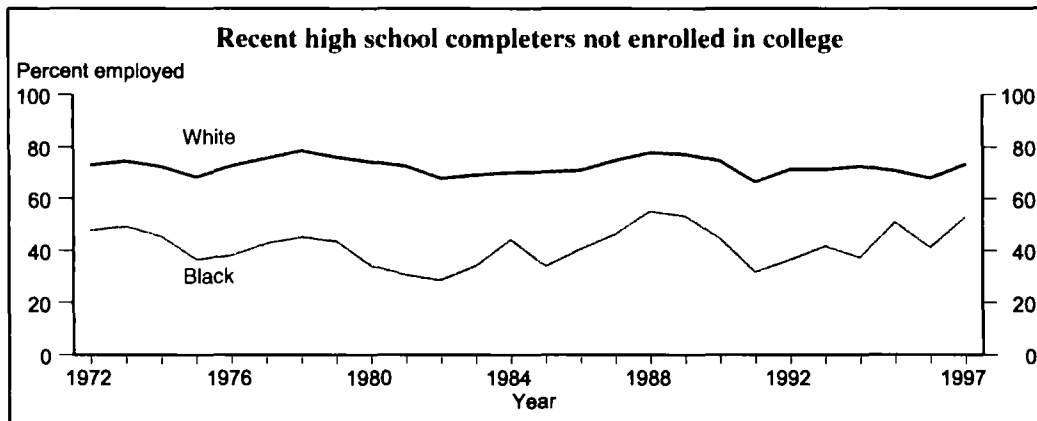
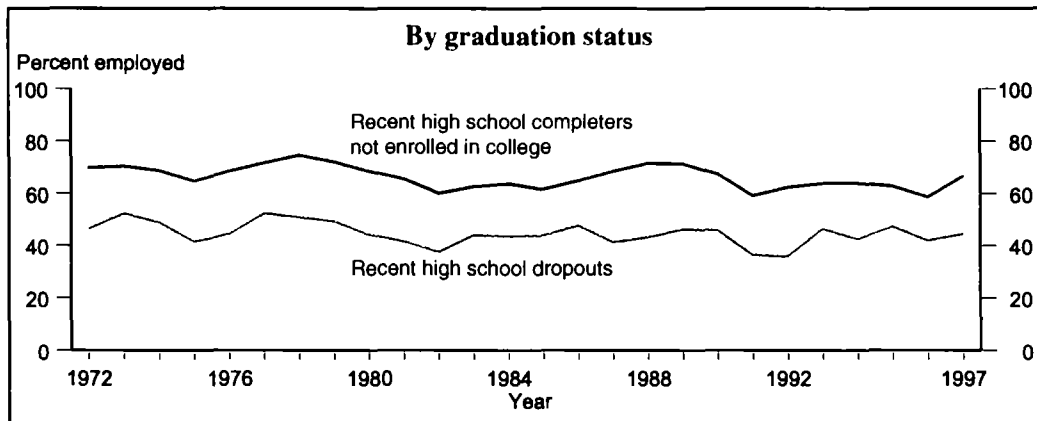
¹ Included in the totals but not shown separately are members of other racial-ethnic groups.

² Due to the small sample sizes for the Hispanic category, 3-year averages were calculated. For example, the 3-year average for 1996 is the average percentage of recent high school completers not enrolled in college or recent school dropouts in 1995, 1996, and 1997. Thus, 3-year averages cannot be calculated for 1972 and 1997.

NOTE: Recent high school completers are individuals ages 16-24 who completed high school during the survey year. Recent high school dropouts are individuals ages 16-24 who had not completed high school, were not enrolled during the survey month, and were in school 12 months earlier. In 1994, the survey instrument for the Current Population Survey (CPS) was changed and weights were adjusted. See the supplemental note to Indicator 51 for further discussion.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Employment rates for recent high school completers not enrolled in college and for recent school dropouts: October 1972-97



NOTE: Recent high school completers are individuals ages 16-24 who completed high school during the survey year. Recent high school dropouts are individuals ages 16-24 who had not completed high school, were not enrolled during the survey month, and were in school 12 months earlier. In 1994, the survey instrument for the CPS was changed and

weights were adjusted. In 1992, there were too few sample observations for a reliable estimate of black recent school dropouts. See the supplemental note to *Indicator 51* for further discussion.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Employment of young adults, by educational attainment

Many factors affect employment rates among adults. Some factors influence the willingness of employers to offer jobs to individuals with different levels of education at the going wage rate, whereas others influence the willingness of individuals to take jobs at this wage rate. The percentage of young adults who are employed is an indication of both the skill levels required by employers and the advantages employment offers to individuals relative to other pursuits.

- The employment rate of male and female 25- to 34-year-olds was generally higher among those individuals with a higher level of education between 1971 and 1998. For example, in 1998, males and females ages 25–34 with a bachelor's degree or higher were more likely to be employed than their peers who had lower levels of educational attainment.
- Between 1971 and 1998, the employment rate of males ages 25–34 decreased for those who had not finished high school and those with a high school diploma or GED, and remained relatively constant for those with some college and those with a bachelor's degree or higher.
- Between 1971 and 1998, the employment rate of females ages 25–34 increased across all education levels. However, the rate of increase for females who did not complete high school was lower than the rate of increase for females who attained higher levels of education.

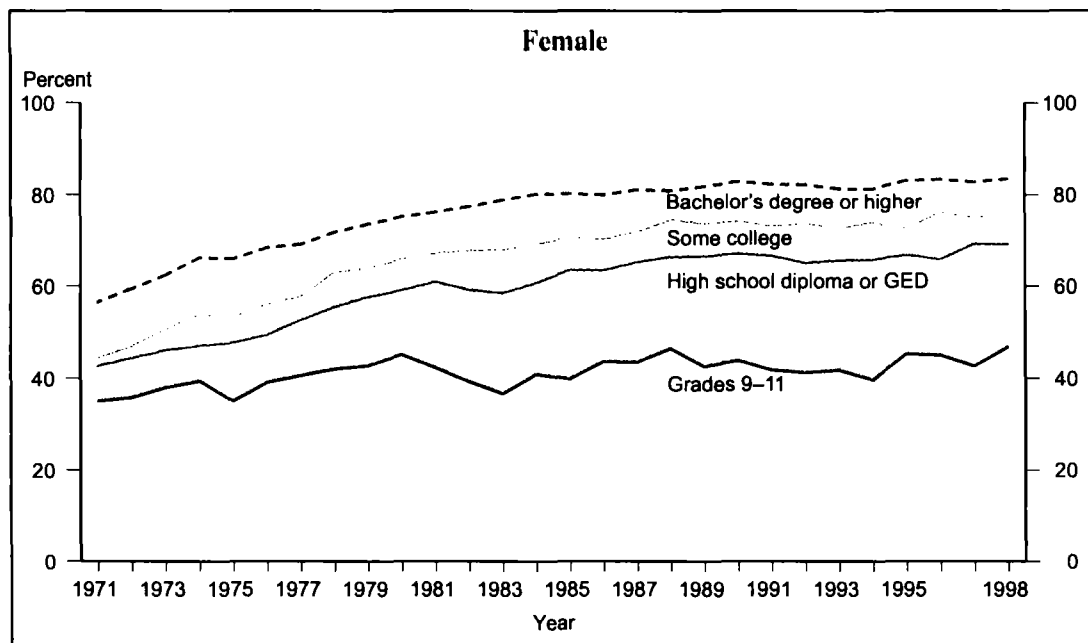
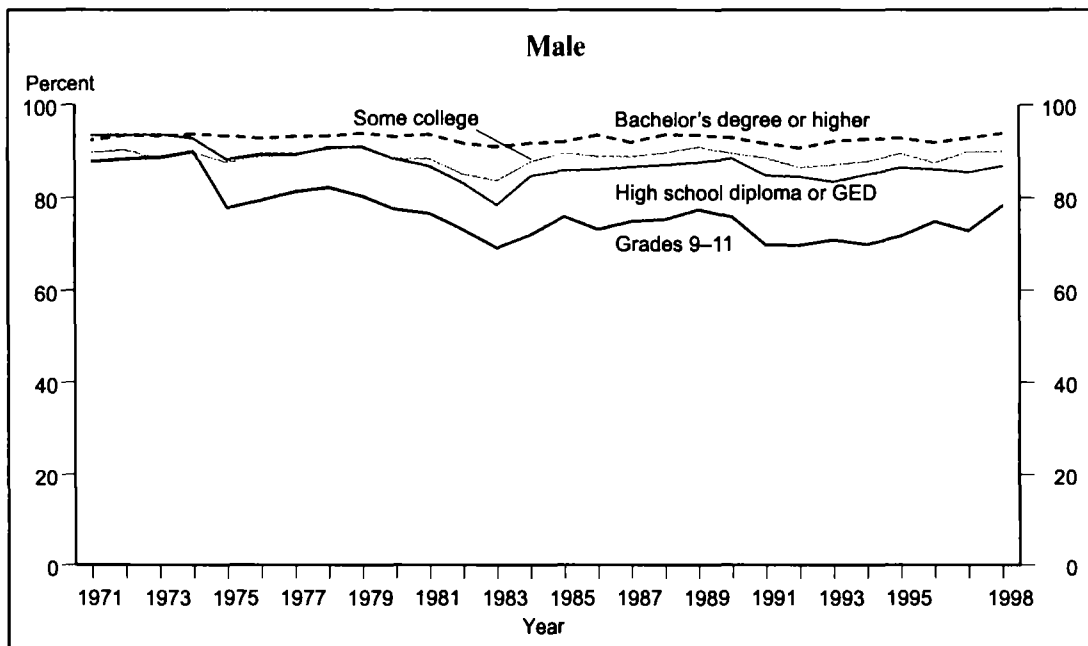
Employment rate of 25- to 34-year-olds, by sex and educational attainment: March 1971–98

March	Male				Female			
	Grades 9–11	High school diploma or GED	Some college	Bachelor's degree or higher	Grades 9–11	High school diploma or GED	Some college	Bachelor's degree or higher
1971	87.9	93.6	89.9	92.5	35.4	43.1	44.9	56.9
1973	88.8	93.8	88.5	93.5	38.4	46.5	51.0	62.7
1975	78.0	88.4	87.7	93.5	35.4	48.1	53.6	66.3
1977	81.5	89.5	89.1	93.3	41.0	53.0	58.0	69.5
1979	80.5	91.3	90.9	94.1	43.2	58.0	64.2	74.0
1981	76.7	86.9	88.5	93.7	42.7	61.3	67.6	76.4
1983	69.3	78.6	83.8	91.1	37.1	58.8	68.3	79.2
1985	76.1	86.1	89.7	92.2	40.3	63.9	71.0	80.6
1987	75.0	86.8	89.0	92.1	44.0	65.6	72.2	81.4
1989	77.6	87.8	91.1	93.7	43.0	66.9	74.0	82.1
1990	76.0	88.6	89.7	93.0	44.4	67.5	74.5	83.2
1991	69.9	84.9	88.6	91.8	42.3	67.0	73.5	82.6
1992	69.9	84.7	86.7	90.9	41.7	65.4	74.0	82.5
1993	71.0	83.6	87.2	92.3	42.2	66.0	73.0	81.6
1994	70.0	85.2	88.0	92.8	40.1	66.2	74.3	81.6
1995	71.8	86.6	89.6	92.9	45.8	67.2	73.0	83.4
1996	74.9	86.3	87.6	92.1	45.5	66.3	76.4	83.7
1997	73.0	85.6	90.0	93.0	43.1	69.6	75.3	83.1
1998	78.5	87.0	90.1	94.0	47.3	69.5	76.2	83.8

NOTE: The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. See the supplemental note to Indicator 59 for further discussion. The employment rate represents the number of employed individuals as a percentage of the total population.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Employment rate of 25- to 34-year-olds, by sex and educational attainment: March 1971-98



NOTE: The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. See the supplemental note to *Indicator 59* for further discussion. The employment rate represents the number of employed individuals as a percentage of the total population.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Annual earnings of young adults, by educational attainment

Many factors influence wages and salaries, including employer's perceptions of the productivity and availability of workers with different levels of education and prevailing economic conditions. The ratio of annual earnings of high school dropouts or college graduates to the annual earnings of high school completers measures the earnings disadvantage of not finishing high school and the earnings advantage of completing college.

- In 1997, the median annual earnings of young adults ages 25–34 who had not completed high school were substantially lower than those of their counterparts who had done so (29 and 37 percent lower for males and females, respectively). Young adults who had completed a bachelor's degree or higher earned substantially more than those who had earned no more than a high school diploma or GED (50 and 91 percent more for males and females, respectively).
- Between 1980 and 1997, the earnings of those with a bachelor's degree or higher rose faster than the earnings of those who had completed only high school for both males and females.
- Gaps in earnings between males and females decline with increasing levels of education: as educational attainment increases, the ratio of median annual earnings of male to female wage and salary workers decreases. However, the association between education and the male/female earnings gap has lessened over time. That is, earnings of women achieved greater parity with the earnings of men in recent years, regardless of level of educational attainment (see supplemental table 12-1).

Ratio¹ of median annual earnings of all wage and salary workers ages 25–34 whose highest education level was grades 9–11, some college, or a bachelor's degree or higher, compared with those with a high school diploma or GED, by sex: 1970–97

Year	Grades 9–11		Some college		Bachelor's degree or higher	
	Male	Female	Male	Female	Male	Female
1970 ²	0.83	0.59	1.09	1.20	1.24	1.82
1972 ²	0.79	0.63	1.01	1.18	1.18	1.79
1974	0.81	0.62	1.02	1.19	1.14	1.74
1976	0.78	0.61	1.03	1.14	1.19	1.58
1978	0.77	0.54	1.05	1.17	1.18	1.55
1980	0.73	0.65	1.04	1.24	1.19	1.52
1982	0.71	0.66	1.12	1.21	1.34	1.63
1984	0.63	0.56	1.15	1.21	1.36	1.61
1986	0.69	0.65	1.18	1.21	1.50	1.78
1988	0.68	0.56	1.10	1.31	1.42	1.81
1990	0.71	0.58	1.14	1.34	1.48	1.92
1991	0.64	0.64	1.14	1.32	1.53	1.90
1992	0.68	0.76	1.13	1.34	1.60	2.00
1993	0.67	0.59	1.12	1.31	1.57	1.99
1994 ²	0.67	0.58	1.14	1.20	1.52	1.86
1995 ²	0.74	0.61	1.11	1.28	1.55	1.91
1996 ²	0.69	0.64	1.14	1.27	1.56	1.88
1997	0.71	0.63	1.11	1.22	1.50	1.91

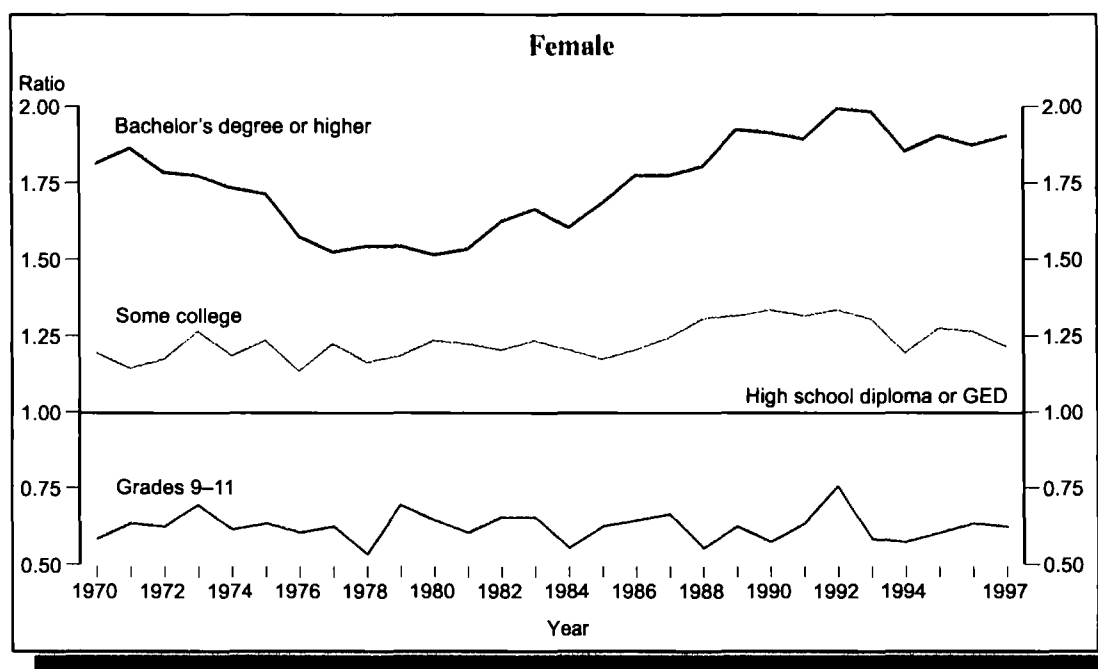
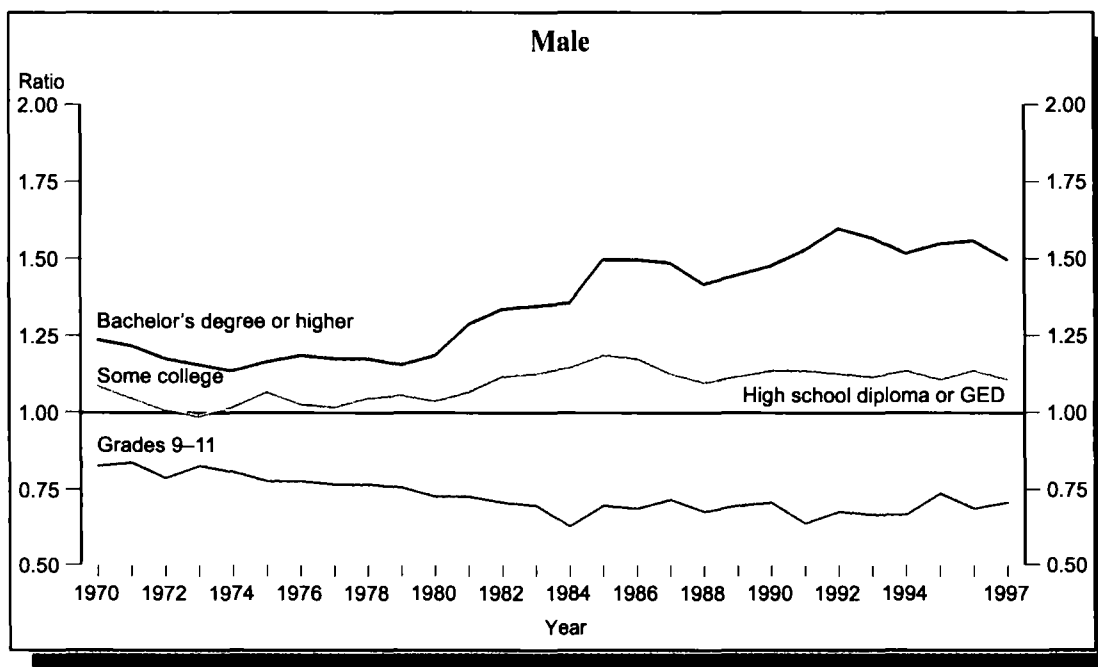
¹ This ratio is most useful when compared with 1.0. For example, the ratio of 1.50 in 1997 for males whose highest education level was a bachelor's degree or higher means that they earned 50 percent more than males who had a high school diploma or GED. The ratio of 0.71 in 1997 for males whose highest education level was grades 9–11 means that they earned 29 percent less than males who had a high school diploma or GED.

² Data revised from previously published figures.

NOTE: The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. See the supplemental note to *Indicator 59* for further discussion. In 1994, the survey instrument for the CPS was changed and weights were adjusted. See the supplemental note to *Indicator 51* for further discussion.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Ratio* of median annual earnings of all wage and salary workers ages 25–34 whose highest education level was grades 9–11, some college, or a bachelor's degree or higher, compared with those with a high school diploma or GED, by sex: 1970–97



* This ratio is most useful when compared with 1.0. For example, the ratio of 1.50 in 1997 for males whose highest education level was a bachelor's degree or higher means that they earned 50 percent more than males who had a high school diploma or GED. The ratio of 0.71 in 1997 for males whose highest education level was grades 9–11 means that they earned 29 percent less than males who had a high school diploma or GED. Data for 1994, 1995, and 1996 are revised from previously published figures.

NOTE: The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. See the supplemental note to *Indicator 59* for further discussion. In 1994, the survey instrument for the CPS was changed and weights were adjusted. See the supplemental note to *Indicator 51* for further discussion.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Educational outcomes and employment status 4 years after college graduation

Some bachelor's degree recipients go directly into the labor force, while others pursue further education, often combining school and work. A snapshot of labor market status and educational outcomes of college graduates 4 years after graduation illustrates graduates' paths to employment and further schooling. It also provides an opportunity to see the extent to which these paths are related to borrowing for undergraduate education.

- In 1997, the majority (79 percent) of 1992–93 graduates were neither enrolled in an advanced degree program nor had attained an advanced degree. Ten percent had attained an advanced degree and were not enrolled in school; another 10 percent were enrolled and had not attained an advanced degree; and 1 percent were enrolled and had attained an advanced degree.
- College graduates with parents who had an advanced degree were more likely than students whose parents had a bachelor's degree or less to have attained an advanced degree or to be enrolled in school in 1997.
- Graduates who used federal loans to finance their undergraduate education were slightly less likely than those who had not used these loans to have attained an advanced degree or to be enrolled in school in 1997.
- By 1997, most 1992–93 bachelor's degree recipients were employed: 76 percent were working and not enrolled in school and another 13 percent were combining school and work. Five percent were enrolled but not working, and 6 percent were neither working nor enrolled (see supplemental table 13-1).

Percentage distribution of 1992–93 bachelor's degree recipients* according to enrollment status in April 1997, by parents' educational attainment and undergraduate borrowing status

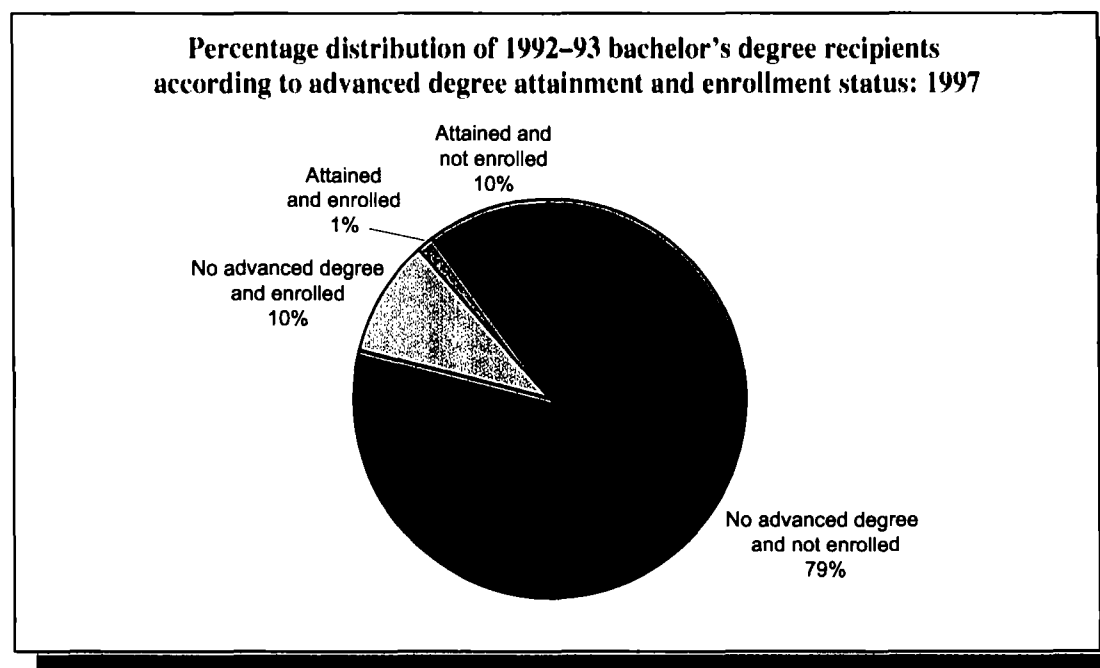
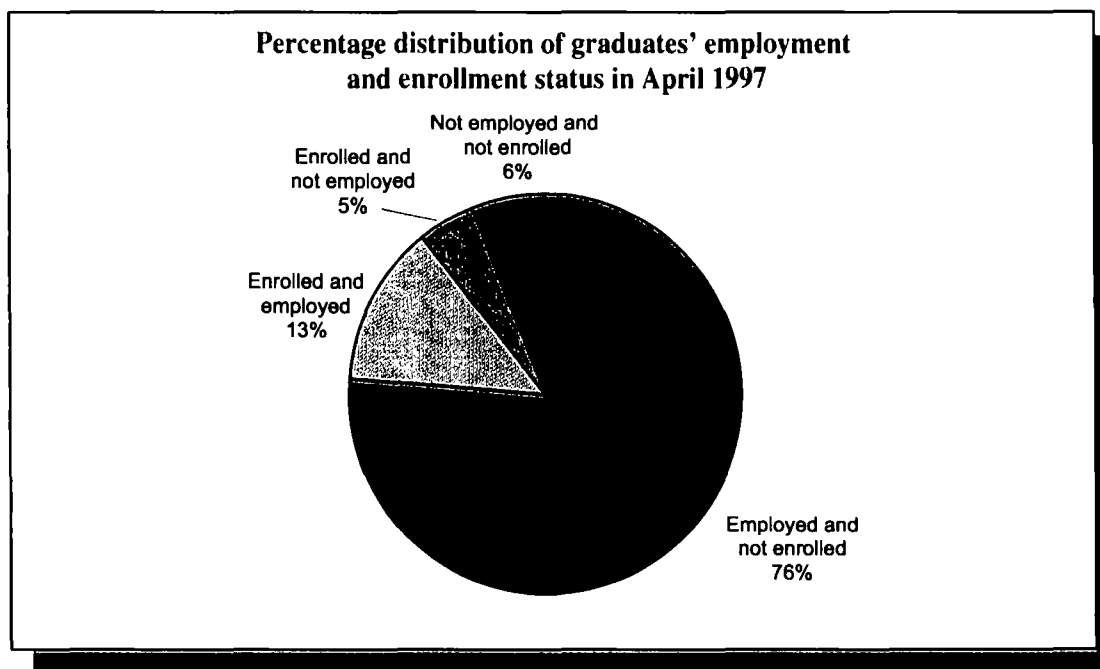
Parents' educational attainment and undergraduate borrowing status	No advanced degree, not enrolled	Attained advanced degree or currently enrolled			
		Total	No advanced degree, enrolled	Attained, not enrolled	Attained and enrolled
Total	78.9	21.1	9.5	10.2	1.4
Parents' educational attainment					
Less than high school	84.9	15.1	5.4	8.6	1.1
High school diploma or equivalency credential	84.0	16.0	7.6	7.7	0.7
Some postsecondary education	81.6	18.4	7.3	9.8	1.3
Bachelor's degree	78.3	21.7	10.8	9.5	1.4
Advanced degree	70.6	29.4	12.4	14.7	2.3
Undergraduate borrowing status (federal loans)					
Did not borrow	78.0	22.0	9.8	10.6	1.6
Borrowed	80.8	19.2	9.1	9.0	1.1
Less than \$1,000	77.8	22.2	17.4	3.9	0.9
\$1,000–4,999	81.1	18.9	8.9	8.8	1.2
\$5,000–9,999	82.1	17.9	8.2	9.0	0.7
\$10,000–19,999	80.3	19.7	9.4	9.1	1.2
\$20,000 or more	77.3	22.7	7.0	13.1	2.6

* Bachelor's degrees were earned between July 1992 and June 1993.

NOTE: Details may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1993 Baccalaureate and Beyond Longitudinal Study, Second Follow-up (B&B:93/97), Data Analysis System.

Employment and enrollment among 1992-93 bachelor's degree recipients* in April 1997



* Bachelor's degrees were earned between July 1992 and June 1993.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1993 Baccalaureate and Beyond Longitudinal Study, Second Follow-up (B&B:93/97), Data Analysis System.

Section II. Quality of Education Environments (Elementary/ Secondary)

14	Students who took Advanced Placement (AP) examinations	30
15	Teachers' use of higher-level tasks in instruction	32
16	International comparisons of instructional activities in mathematics	34
17	Internet access in public and private schools	36
18	Student computer use	38
19	Uses of computers for mathematics instruction	40
20	Inclusion of students with disabilities in the least restrictive environment	42
21	Reading and writing habits of students outside of school	44
22	Requirements in teacher hiring	46
23	Teachers' feelings of preparedness	48
24	Teachers' participation in collaborative activities	50
25	Salaries of teachers	52
26	Student victimization at school	54
27	Student alcohol and drug use	56
28	Tuition and enrollment in private schools	58

Students who took Advanced Placement (AP) examinations

The Advanced Placement (AP) program is associated with a demanding academic curriculum and illustrates the desire of high schools to offer college-level courses to high school students. By participating in the AP program, high school students may acquire college credit for their knowledge of college-level subjects. The number of students per 1,000 12th-graders who participated in AP examinations each year shows the level of importance that students, schools, and colleges place on the AP program and how that importance has changed over time.

- Between 1984 and 1997, the number of students who took AP examinations increased dramatically, rising from 50 to 131 students per 1,000 12th-graders. The number of examinees increased for both sexes and all racial-ethnic groups during this period.
- In 1984, equal proportions of male and female students took AP examinations. Between 1984 and 1997, the number of females who took the examinations rose at a faster rate than did the number of males who took the examinations. In 1997, 145 females compared with 117 males per 1,000 12th-graders took AP examinations.
- In 1997, whites were more likely than blacks or Hispanics to take AP examinations in all subject areas, with the exception of foreign languages. Hispanics were at least three times as likely to take a foreign language AP examination as whites.

Number of U.S. students¹ who took AP examinations (per 1,000 12th-graders), by sex and race-ethnicity: 1984-97

Sex and race-ethnicity	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total²	50	59	64	66	81	88	100	103	109	117	115	125	131	131
Sex														
Male	50	61	65	68	76	86	101	96	102	108	101	111	117	117
Female	50	58	63	65	85	90	98	111	117	127	129	140	144	145
Race-ethnicity														
White	48	60	62	63	82	92	103	107	112	115	116	125	133	132
Black	8	11	12	13	21	20	26	25	26	31	32	37	32	37
Hispanic	24	21	27	30	48	54	54	67	68	80	63	75	74	85

Number of AP examinations¹ taken in the United States and the number of examinations with scores of 3 or higher (per 1,000 12th-graders), by subject area, sex, and race-ethnicity: 1997

Sex and race-ethnicity	Number of AP examinations taken						Number of examinations with scores of 3 or higher					
	Social studies	English	Foreign language	Calculus	Computer science	Science	Social studies	English	Foreign language	Calculus	Computer science	Science
Total²	59	55	17	33	3	35	35	38	12	20	1	23
Sex³												
Male	62	42	13	36	5	41	40	28	9	24	3	28
Female	70	70	23	30	1	34	40	48	17	17	0	20
Race-ethnicity												
White	61	58	12	33	2	34	38	41	7	21	1	22
Black	15	17	3	7	1	8	5	6	1	2	0	2
Hispanic	26	27	41	12	1	12	11	12	36	6	0	5

¹ Includes all participation by 11th- and 12th-graders. See the supplemental note to this indicator for further discussion.

² Included in the total but not shown separately are students from other racial-ethnic groups.

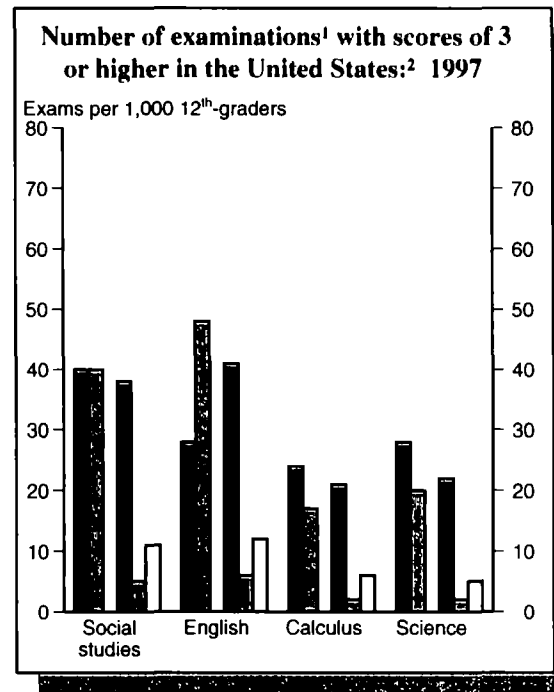
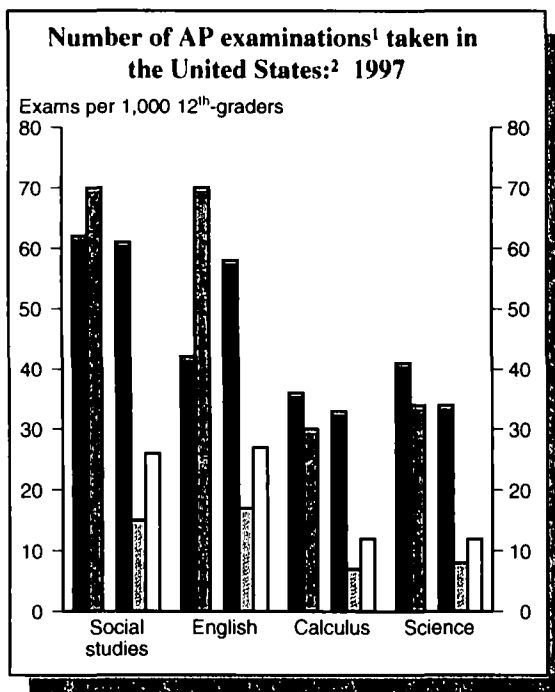
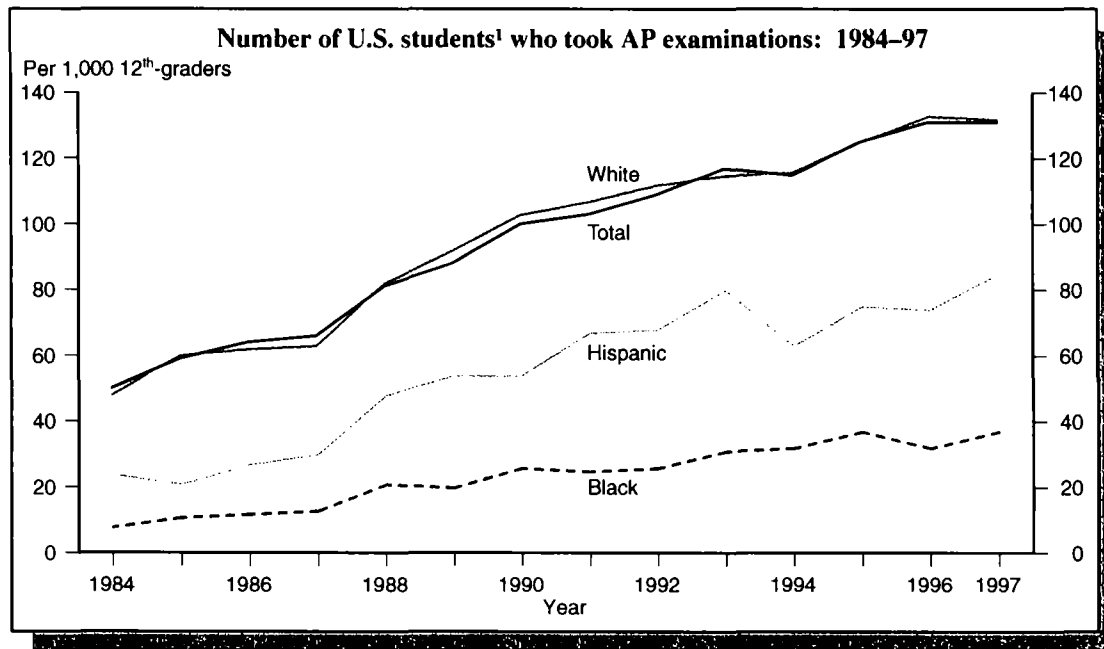
³ The number of examinations taken by males and females includes a small number of examinations taken by 9th-graders, 10th-graders, college students, and others (9 percent of all students who took AP examinations in 1997).

NOTE: Included in this analysis are students who participated in the United States only. Students scoring 3 or higher on an AP examination

usually receive college credit. Since, on average, AP candidates take more than one examination, there is not a 1:1 ratio between candidates and examinations. See the supplemental note to this indicator for a description of AP course categories and a discussion of the calculations for this analysis.

SOURCE: The College Board, Advanced Placement Program, *National Summary Reports* (Copyright © 1984-97 by the College Entrance Examination Board. All rights reserved.). U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Students who took Advanced Placement (AP) examinations



■ Male ■ Female ■ White ■ Black ■ Hispanic

¹ Includes all participation by 11th- and 12th-graders. See the supplemental note to this indicator for further explanation.

² The number of examinations taken by males and females includes a small number of examinations taken by 9th-graders, 10th-graders, college students, and others (9 percent of all students who took AP examinations in 1997).

NOTE: Included in this analysis are students who participated in the United States only. Students scoring 3 or higher on an AP examination usually receive college credit. Since, on average, AP candidates

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Teachers' use of higher-level tasks in instruction

Given the complexity and pace of technological advancement in recent decades, educational goals have expanded from mastery of basic skills to developing higher-level thinking skills. Information about the extent to which teachers assign students activities designed to help them develop higher-level thinking skills in the classroom or as homework indicates how widely these instructional practices have been adopted.

- In 1994–95, more than one-half of K–12 teachers reported that their students engaged in specific activities designed to promote higher-level thinking skills in class at least weekly. Such activities included having students explain how what they had learned in class related to the real world (64 percent), solving problems with several answers (59 percent), and working on problems with several methods of solution (59 percent). Thirty-eight percent of teachers reported that they had students in their classes put things in order and then explain why they were organized that way.
- Teachers were generally less likely to ask students to engage in activities designed to promote higher-level thinking skills in their homework than in the classroom. On a weekly basis, 13 percent of teachers had students work at home on problems with no obvious solution; 23 percent assigned projects or experiments as homework; and 43 percent assigned tasks that required students to apply concepts in a new context.
- As the class ability level increased, teachers became more likely to ask their students to engage in various higher-level tasks in their homework, such as conducting a project or experiment, working on problems with no obvious solutions, and applying concepts in a new context. However, in class, the likelihood of teachers' use of various higher-level tasks was unrelated to the abilities of the students they taught except for one type of task—working on problems with several solution methods—in which the likelihood of teachers' use of this type of task rose with an increased level of class ability.

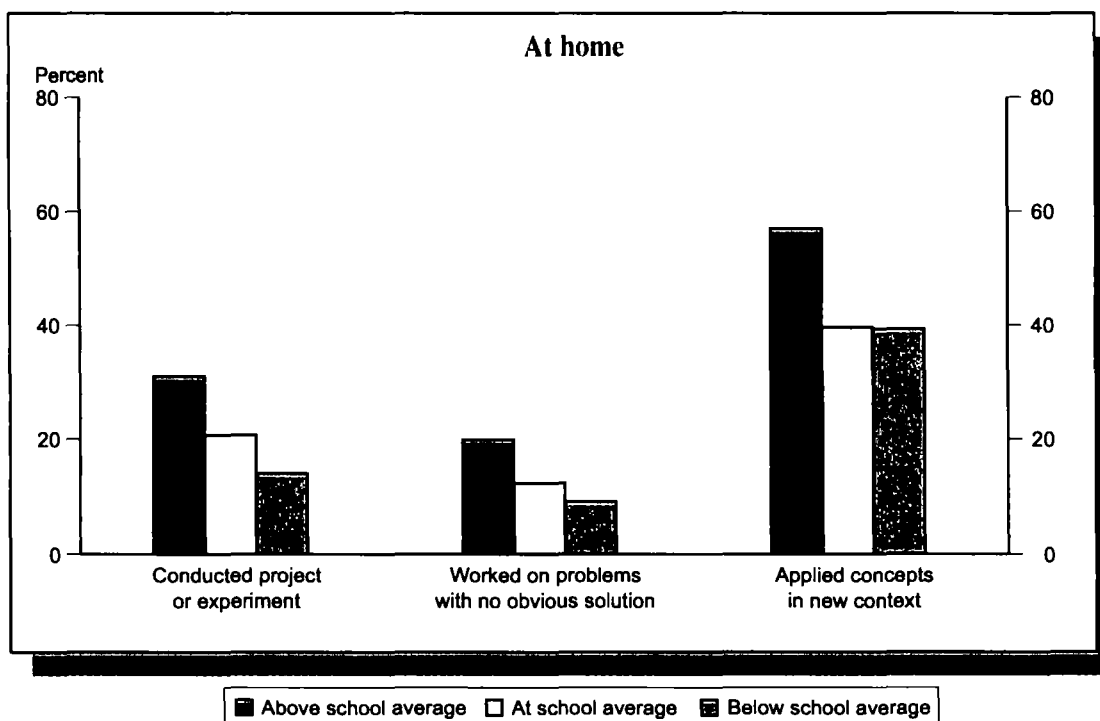
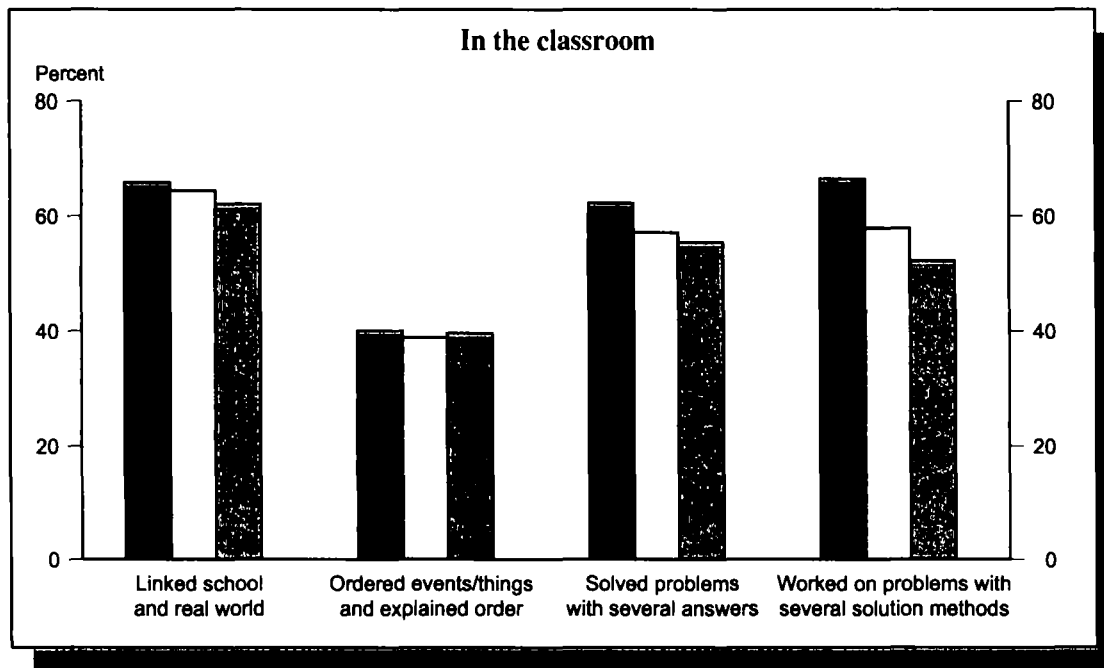
Percentage of K–12 teachers whose students engaged in various higher-level tasks in class or as homework at least once a week during the last semester, by class ability level:* 1994–95

Class ability level	Tasks done in class				Tasks done as homework		
	Linked school and real world	Ordered events/things and explained order	Solved problems with several answers	Worked on problems with several solution methods	Conducted project or experiment	Worked on problems with no obvious solution	Applied concepts in new context
Total	63.7	38.1	59.1	58.8	22.8	13.2	43.2
Above school average	65.7	40.0	62.2	66.4	31.0	19.9	56.9
At school average	64.4	38.8	57.1	57.9	20.7	12.3	39.6
Below school average	62.0	39.6	55.3	52.1	14.0	9.1	39.3
Mixed	66.6	37.4	63.1	62.6	26.4	14.6	45.8

* Class ability level was derived from teachers' estimates of the proportion of students in the designated class whose academic ability was above, at, or below the school average for their age and grade. Teachers were defined as having classes of above, at, or below average ability if they reported that more than 50 percent of their students fell into the respective category. If a majority of students did not fall into any of these categories, teachers were defined as having "mixed" classes.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey, 1994–95.

Percentage of teachers whose students engaged in various higher-level tasks at least once a week during the last semester, by class ability level:* 1994-95



* Class ability level was derived from teachers' estimates of the proportion of students in the designated class whose academic ability was above, at, or below the school average for their age and grade. Teachers were defined as having classes of above, at, or below average ability if they reported that more than 50 percent of their students fell into the respective category. If a majority of

students did not fall into any of these categories, teachers were defined as having "mixed" classes.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey, 1994-95.

International comparisons of instructional activities in mathematics

In recent years, many education program evaluations and teacher training programs have focused on instructional methods that teachers use in the classroom. For example, some teachers ask their students to conduct repetitive practice exercises; others ask their students to do reasoning tasks; still others apply content to everyday problems; and many use some combination of all of these methods. Data from the Third International Mathematics and Science Study (TIMSS) show not only that student achievement varies across countries but also that instructional methods vary as well. Examining how teachers from various countries differ in how they teach may provide insight into factors that are associated with student achievement.

- In 1995, mathematics teachers in the United States were more likely to report that their 8th-grade students practiced computational skills “in every lesson” than mathematics teachers in England, France, and Germany. However, mathematics teachers in the United States were just as likely as their counterparts in Japan, Canada, France, and Germany, and more likely than mathematics teachers in England, to report that their students did reasoning tasks “in every lesson.”
- Mathematics teachers in the United States also differ from their international peers in the frequency with which they assess their students in mathematics classes. For example, 8th-grade students in the United States were more likely to report they took quizzes or tests “pretty often” or “almost always” in mathematics lessons than their counterparts in Canada, England, France, Germany, and Japan (see supplemental table 16-1).
- Teachers rely on a variety of sources when deciding which topics to teach. In 1995, 64 percent of 8th-grade students in the United States had mathematics teachers who reported that they relied on curriculum guides as their main source of information, compared with 30 percent relying on textbooks and 6 percent on examination specifications. In Japan, the majority of 8th-grade students (74 percent) had mathematics teachers who reported that they relied on textbooks to decide which topics to teach. In Germany, most students (80 percent) had mathematics teachers who reported using curriculum guides (see supplemental table 16-2).

Percentage distribution of 8th-grade students¹ according to frequency with which teachers reported asking them to practice computational skills and do reasoning tasks in mathematics, by G-7² country: 1995

Country	Practice computational skills				Do reasoning tasks			
	Never or almost never	Some lessons	Most lessons	Every lesson	Never or almost never	Some lessons	Most lessons	Every lesson
Canada	4	36	42	18	0	19	62	19
England ⁴	7	52	34	8	0	25	60	14
France	6	44	44	7	0	32	48	20
Germany ^{3,4}	17	51	25	7	1	24	58	17
Japan	—	—	—	—	0	7	55	37
United States ⁵	11	31	38	21	0	24	50	26

— Not available.

¹ Eighth grade in most nations.

² Italy was not included because it was unable to complete the steps necessary for its data to be published.

³ Country did not satisfy one or more sampling or other guidelines. See the supplemental note to *Indicator 3* for further explanation.

⁴ Teacher response data are available for 50–69 percent of students.

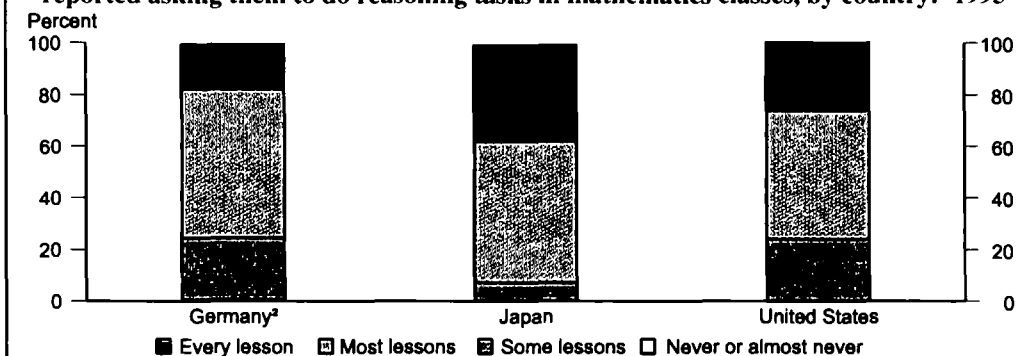
⁵ Teacher response data are available for 70–84 percent of students.

NOTE: Details may not add to 100 due to rounding.

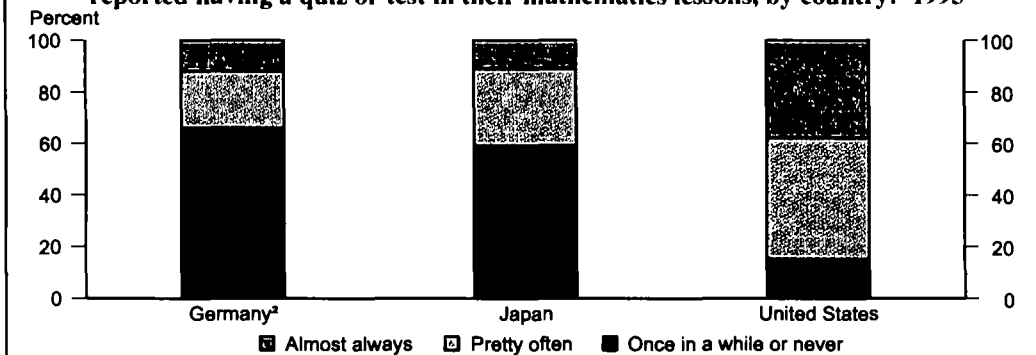
SOURCE: International Association for the Evaluation of Educational Achievement, TIMSS International Study Center, *Mathematics Achievement in the Middle School Years, 1996*.

International comparisons of instructional activities in mathematics

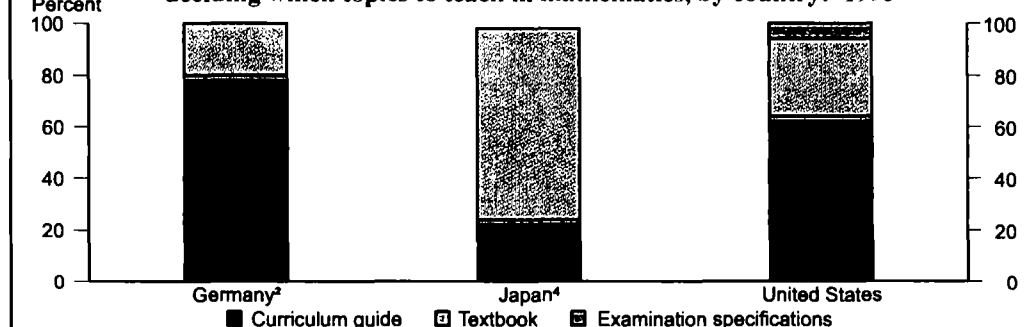
Percentage distribution of 8th-grade students¹ according to frequency with which teachers reported asking them to do reasoning tasks in mathematics classes, by country: 1995



Percentage distribution of 8th-grade students¹ according to frequency with which they reported having a quiz or test in their mathematics lessons, by country: 1995



Percentage distribution of 8th-grade students¹ according to teacher reports of the use of various pieces of written information³ as their main source for deciding which topics to teach in mathematics, by country: 1995



¹ Eighth grade in most nations.

² Country did not satisfy one or more sampling or other guidelines. See the supplemental note to Indicator 3 for further explanation.

³ Curriculum guides include national, regional, and school curriculum guides; textbooks include teacher and student editions as well as other resource books; and examination specifications include national and regional levels.

⁴ Percentage for examination specifications for Japan is 1 percent; therefore the percentage is not discernable in the graph.

SOURCE: International Association for the Evaluation of Educational Achievement, TIMSS International Study Center, *Mathematics Achievement in the Middle School Years*, 1996.

Internet access in public and private schools

The Internet, with its vast array of information, can broaden the learning resources available in schools by providing teachers and students with connections to libraries, schools, and government agencies. Information found on the Internet can broaden students' knowledge base, and Internet access can prepare students for an increasingly technological workplace. Examining patterns of Internet access in schools can help determine how many students will be prepared to use this technology effectively in the future.

- Between fall 1994 and fall 1998, Internet access in public schools increased from 35 to 89 percent of schools. The percentage of public school instructional rooms with Internet access also increased during this time period (from 3 percent in 1994 to 51 percent in 1998).
- Public schools with a high student poverty level (71 percent or more of students eligible for free or reduced-price lunch) were less likely to have Internet access than schools with a low student poverty level (less than 11 percent of students eligible for free or reduced-price lunch) from fall 1994 to 1997. However, in fall 1998, high poverty-level public schools were as likely to have Internet access as low poverty-level schools.
- In fall 1997, public schools with a high minority enrollment (50 percent or more) had a lower rate of Internet access than public schools with a low minority enrollment (less than 6 percent), and had a smaller percentage of instructional rooms with Internet access than public schools with a low minority enrollment. By fall 1998, the gap between high and low minority enrollment schools with Internet access closed, but high minority enrollment schools were still less likely to have instructional rooms with Internet access.
- In both public and private schools with Internet access, teachers were more likely to have access to e-mail, news groups, resource location services, and the World Wide Web than were students in these schools (see supplemental tables 17-1 and 17-2).

Percentage of public schools and instructional rooms with Internet access, by school characteristics: Fall 1994–98

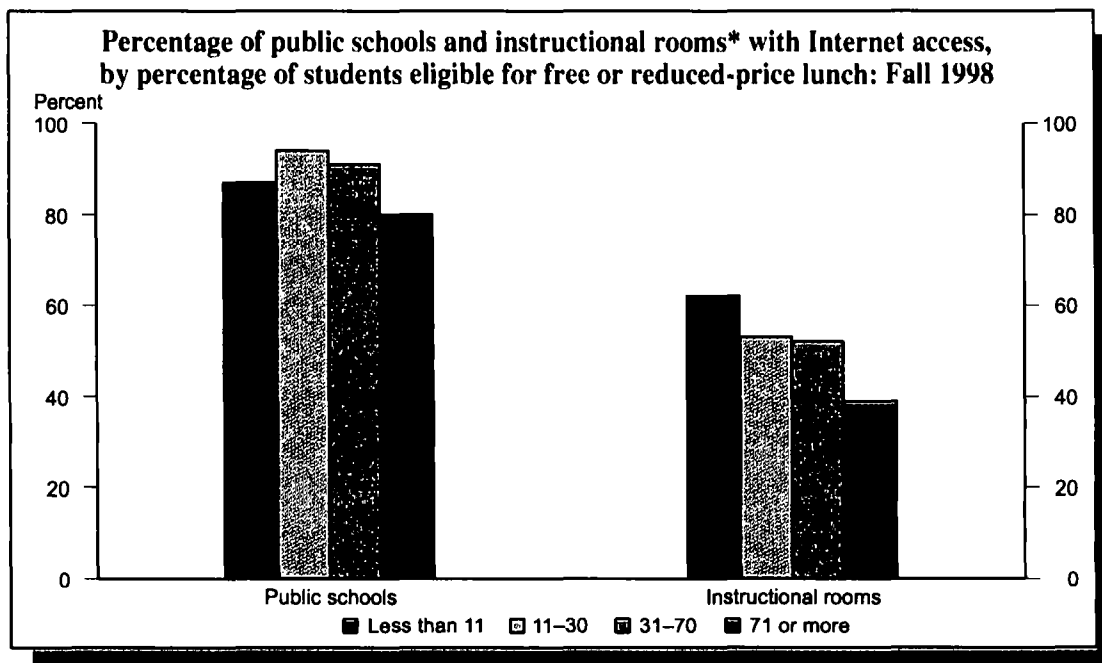
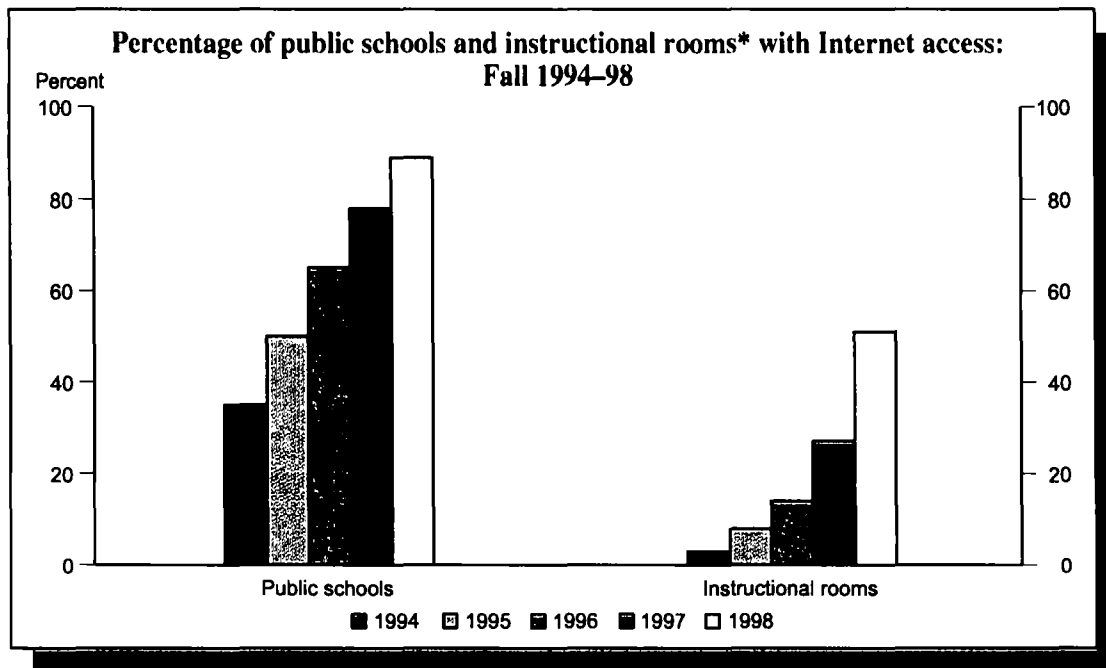
School characteristics	Percentage of schools with Internet access					Percentage of instructional rooms with Internet access ¹				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
Total	35	50	65	78	89	3	8	14	27	51
Level of school ²										
Elementary	30	46	61	75	88	3	8	13	24	51
Secondary	49	65	77	89	94	4	8	16	32	52
Percentage of students eligible for free or reduced-price lunch										
Less than 11	40	62	78	88	87	4	9	18	36	62
11–30	39	59	72	83	94	4	10	16	32	53
31–70	33	47	58	78	91	3	7	14	27	52
71 or more	19	31	53	63	80	2	3	7	14	39
Percentage of minority students enrolled										
Less than 6	38	52	65	84	91	6	9	18	37	57
6–20	38	58	72	87	93	4	10	18	35	59
21–49	38	54	65	73	91	4	9	12	22	52
50 or more	27	40	56	63	82	3	3	5	13	37

¹ Based on the total number of instructional rooms in regular public schools.

² Data for combined schools are not reported as a separate level of school because there are too few sample observations for a reliable estimate. Included in the totals are data for combined schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Internet Access in Public Schools," Issue Brief, February 1998, and "Internet Access in Public Schools, 1994–1998," Issue Brief, February 1999.

Internet access in public schools



* Based on the total number of instructional rooms in regular public schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Internet Access in Public Schools," Issue Brief, February 1998, and "Internet Access in Public Schools, 1994–1998," Issue Brief, February 1999.

Student computer use

Computers have become an essential tool in our society. Early exposure to computers can help students gain the computer literacy that will be crucial for future success in the workplace. Access to computers allows students to retrieve information, manipulate data, and produce results efficiently and in innovative ways. Examining the extent to which students have access to computers at home and at school may be an indicator of how well prepared students will be to enter an increasingly technological workplace.

- The percentage of students who used a computer at home was higher in 1997 than in 1984 (45 versus 13 percent). In addition, the percentage of students who used a computer at school was also higher in 1997 than in 1984 (76 versus 30 percent).
- The percentage of white, black, and Hispanic students in grades 1–6 and 7–12 who used a computer at school and at home was higher in 1997 than in 1984. For example, 18 and 19 percent of black and Hispanic 1st- through 6th-graders, respectively, used a computer at school in 1984, compared with 73 and 71 percent of their black and Hispanic peers, respectively, in 1997.
- Between 1984 and 1997, white students in grades 1–6 and 7–12 were consistently more likely than their black and Hispanic peers to use a computer at school or at home. However, when computer use by students was broken out by location of use, there was similar computer use by blacks and whites in grades 7–12 at school but not at home in 1997.
- In 1997, students in grades 1–6 and 7–12 were more likely to use computers at home for school assignments or word processing than for graphics/design, Internet, or e-mail access (see supplemental table 18-1).

Percentage of students who used a computer at school and/or home, by current grade level, race-ethnicity, and family income: 1984, 1989, 1993, and 1997

Current grade level, race-ethnicity, and family income ²	1984 ¹			1989 ¹			1993 ¹			1997		
	Used a computer at:			Used a computer at:			Used a computer at:			Used a computer at:		
	School	Home or	school	School	Home or	school	School	Home or	school	School	Home or	school
Total (Grades 1–12)	29.7	12.6	36.2	48.0	18.4	54.6	62.0	25.2	68.3	76.4	45.2	84.0
Grades 1–6												
Total	30.5	11.8	36.2	52.4	16.1	56.9	66.6	23.0	70.7	79.1	41.3	83.8
Race-ethnicity												
White	35.5	14.4	42.3	58.9	20.4	64.5	71.6	29.2	76.6	84.4	52.3	89.9
Black	15.1	5.1	18.3	34.3	6.0	36.2	54.1	8.3	56.5	70.1	19.3	72.9
Hispanic	16.4	3.5	18.5	41.1	5.1	42.3	55.1	6.8	56.8	67.7	17.9	70.5
Family income												
Low income	18.5	2.5	20.0	39.4	5.7	39.0	57.4	3.9	58.1	70.9	12.4	71.9
Middle income	29.5	9.7	34.5	52.3	17.0	49.9	66.2	18.0	69.5	78.6	36.4	82.8
High income	42.2	24.4	53.0	62.5	38.3	63.9	74.0	48.5	82.4	86.5	74.6	95.0
Grades 7–12												
Total	28.9	13.4	36.2	43.0	21.1	52.1	57.0	27.7	65.6	75.5	60.9	89.0
Race-ethnicity												
White	31.9	16.2	40.8	45.5	25.6	56.7	59.6	34.7	70.2	75.5	60.9	89.0
Black	18.4	4.9	20.8	36.5	8.5	39.7	50.5	10.2	53.5	74.2	22.3	77.9
Hispanic	21.2	3.6	23.2	34.4	9.0	38.3	52.6	9.5	56.1	65.4	21.5	69.4
Family income												
Low income	20.0	3.3	22.3	36.7	5.7	39.0	49.0	5.6	50.4	67.6	14.9	70.7
Middle income	28.4	10.1	33.6	42.6	17.0	49.9	57.3	22.2	64.1	74.1	44.2	83.5
High income	34.1	24.8	48.1	47.2	38.3	63.9	60.7	51.2	77.0	75.4	78.6	93.3

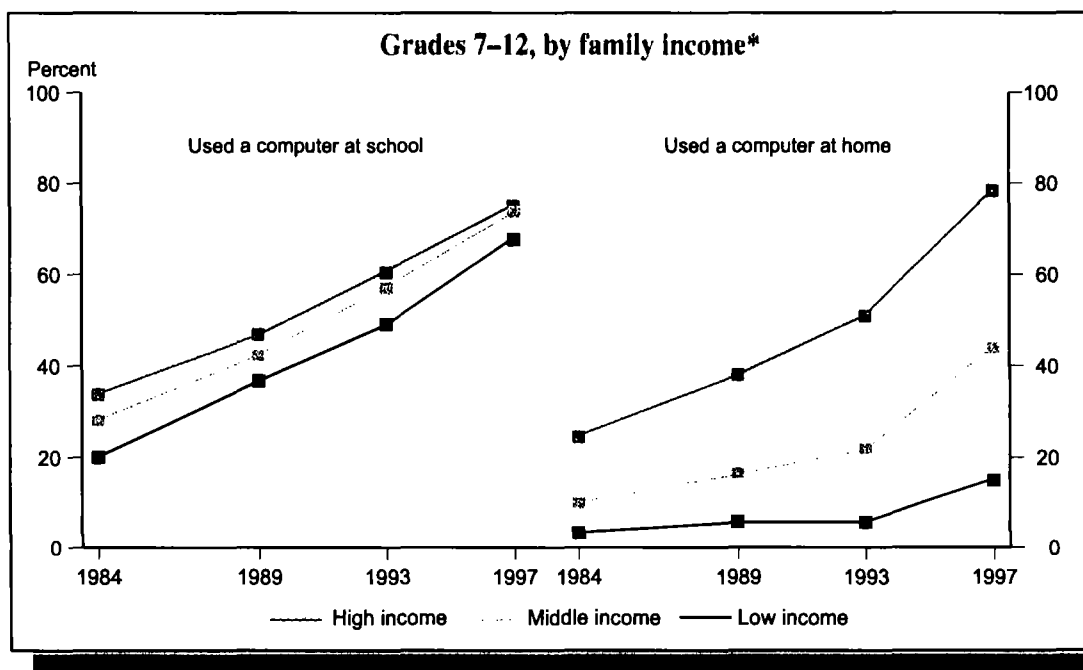
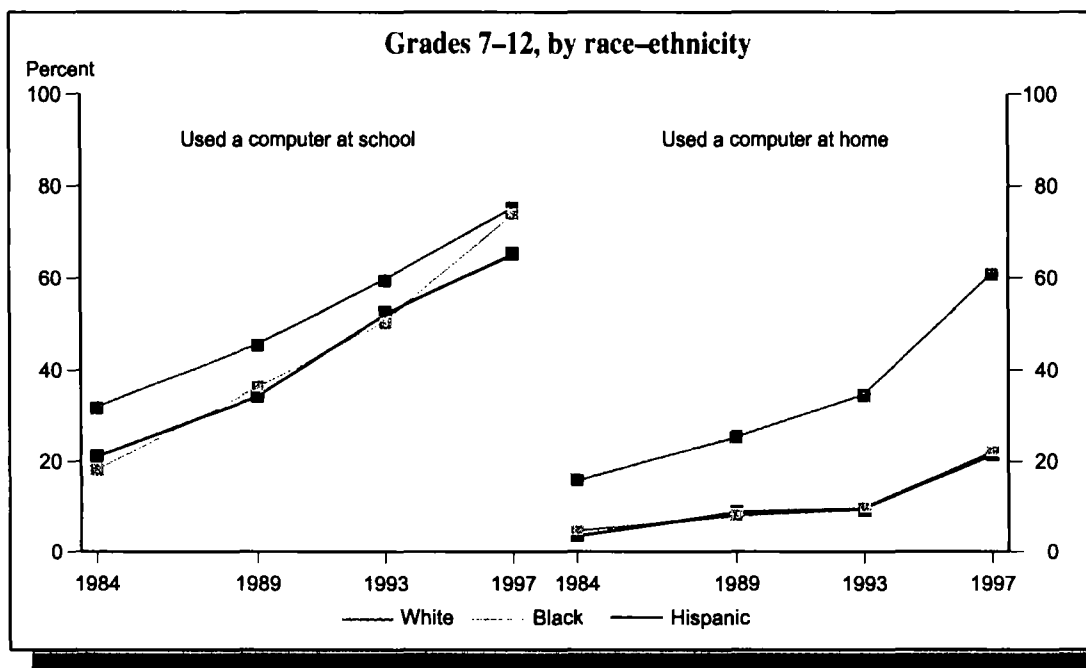
¹ Data are revised from previously published figures.

² Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in between. See the supplemental note to Indicator 53 for further discussion.

NOTE: Data for 1984, 1989, and 1993 are revised from previously published figures.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Percentage of students who used a computer at school or home, by selected characteristics: 1984, 1989, 1993, and 1997



* Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes and middle income is the 60 percent in between. See the supplemental note to Indicator 53 for further discussion.

NOTE: Data for 1984, 1989, and 1993 are revised from previously published figures.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Uses of computers for mathematics instruction

As computers and other modern technologies become more prevalent in our nation's schools and classrooms, it becomes increasingly important to ensure that they are used effectively. In addition, there is growing concern about an emerging "digital divide" between those students who have access to and make effective use of technology for education and those who do not. Data from the 1996 National Assessment of Educational Progress (NAEP) provide insight into the uses of computers for 4th- and 8th-grade mathematics instruction.

- In 1996, teachers reported that 4th-grade students who used computers for mathematics instruction were most likely to use computers primarily to play learning games. In 8th grade, teachers reported that the primary use for students using computers was as likely to be drill and practice as playing learning games or simulations and applications. However, about twice as many teachers of 8th-grade students reported not using computers at all for mathematics instruction as did teachers of 4th-grade students.
- The patterns of technology used in mathematics instruction were not similar across racial-ethnic groups. For instance, according to teacher reports, the primary use of computers by black 4th-grade students was as likely to be for drill and practice as for playing learning games, while for black 8th-grade students, their primary use was more likely to be for drill and practice than for simulations and applications. For whites, on the other hand, teachers reported that 4th-grade students were more likely to use computers primarily for playing learning games than for drill and practice, and that the primary use of computers for 8th-grade students was equally likely to be for playing learning games as for drill and practice or simulations and applications. Despite these differences, teacher reports show that black and white students were equally likely to make no use of computers for instruction in both the 4th and 8th grades.
- It appears that whether or not 8th-grade students used computers at all for mathematics instruction was related to their Title I participation. Eighth-grade teachers who taught Title I students were more likely to report the use of computers by their students than teachers who did not teach Title I participants.

Percentage distribution of students according to the primary use of computers for mathematics instruction reported by their teachers, by grade, primary type of use, and selected student characteristics: 1996

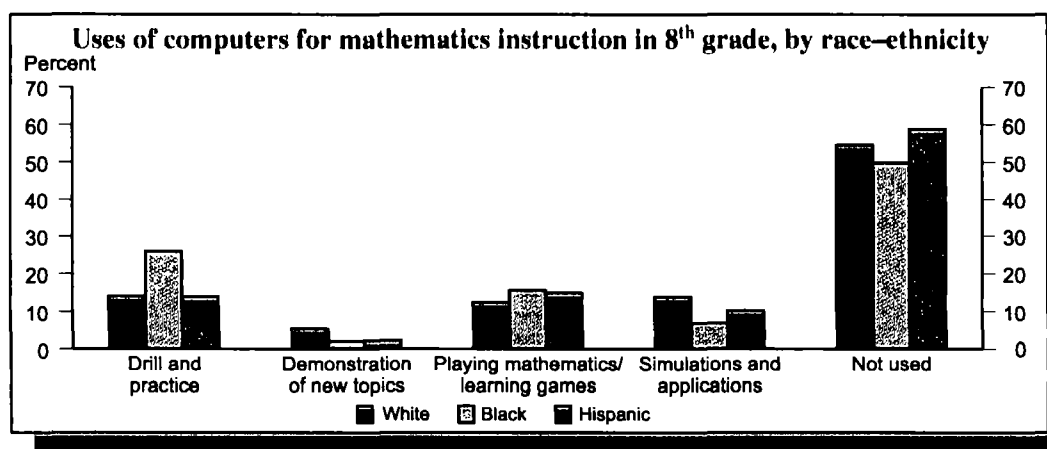
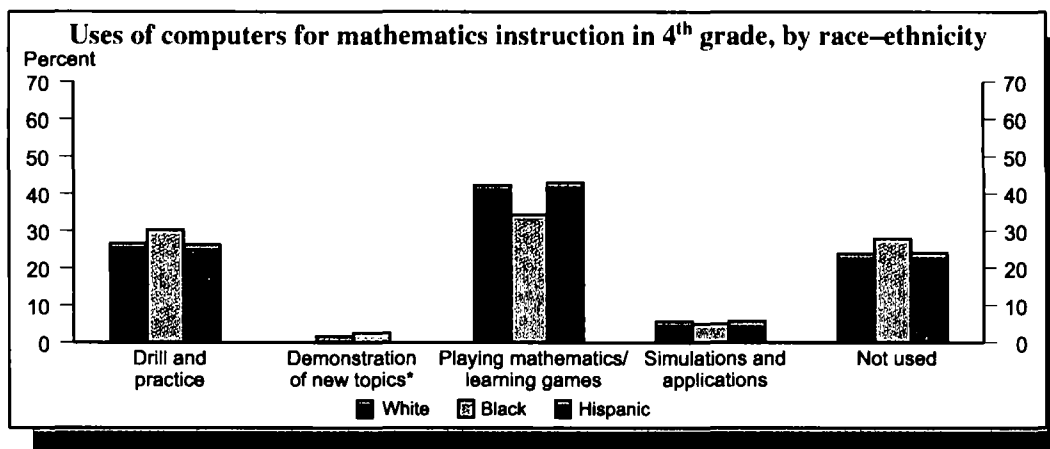
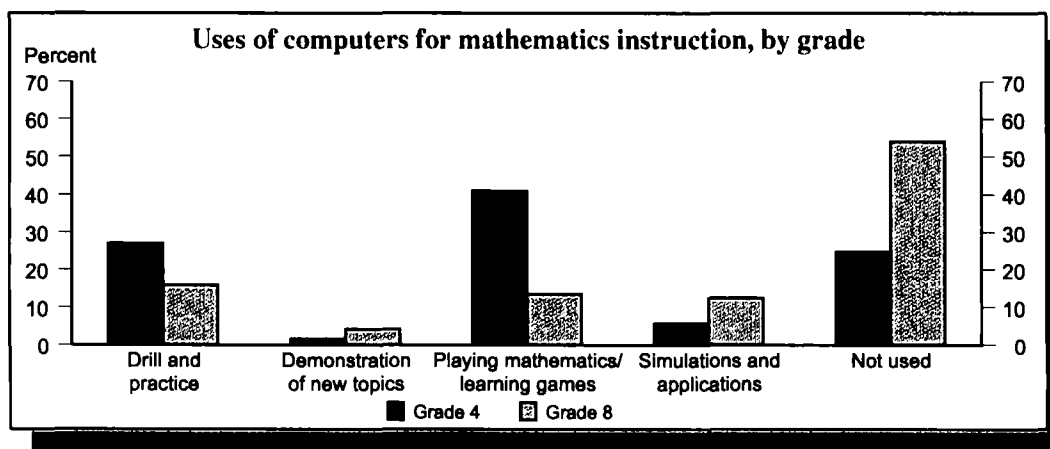
Selected student characteristics	Grade 4					Grade 8				
	Drill and practice	Demonstration of new topics	Playing math/learning games	Simulations and applications	Not used	Drill and practice	Demonstration of new topics	Playing math/learning games	Simulations and applications	Not used
Total	27.0	1.6	41.0	5.7	24.7	15.8	4.2	13.4	12.5	54.1
Sex										
Male	27.7	2.1	40.3	5.2	24.7	16.4	4.4	13.4	13.0	52.8
Female	26.3	1.1	41.8	6.1	24.7	15.0	4.1	13.4	11.9	55.6
Race-ethnicity										
White	26.6	1.6	42.3	5.7	23.8	14.1	5.2	12.4	13.9	54.5
Black	30.2	2.5	34.4	5.0	27.9	25.9	2.0	15.6	6.8	49.7
Hispanic	26.2	1.1	43.0	5.7	24.0	13.9	2.2	14.9	10.2	58.8
Title I participation*										
Participated	32.2	1.2	34.6	8.2	23.8	20.6	11.0	21.6	7.7	39.1
Did not participate	25.7	1.7	42.7	5.0	24.9	15.1	3.4	12.4	13.1	56.0

* Indicates that student receives benefits through participation in schoolwide Title I programs.

NOTE: Details may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, 1996 Summary Data Tables: Teacher Reports for Mathematics and Science, 1998.

Uses of computers for mathematics instruction



* Percentage for demonstration of new topics for Hispanic students is 1 percent; therefore, the percentage is not discernable in the graph.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, 1996 Summary Data Tables: Teacher Reports for Mathematics and Science, 1998.

Inclusion of students with disabilities in the least restrictive environment

The 1997 amendments to the Individuals with Disabilities Education Act (IDEA) placed renewed emphasis on educating students with disabilities in less restrictive environments. In particular, the law encourages opportunities for children with disabilities to participate in general education settings and in the general education curriculum. Inclusion of children with disabilities in such settings is important because it raises expectations for student performance, provides opportunities for children with disabilities to learn alongside their nondisabled peers, improves coordination between regular and special educators, and increases school-level accountability for educational results.

- Between and 1986 and 1996, the percentage of children ages 6–21 with disabilities who were educated in regular classrooms increased substantially. For example, the percentage served in regular classrooms increased by nearly 20 percentage points, while the percentage served in resource rooms, separate classes, and separate residential facilities decreased.
- The types of environments in which children with disabilities are educated and the extent to which their educational environments have changed over time vary greatly by disability type. For example, in the 1995–96 academic year, about 89 percent of children with speech or language impairments were educated in regular classrooms, compared with about 10 percent of those with mental retardation. In addition, children with specific learning disabilities experienced the greatest increase in service in regular classrooms (27 percentage points), and those with deaf-blindness experienced the smallest increase (4 percentage points; see supplemental table 20-1).
- There has been a general downward trend in the percentage of children with disabilities who were educated in resource rooms and separate classes, but this pattern does not hold true for children with all disability types. Among children in 8 of the 12 disability categories, where disabilities tend to be more severe, placements in either resource rooms, separate classes, or both increased between 1985–86 and 1995–96 (between 1991–92 and 1995–96 for autism and traumatic brain injury). Even so, children in many of these 8 disability categories show relatively high decreases in placement in separate facilities (see supplemental table 20-1).

Percentage distribution of students with disabilities ages 6–21* according to the educational environments in which they were educated: Academic years ending 1986–96

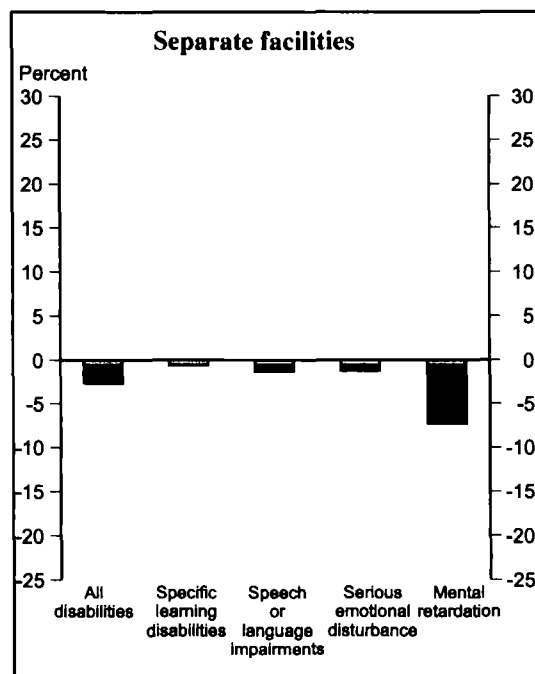
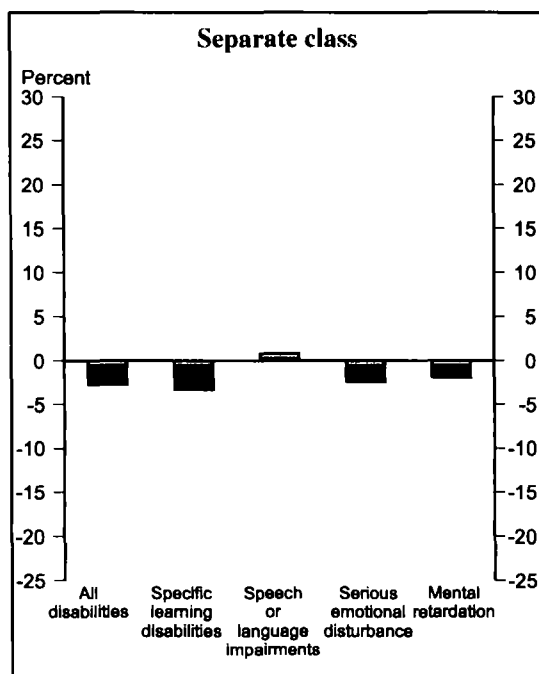
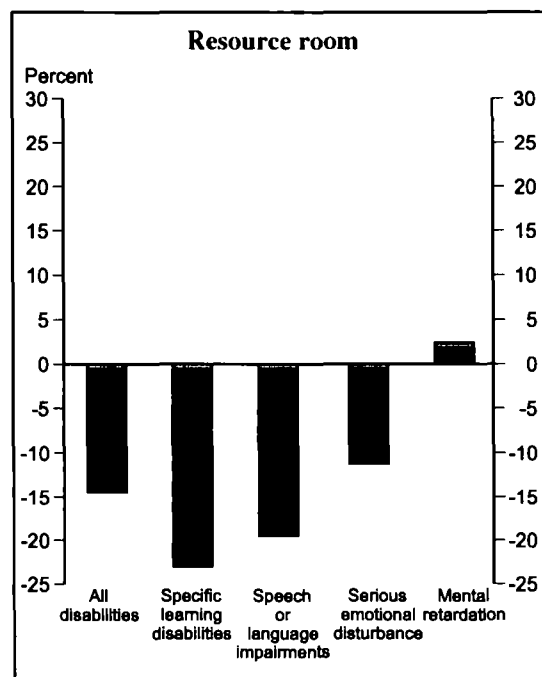
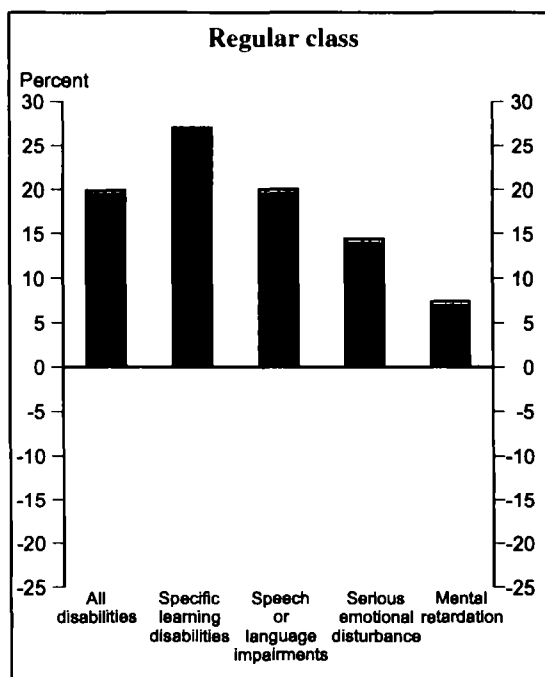
Educational environment	Academic year ending											Percentage point change
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
Regular class	25.5	26.4	28.9	30.5	31.5	32.8	34.9	39.8	43.4	44.5	45.4	19.9
Resource room	43.1	42.7	40.0	39.0	37.6	36.5	36.3	31.7	29.5	28.8	28.7	-14.4
Separate class	24.4	24.9	24.7	24.3	24.9	25.1	23.5	23.4	22.7	22.4	21.7	-2.7
Separate facilities	6.9	6.1	6.4	6.2	6.1	5.6	5.3	5.1	4.4	4.3	4.3	-2.6

* Based on the number of students served under Part B of the Individuals with Disabilities Education Act (IDEA) in the United States and outlying areas.

NOTE: See the supplemental note to this indicator for definitions of the different educational environments and disability types. Details may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act, 1988–1998*.

Percentage point change between the 1985-86 and 1995-96 academic years of students ages 6-21* with disabilities educated in various educational environments, by selected disability types



* Based on the number of students served under Part B of the Individuals with Disabilities Education Act (IDEA) in the United States and outlying areas.

NOTE: See the supplemental note to this indicator for definitions of the different educational environments and disability types.

SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act, 1988-1998*.

Reading and writing habits of students outside of school

Research has shown that reading ability is positively correlated with the extent to which students read recreationally. Educators are increasingly encouraging their students to read and write on their own, outside of school. Changes in the frequency with which students read and write independently, as well as in the types of materials students read and write, indicate the degree to which recreational activities related to education are supported outside of the classroom.

- Independent reading and writing habits of students have remained relatively stable across all age groups since 1984, with few exceptions. For example, although the percentage of students writing in journals or writing notes or messages outside of school at least once a week has remained nearly constant over the years, more 8th-grade students and 11th-grade students reported writing stories outside of school at least once a week in 1996 than in 1984; more 8th-grade students reported writing letters outside of school at least once a week. The percentage of 17-year-olds who reported reading for fun almost every day decreased.
- Between 1984 and 1996, a greater percentage of 9-year-olds than 13- and 17-year-olds reported reading for fun almost every day. In addition, 4th-grade students were more likely than 8th- or 11th-grade students to report that they wrote stories outside of class at least once a week.
- In 1996, 9-, 13-, and 17-year-old students who reported reading for fun almost every day had higher average reading proficiency scores than students who reported never or hardly ever reading for fun (see supplemental table 21-1).
- In 1996, the types of materials students read on their own and at school varied across age groups. For example, 17-year-olds were more likely than 9-year-olds to have read newspapers or magazines on their own, yet were equally likely to have last read newspapers or magazines at school. Of students who reported most recently having read a story or novel, 17-year-olds were more likely than 9-year-olds to have last read a story or novel at school but less likely to have last read a story or novel on their own (see supplemental table 21-2).

Percentage of students who wrote outside of class at least once a week, by grade and writing habit: 1984-96

Writing habit	Grade 4						Grade 8						Grade 11					
	1984	1988	1990	1992	1994	1996	1984	1988	1990	1992	1994	1996	1984	1988	1990	1992	1994	1996
Keep a diary/journal	—	—	—	—	—	—	25.9	28.6	30.9	29.8	32.8	31.3	19.0	22.2	21.3	22.5	27.0	24.2
Write for school paper	—	—	—	—	—	—	8.0	8.1	9.2	11.1	10.2	8.7	5.3	4.8	7.1	5.7	8.5	7.0
Write letters to relatives	32.5	32.3	36.5	33.6	34.9	35.4	37.3	41.9	47.2	45.8	45.1	45.9	36.2	43.9	38.5	38.0	38.1	35.6
Write notes or messages	43.7	44.7	45.9	45.4	43.9	43.1	67.9	70.8	73.5	72.5	71.5	71.7	73.7	81.5	78.2	78.9	77.2	76.9
Write stories	25.9	24.2	25.6	28.8	25.5	26.8	10.2	15.3	14.3	16.8	18.0	18.8	11.7	15.3	14.2	15.8	15.9	19.1

Percentage distribution of students according to frequency of reading for fun, by age: 1984-96

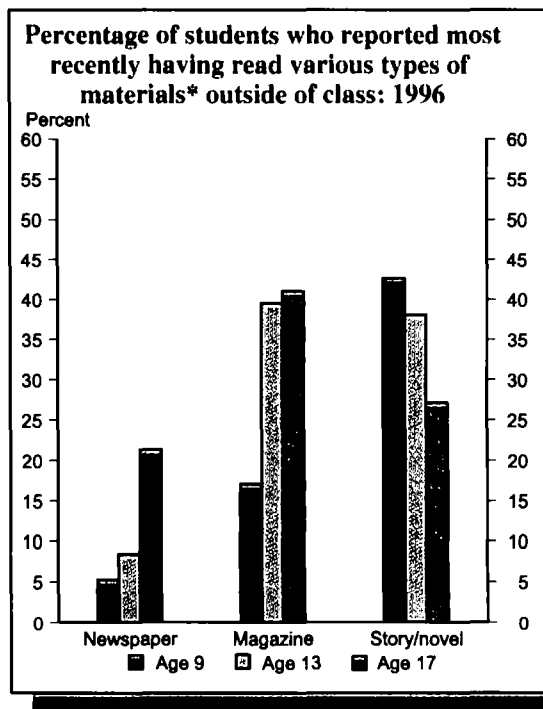
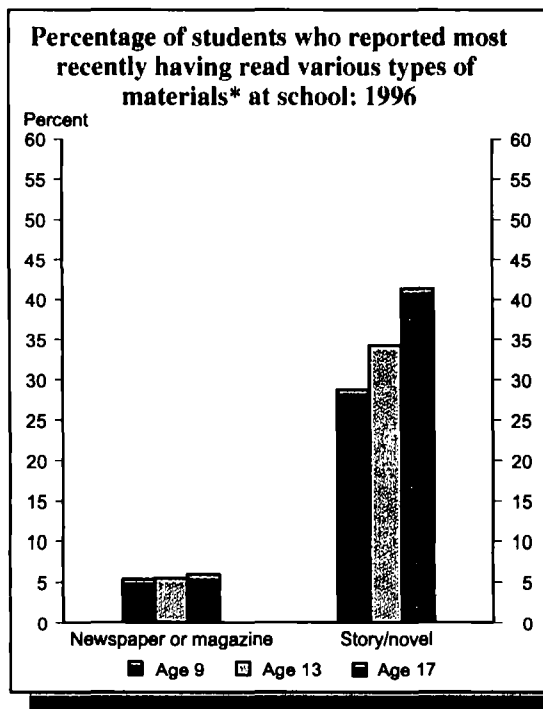
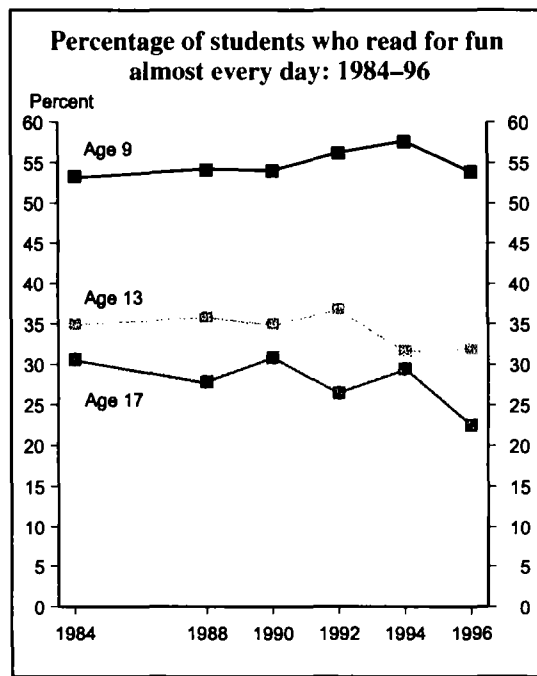
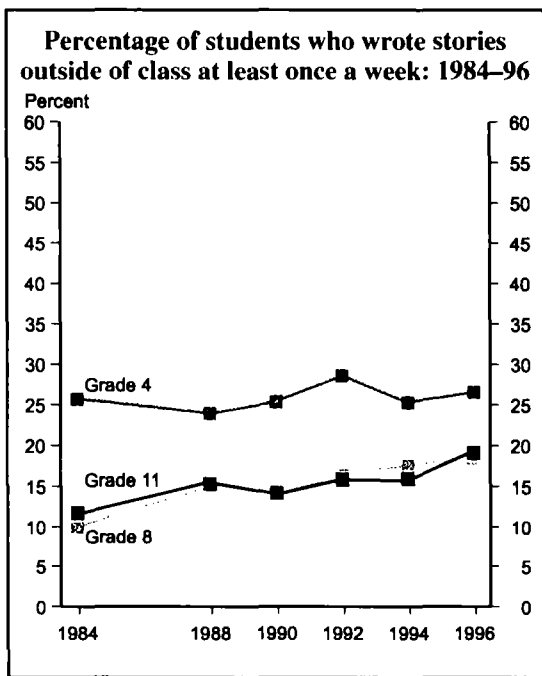
Frequency	Age 9						Age 13						Age 17					
	1984	1988	1990	1992	1994	1996	1984	1988	1990	1992	1994	1996	1984	1988	1990	1992	1994	1996
Almost every day	53.3	54.1	54.0	56.2	57.6	53.9	35.1	36.0	35.2	37.0	31.9	32.1	30.8	28.1	31.1	26.7	29.7	22.8
1-2 times a week	27.7	26.1	25.2	28.0	25.1	26.9	35.1	31.3	31.9	32.4	32.4	31.0	33.5	32.1	31.4	32.9	31.4	31.7
1-2 times a month	7.1	6.9	5.7	5.8	5.3	7.9	14.2	15.3	13.4	12.8	13.9	15.2	16.7	20.8	15.5	17.8	15.3	17.1
Few times a year	3.0	3.8	3.5	3.2	3.0	3.1	7.2	7.7	8.8	8.4	9.9	9.1	10.3	10.1	11.8	11.9	11.9	12.2
Never/hardly ever	8.9	9.1	11.6	6.8	9.0	8.2	8.5	9.7	10.8	9.5	11.8	12.6	8.7	8.9	10.2	10.7	11.7	16.1

— Not available.

NOTE: In the first table details may not add to 100.0 because each writing habit was a separate survey question. In the second table details may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, *Almanac: Reading 1984 to 1996, Writing 1984 to 1996*, 1998.

Reading and writing habits of students outside of school



* Based on last type of material read.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, *Almanac: Reading 1984 to 1996, Writing 1984 to 1996, 1998*.

Requirements in teacher hiring

Concerns about the quality of education in the United States have focused interest on teacher qualifications and student exposure to well-qualified teachers. Following state requirements, school districts rely on teacher credentials, such as state certification or teachers' performance on national, state, or local tests, when considering teacher applicants. In most cases, these state requirements are minimums, which the districts may exceed. Examining trends in the requirements employed by public school districts provides information about the qualifications of teachers who are hired to teach in the Nation's schools.

- In 1987–88, 1990–91, and 1993–94, when considering applicants for teaching positions, public school districts were more likely to require applicants to hold credentials (e.g., full standard state certification) or other qualifications (e.g., college major or minor in field to be taught) than to pass tests. However, more public school districts required teacher applicants to have passed state tests of basic skills and subject knowledge and the National Teachers Examination (NTE) in 1993–94 than in 1987–88.
- Public school districts with a minority enrollment of less than 5 percent were more likely than districts with a minority enrollment of 50 percent or more to require teacher applicants to have full standard state certification or a college major or minor in the field to be taught in 1993–94. Conversely, districts with a low percentage of minority enrollment were less likely than districts with a minority enrollment of 50 percent or more to require teacher applicants to pass a state test of basic skills or subject knowledge (see supplemental table 22-1).
- Hiring requirements varied by region of the country. For example, public school districts in the Northeast were more likely to require full standard state certification and passage of the NTE than were districts in the Midwest, South, and West (see supplemental table 22-2).

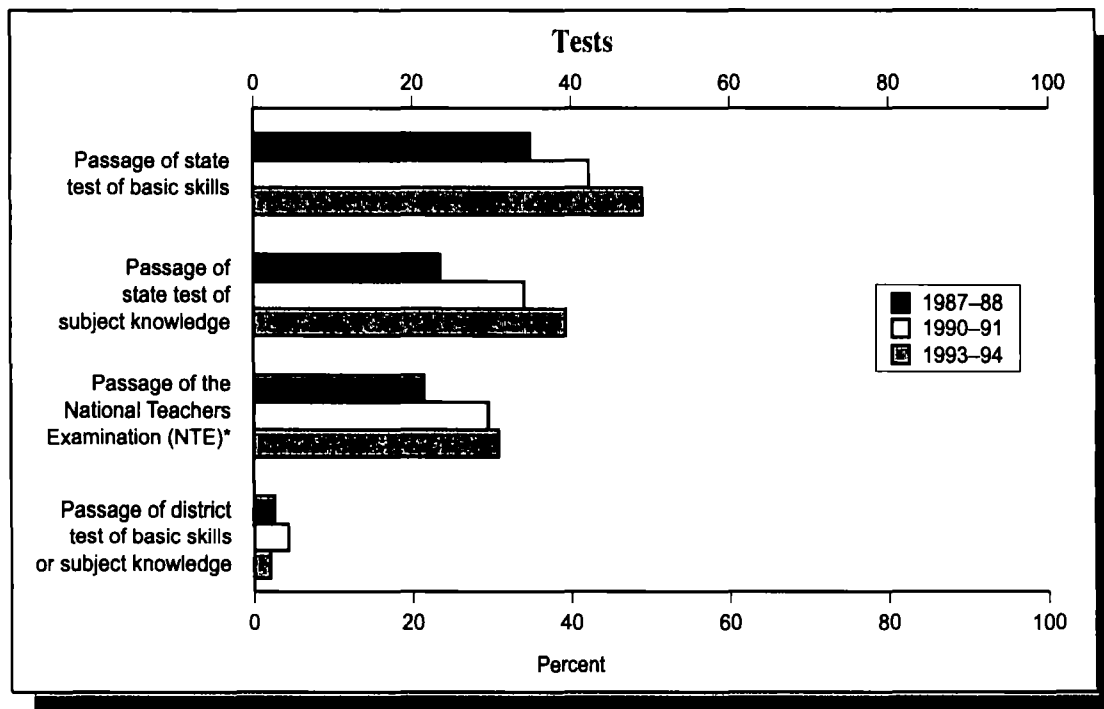
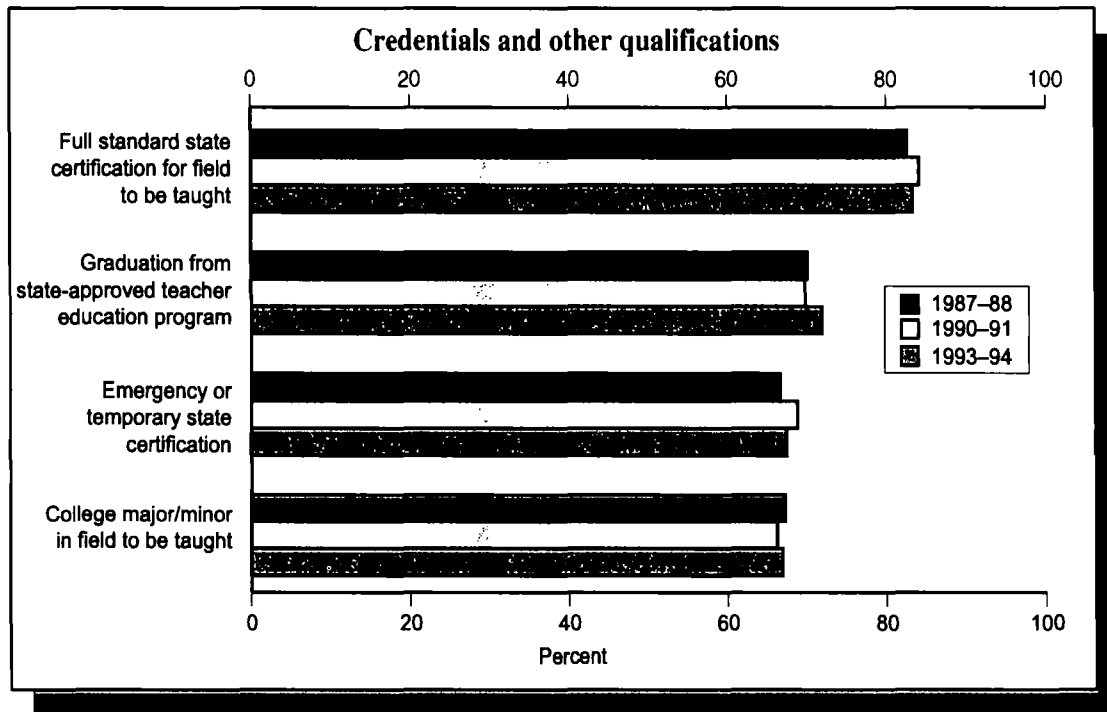
Percentage of public school districts with various requirements for teacher applicants, by type of requirement: School years 1987–88, 1990–91, and 1993–94

Requirements in teacher hiring	1987–88	1990–91	1993–94
Full standard state certification for field to be taught	82.6	84.1	83.3
Graduation from state-approved teacher education program	70.1	69.8	71.9
Emergency or temporary state certification	66.6	68.8	67.4
College major/minor in field to be taught	67.2	66.2	66.9
Passage of state test of basic skills	34.9	42.3	49.0
Passage of state test of subject knowledge	23.5	34.1	39.3
Passage of the National Teachers Examination (NTE)*	21.4	29.5	30.8
Passage of district test of basic skills or subject knowledge	2.6	4.3	2.0

* In 1993–94 only, districts indicated whether they required the NTE Core Battery and/or the Professional Specialty Area. Districts were counted as requiring the NTE if they checked either response option. In other years, districts indicated only whether they required the NTE Core Battery.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88, 1990–91, and 1993–94 (Teacher Demand and Shortage Questionnaire for Public School Districts).

**Percentage of public school districts requiring various credentials, qualifications, and the passage of various tests when considering teacher applicants:
School years 1987-88, 1990-91, and 1993-94**



* In 1993-94 only, districts indicated whether they required the NTE Core Battery and/or the Professional Specialty Area. Districts were counted as requiring the NTE if they checked either response option. In other years, districts indicated only whether they required the NTE Core Battery.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88, 1990-91, and 1993-94 (Teacher Demand and Shortage Questionnaire for Public School Districts).

Teachers' feelings of preparedness

Reform initiatives, new technologies, and changing student populations have required teachers to learn new ways of presenting material and managing their classrooms. Teachers' initial professional training may not have prepared them adequately to meet current expectations, so continuing professional development is important. Teachers' self-assessments provide one indication of the extent to which preservice and on-the-job learning prepare them to meet the new demands.

- In 1998, the majority of public school teachers (71 percent) felt that they were very well prepared to maintain order and discipline in their classrooms.
- Fewer teachers felt that they were very well prepared to meet certain instructional requirements, including implementing new teaching methods (41 percent), implementing state or district curriculum and performance standards (36 percent), or using student performance assessment techniques (28 percent).
- Teachers were least likely to report that they felt very well prepared to integrate educational technology into their teaching methods (20 percent), or to address the needs of students with disabilities (21 percent) or of students with limited English proficiency or from diverse cultural backgrounds (20 percent).
- Teachers who spent more than 8 hours in professional development in the content area of a specific activity in the previous 12 months were generally more likely than other teachers to feel very well prepared in that area. The exception was the area in which teachers felt most prepared: maintaining order and discipline in the classroom.

Percentage distribution of public school teachers according to how well prepared they felt to perform various activities in the classroom, and the percentage of teachers who felt very well prepared, according to the number of hours spent in professional development in that content area in the last 12 months, by activity: 1998

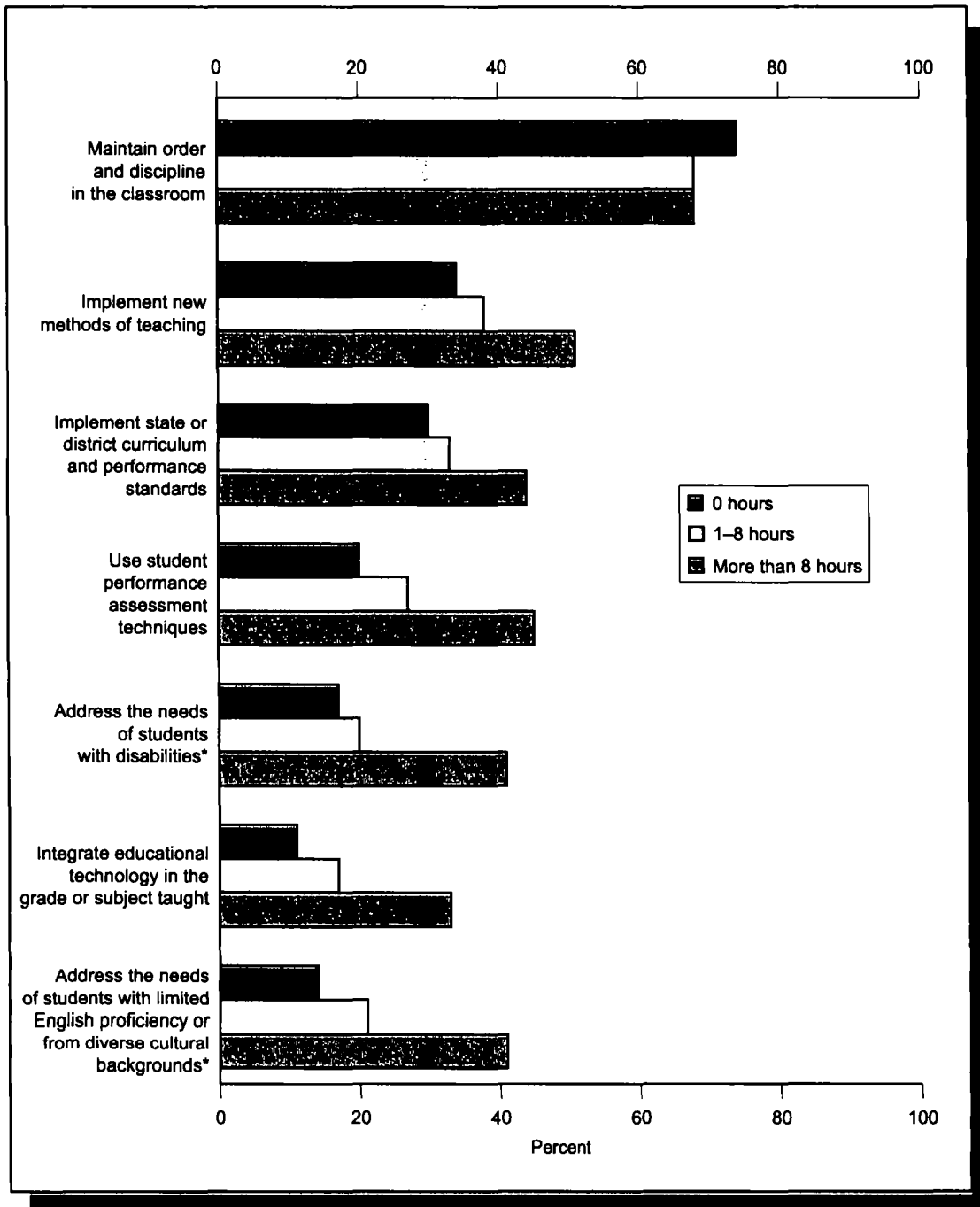
Activity	How well prepared teachers felt				Very well prepared		
	Very well prepared	Moderately well prepared	Somewhat well prepared	Not at all prepared	Hours of professional development		
					0 hours	1-8 hours	More than 8 hours
Maintain order and discipline in the classroom	71	24	4	1	74	68	68
Implement new methods of teaching (e.g., cooperative learning)	41	41	16	2	34	38	51
Implement state or district curriculum and performance standards	36	41	20	3	30	33	44
Use student performance assessment techniques (e.g., methods of testing, applying results to modify instruction)	28	41	26	4	20	27	45
Address the needs of students with disabilities*	21	41	30	7	17	20	41
Integrate educational technology in the grade or subject taught	20	37	34	9	11	17	33
Address the needs of students with limited English proficiency or from diverse cultural backgrounds*	20	33	30	17	14	21	41

* Percentages based on teachers who teach such students.

NOTE: Details may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Teacher Survey on Professional Development and Training, 1998.

Percentage of public school teachers who felt they were very well prepared to perform various activities in the classroom, according to the number of hours spent in professional development in that content area, in the last 12 months, by activity: 1998



* Percentages based on teachers who teach such students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Teacher Survey on Professional Development and Training, 1998.

Teachers' participation in collaborative activities

Teachers can improve their teaching practices by engaging in frequent and planned collaborative activities with other teachers. Such activities can include team teaching, mentoring, formal planning meetings, and research projects. In the larger teaching community, collaborative activities might include school-university partnerships, teacher networks, or task forces organized around subject matter, pedagogical issues, or school reform.

- In 1998, 81 percent of teachers reported participating in regularly scheduled collaboration with other teachers at least a few times in the previous 12 months. The next most common activities were engaging in a common planning period for team teachers (62 percent) and networking with teachers outside their school (61 percent). Conducting individual or collaborative research on a topic of interest professionally (53 percent) was next. Teachers were least likely to have been involved in mentoring activities, either mentoring another teacher (26 percent) or being mentored (19 percent; see supplemental table 24-1).
- Of particular importance is the effect that participation in collaborative activities has on teaching practice. Seventy percent of teachers who were

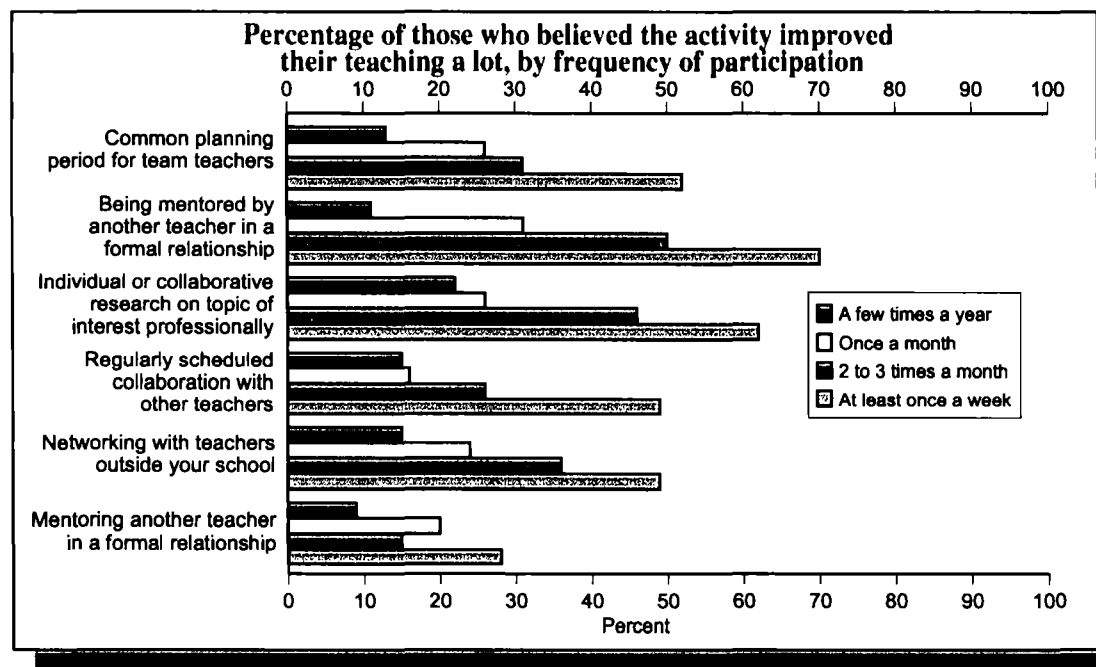
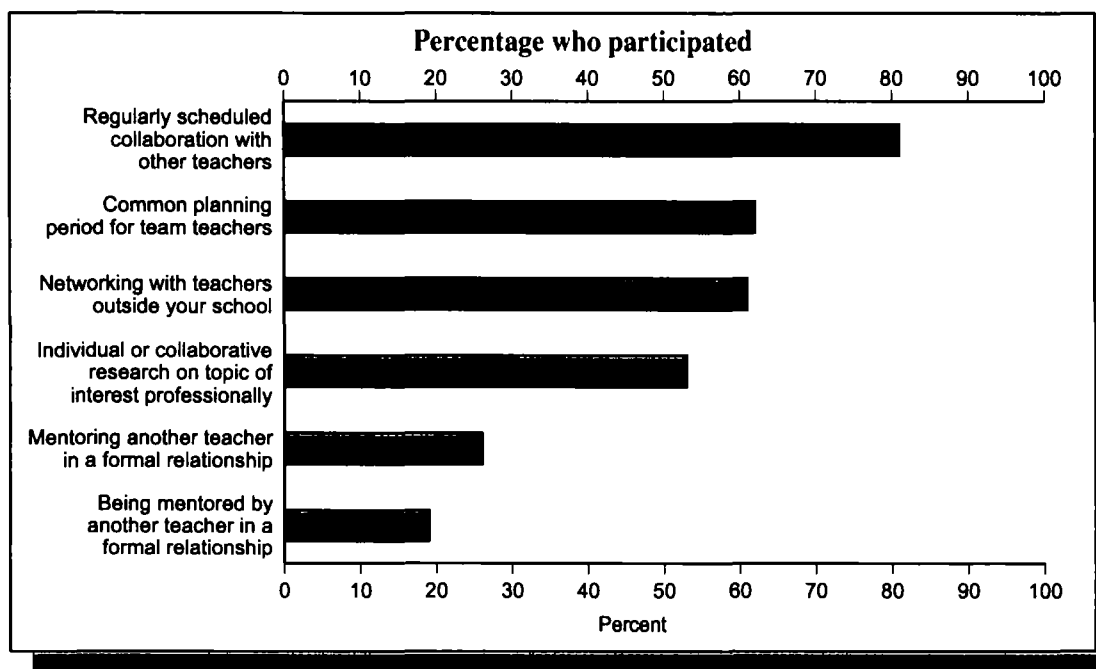
mentored by another teacher at least once a week reported that this activity helped them a lot. A clear relationship exists between the amount of time teachers engage in collaborative activities and the extent to which they believe the activities improve their teaching a lot. With the exception of mentoring another teacher, about half or more of the teachers who had participated in these activities at least once a week during the previous 12 months believed that this participation improved their teaching a lot. In contrast, those who had participated once a month or less were less likely to hold this belief (again with the exception of mentoring another teacher).

Percentage of public school teachers who participated in various collaborative activities in the past 12 months who believed the activity improved their teaching a lot, by frequency of participation: 1998

Activity	Total	Frequency of participation			
		A few times a year	Once a month	2 to 3 times a month	At least once a week
Common planning period for team teachers	40	13	26	31	52
Being mentored by another teacher in a formal relationship	34	11	31	50	70
Individual or collaborative research on topic of interest professionally	34	22	26	46	62
Regularly scheduled collaboration with other teachers	29	15	16	26	49
Networking with teachers outside your school	23	15	24	36	49
Mentoring another teacher in a formal relationship	19	9	20	15	28

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Teacher Survey on Professional Development and Training, 1998.

Percentage of public school teachers who had participated in various collaborative activities in the past 12 months and the perceived effect: 1998



SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Teacher Survey on Professional Development and Training, 1998.

Salaries of teachers

Attracting and retaining quality teachers are growing concerns among education officials and the public. This is especially true for beginning teachers as school districts compete with each other and other industries for additional teaching personnel to cope with growing enrollments and an aging work force of experienced teachers who are nearing retirement. Increased salaries potentially provide a means of attracting and retaining the increased numbers of quality young teachers who will be needed in the years ahead.

- As a wave of younger teachers hired in the mid-1970s has aged, a demographic shift in the age of teachers has occurred. For example, in 1975, 53 percent of all full-time teachers were younger than age 35; in 1993, the percentage of younger teachers fell to about 23 percent. Meanwhile, the percentage of full-time teachers 45 years old or older increased from about 26 percent in 1975 to 43 percent in 1993.
- The annual median salaries (in constant 1998 dollars) of full-time teachers decreased between 1971 and 1981 by about \$500–700 annually in each age group.
- Between 1981 and 1989, the salaries of teachers rose. For the oldest group of teachers, salaries rose by about \$1,100 per year, on average, while for the middle and youngest age groups, salaries increase by smaller amounts.
- Since 1989, the salaries of the oldest and youngest groups of teachers have remained about the same, while the salaries of the middle age group (between ages 35 and 44) have declined by about \$400 per year, on average (in constant 1998 dollars).
- The difference between the annual median salaries of bachelor's degree recipients and all teachers declined from about \$5,000 in 1981 to \$2,300 in 1998. This decline in the salary gap has been due mainly to increases in the relative size of the older teaching work force and in the salaries of teachers ages 45 or older.

Percentage distribution and annual median salaries (in constant 1998 dollars) of full-time elementary and secondary school teachers, by age: 1971–98

Year	All elementary and secondary school teachers			Annual median salaries in constant 1998 dollars					Bachelor's degree recipients*
	Age			Total	Age				
	Less than 35	35-44	45 or older		Less than 35	35-44	45 or older		
1971	46.4	18.1	35.5	\$34,113	\$31,042	\$37,522	\$37,369	\$39,736	
1973	47.7	20.6	31.7	34,138	31,102	38,690	37,758	39,740	
1975	53.1	21.2	25.7	31,581	28,361	37,070	35,106	35,541	
1977	49.9	24.4	25.8	32,003	28,781	36,113	37,135	37,030	
1979	48.0	25.2	26.8	30,061	26,899	32,508	35,204	35,283	
1981	39.7	30.4	30.0	28,576	24,681	31,169	31,099	33,584	
1983	36.8	32.0	31.2	31,122	25,589	33,716	35,867	34,464	
1985	29.7	37.3	33.0	33,188	26,453	34,660	38,026	35,954	
1987	28.1	40.8	31.2	34,893	29,327	37,039	38,842	37,714	
1989	25.8	39.5	34.6	34,668	27,543	35,860	40,341	36,923	
1991	25.1	38.2	36.6	34,322	28,477	34,562	39,738	36,924	
1993	22.7	34.3	43.0	34,947	29,249	33,716	41,103	36,585	
1995	24.2	30.7	45.1	35,134	28,709	33,978	39,759	37,817	
1997	27.3	25.8	46.9	32,295	27,121	31,273	38,406	36,740	
1998	26.7	25.5	47.8	35,099	29,119	33,105	41,661	37,399	

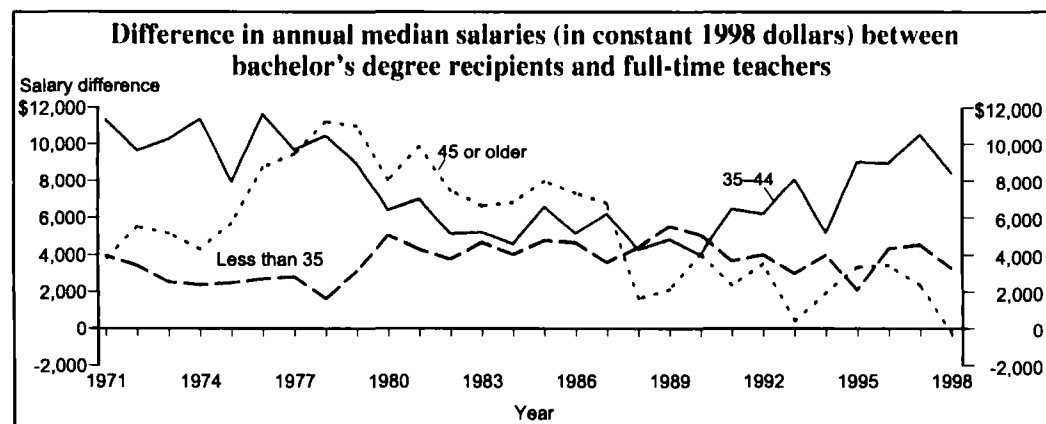
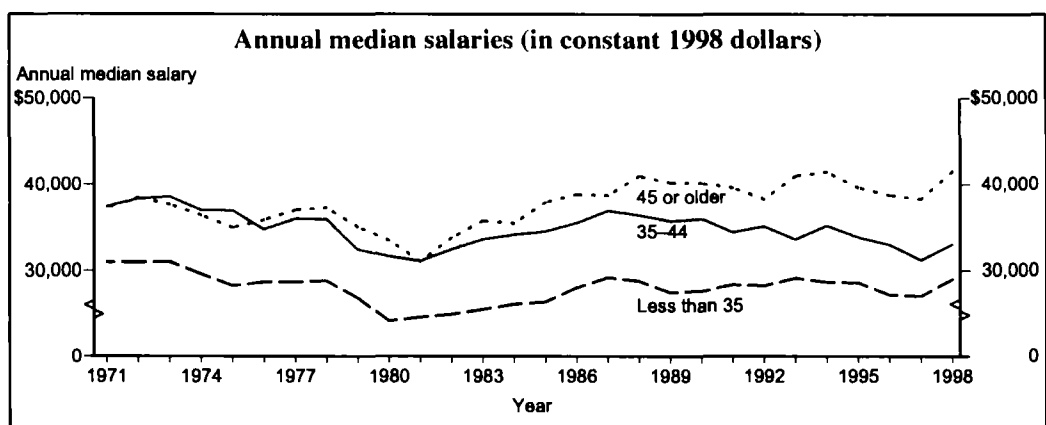
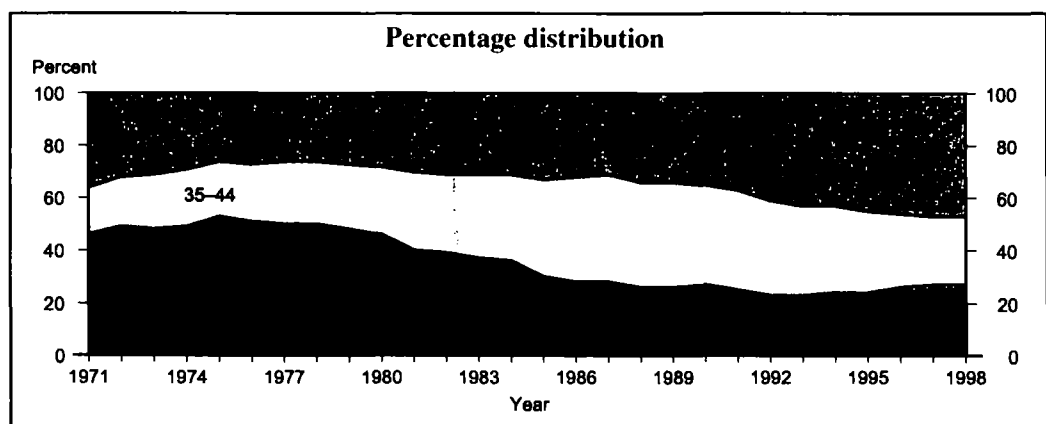
* Includes full-time employed bachelor's degree recipients only.

NOTE: Median salaries refer to the previous calendar year; for example, salaries reported in 1971 refer to salaries earned in 1970. The Consumer Price Index (CPI) was used to calculate constant

dollars. Includes full-time public and private school teachers who taught grades 1–12. Details may not add to 100.0 due to rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Percentage distribution and annual median salaries of full-time elementary and secondary teachers, by age: 1971-98



NOTE: Median salaries refer to the previous calendar year; for example, salaries reported in 1971 refer to salaries earned in 1970. The Consumer Price Index (CPI) was used to calculate constant dollars. Includes full-time public and private school teachers who taught grades 1-12.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Student victimization at school

Violence in schools makes teaching difficult and inhibits student learning. In addition, unsafe school environments expose students who may already be at risk for school failure to other failure-related factors such as physical and emotional harm. In recent years, educators, parents, and policymakers have voiced growing concern about possible increases in the incidence of school-related criminal behavior. Studying trends in victimization rates provides a picture of the safety of today's schools.

- Victimization rates at school for high school seniors changed little between 1976 and 1997. The most common type of victimization at school in the previous 12 months reported by high school seniors in 1997 was having something stolen (39 percent).
- In 1997, there were no differences in reported victimization rates at school in the previous 12 months for white and black high school seniors (see supplemental table 26-1).
- In 1997, high school seniors from metropolitan and nonmetropolitan areas were about equally likely to report being victimized at school in the previous 12 months (see supplemental table 26-2).
- High school seniors in 1997 were more likely to report being threatened at school without a weapon than being threatened with a weapon during the previous 12 months (21 versus 11 percent). Similarly, high school seniors in 1997 were more likely to report being injured at school without a weapon than being injured with a weapon during the previous 12 months (12 versus 5 percent).

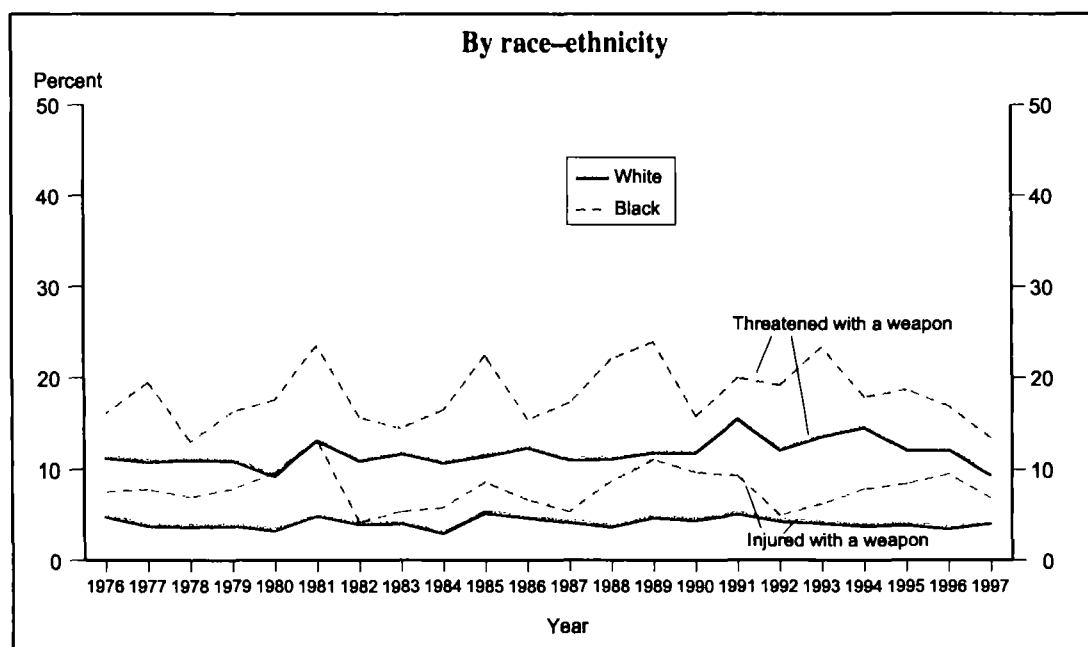
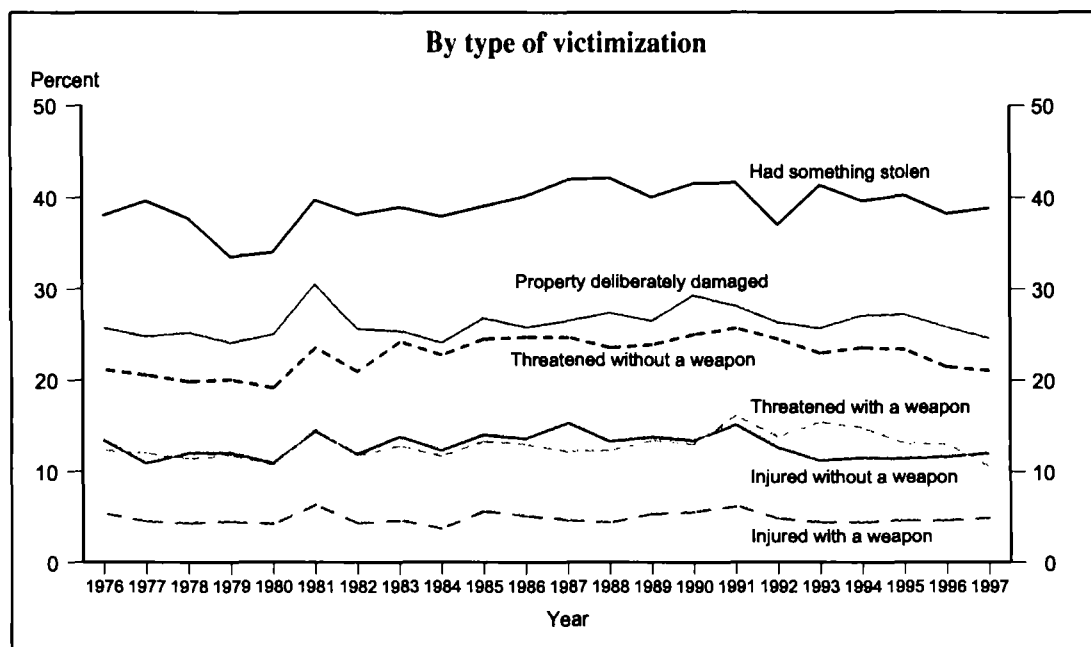
Percentage of high school seniors who reported being victimized at school during the previous 12 months, by type of victimization: 1976-97

Year	Had something stolen	Property deliberately damaged	Injured with a weapon	Threatened with a weapon	Injured without a weapon	Threatened without a weapon
1976	38.1	25.8	5.7	12.5	13.6	21.3
1977	39.7	24.9	4.8	12.2	11.1	20.7
1978	37.8	25.3	4.6	11.6	12.2	20.0
1979	33.6	24.2	4.8	11.9	12.2	20.2
1980	34.1	25.1	4.5	10.9	11.1	19.3
1981	39.8	30.6	6.6	14.8	14.6	23.7
1982	38.2	25.7	4.6	11.9	12.1	21.1
1983	39.0	25.5	4.9	13.0	14.0	24.3
1984	38.0	24.2	4.0	11.9	12.5	22.9
1985	39.1	26.9	5.9	13.5	14.2	24.6
1986	40.2	25.9	5.4	13.2	13.8	24.8
1987	42.0	26.6	4.9	12.4	15.5	24.8
1988	42.2	27.5	4.7	12.5	13.5	23.7
1989	40.1	26.6	5.6	13.6	14.0	24.0
1990	41.6	29.4	5.8	13.2	13.6	25.1
1991	41.7	28.3	6.5	16.3	15.3	25.8
1992	37.1	26.4	5.1	14.0	12.8	24.6
1993	41.4	25.8	4.7	15.6	11.4	23.1
1994	39.7	27.2	4.7	15.0	11.7	23.7
1995	40.3	27.3	4.9	13.3	11.6	23.5
1996	38.3	25.9	4.9	13.2	11.8	21.6
1997	38.9	24.7	5.2	10.8	12.2	21.2

NOTE: Estimates were tabulated using restricted-use files. Response rates for this survey do not meet NCES standards.

SOURCE: University of Michigan, Survey Research Center, Institute for Social Research, Monitoring the Future Study.

Percentage of high school seniors who reported being victimized at school during the previous 12 months: 1976-97



NOTE: Estimates were tabulated using restricted-use files. Response rates for this survey do not meet NCES standards.

SOURCE: University of Michigan, Survey Research Center, Institute for Social Research, Monitoring the Future Study.

Student alcohol and drug use

Alcohol and drug use can interfere with a student's ability to concentrate, reduce a student's academic achievement, and in some cases is associated with violent crime. Therefore, it is important for educators and administrators to determine the extent of student alcohol and drug use and how this use affects the school's goal of providing a safe and effective learning environment. The percentage of students who report alcohol and drug use is an indicator of a safe and effective learning environment.

- Between 1976 and 1998, the percentage of high school seniors who reported using alcohol, marijuana, stimulants, cocaine, or tranquilizers at school during the previous year decreased. For example, the percentage of seniors in 1998 who reported using marijuana at school during the previous year was less than half the percentage who reported doing so in 1976 (8 versus 21 percent).
- The percentage of high school seniors who reported using drugs or alcohol at any time during the previous year also decreased between 1975 and 1998. However, after reaching its lowest point in the early 1990s, drug use at any time during the previous year by high school seniors began to increase again for most drugs. For example, the percentage of seniors who reported using marijuana at any time during the previous year increased from 22 percent in 1992 to 38 percent in 1998 (see supplemental table 27-1).
- Between 1991 and 1998, the percentage of 8th-, 10th-, and 12th-graders who reported using marijuana, smoking cigarettes, or using any illicit drug other than marijuana in the previous 30 days increased (see supplemental table 27-2).
- In 1998, more 8th-, 10th-, and 12th-graders reported that it would be "fairly easy" or "very easy" to obtain marijuana than did their counterparts in 1992 (see supplemental table 27-3).

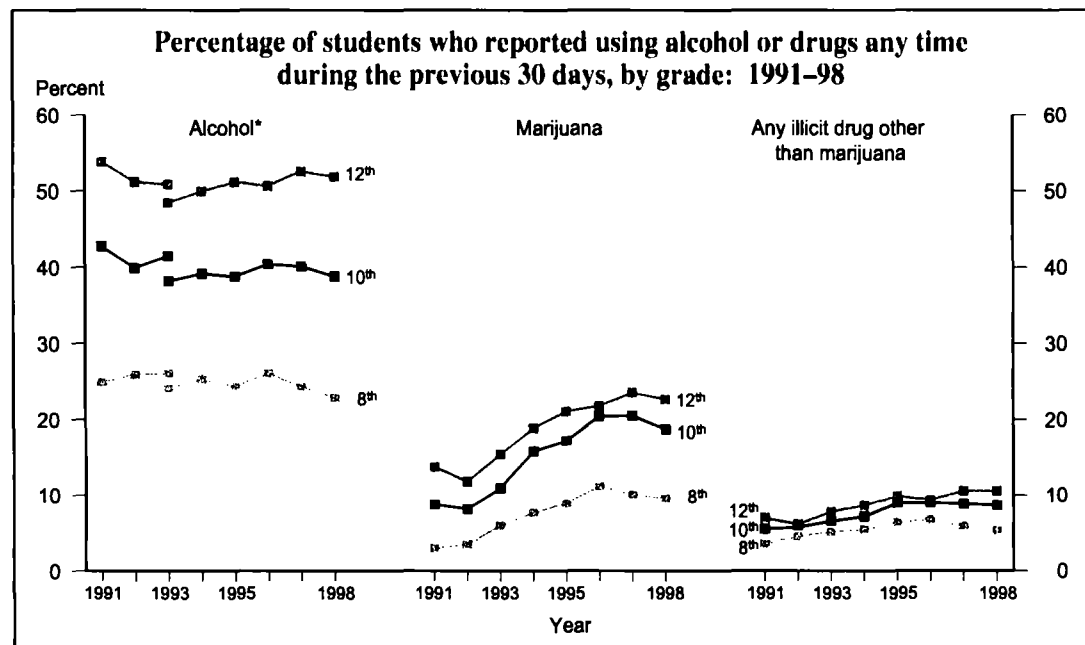
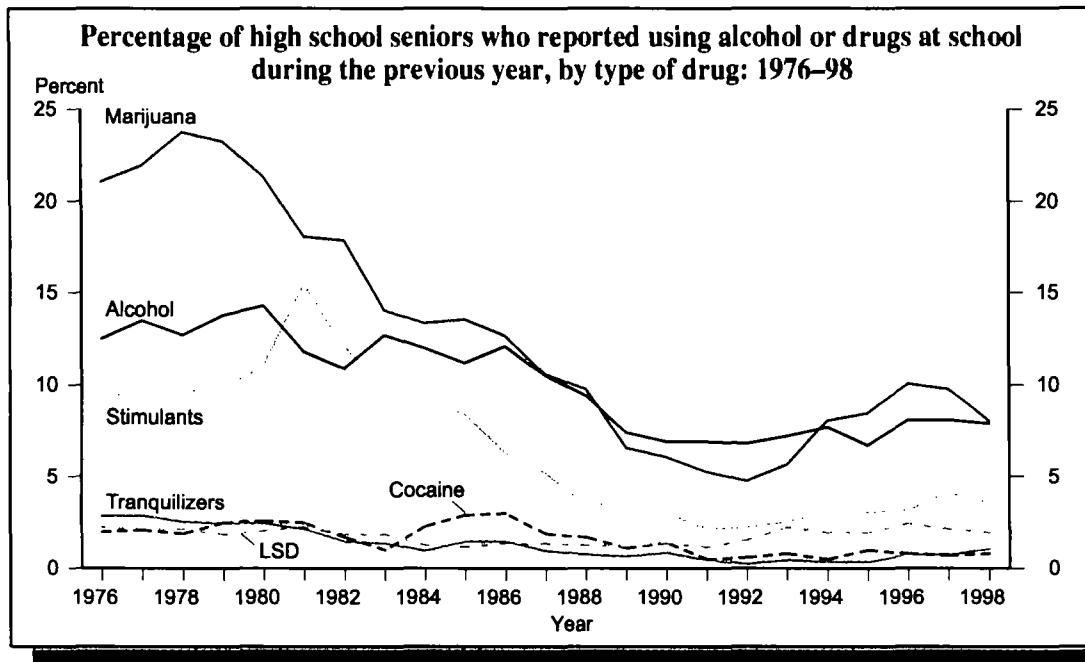
Percentage of high school seniors who reported using alcohol or drugs at school during the previous year, by type of drug: 1976-98

Type of drug	1976	1978	1980	1982	1984	1986	1988	1990	1991	1992	1993	1994	1995	1996	1997	1998
Alcohol	12.5	12.7	14.3	10.9	12.0	12.1	9.4	6.9	6.9	6.8	7.2	7.7	6.7	8.1	8.1	7.9
Marijuana	21.1	23.8	21.4	17.9	13.4	12.7	9.8	6.1	5.3	4.8	5.7	8.1	8.5	10.1	9.8	8.1
LSD	2.3	2.2	2.1	1.9	1.3	1.4	1.3	1.4	1.2	1.6	2.3	2.0	2.0	2.5	2.2	2.0
Stimulants	9.0	9.7	11.1	12.1	9.4	6.3	3.5	3.1	2.2	2.3	2.6	3.0	3.1	3.2	4.2	3.6
Cocaine	2.0	1.9	2.6	1.7	2.3	3.0	1.7	1.4	0.5	0.6	0.8	0.5	1.0	0.8	0.7	0.8
Tranquilizers	2.9	2.6	2.5	1.5	1.0	1.5	0.8	0.9	0.5	0.3	0.5	0.4	0.4	0.8	0.8	1.1

NOTE: Only drug use not under a doctor's orders is included. Estimates were tabulated using restricted-use files. Response rates for this survey do not meet NCES standards.

SOURCE: University of Michigan, Survey Research Center, Institute for Social Research, Monitoring the Future Study.

Student alcohol and drug use



* In 1993, the questions regarding alcohol consumption changed; therefore, data for alcohol use from 1993 through 1998 may not be comparable to earlier years. For example, in 1993, the original wording produced estimates of 26, 42, and 51 percent for alcohol use of 8th-, 10th-, and 12th-graders, respectively. The new wording produced estimates of 24, 38, and 49 percent for alcohol use of 8th-, 10th-, and 12th-graders, respectively.

NOTE: Only drug use not under a doctor's orders is included. Estimates were tabulated using restricted-use files. Response rates for this survey do not meet NCES standards.

SOURCE: University of Michigan, Survey Research Center, Institute for Social Research, Monitoring the Future Study.

Tuition and enrollment in private schools

Private schools provide alternatives to the public schools. Whether or not parents choose a private school for their child may be a function of many factors, including tuition levels, family income, the relative value placed on education, satisfaction with public schools, and the availability of public schools (especially at the preschool level). Variations among population subgroups in the proportion of children enrolled in private schools may reflect differences in any of these factors.

- In 1997, 50 percent of preschool students were enrolled in private schools, a decrease from 1979 when 63 percent of these students were enrolled in private schools. During this period, enrollment in private schools dropped slightly at the elementary level and remained stable at the secondary level.
 - Between 1979 and 1997, at successively higher grade levels, smaller percentages of students attended private schools.
 - Students from high-income families were more likely than other students to attend private schools
- at all grade levels between 1979 and 1997. However, in 1997, a majority of preschool, kindergarten, and elementary students who attended church-related schools were from low- and middle-income families (see supplemental table 28-2).
- Median tuition paid at all levels of private schools increased between 1979 and 1997. In 1997, the 75th percentile of tuition paid was at least twice as high as the 25th percentile of tuition, with the largest gaps occurring at the secondary level.

Percentage of students who were enrolled in private schools, by family income and school level: October 1979, 1991, 1994, and 1997

School level	Total				Low income				Middle income				High income			
	1979	1991	1994	1997	1979	1991	1994	1997	1979	1991	1994	1997	1979	1991	1994	1997
Preschool	63.4	60.2	53.1	49.9	25.5	17.4	17.8	18.8	63.3	59.4	51.3	49.2	78.3	81.6	77.5	72.5
Kindergarten	13.9	14.2	13.5	16.8	3.2	4.0	5.0	6.8	13.5	12.5	13.2	15.7	23.2	28.3	22.6	28.2
Elementary	11.0	9.5	10.1	9.4	3.9	2.6	3.5	2.7	9.4	8.3	9.3	8.5	18.4	17.8	16.3	16.5
Secondary	7.1	6.9	7.0	7.3	2.3	2.2	2.7	2.9	5.4	5.5	5.9	5.6	11.8	12.5	11.3	13.3

NOTE: Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in between. See the supplemental note to Indicator 53 for further discussion.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

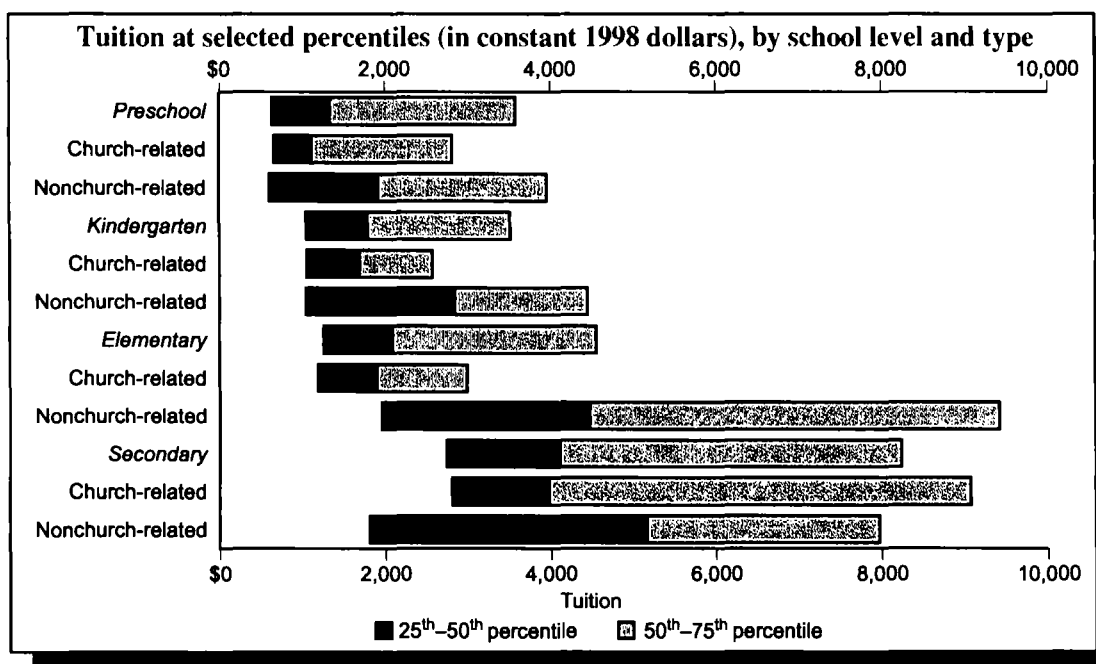
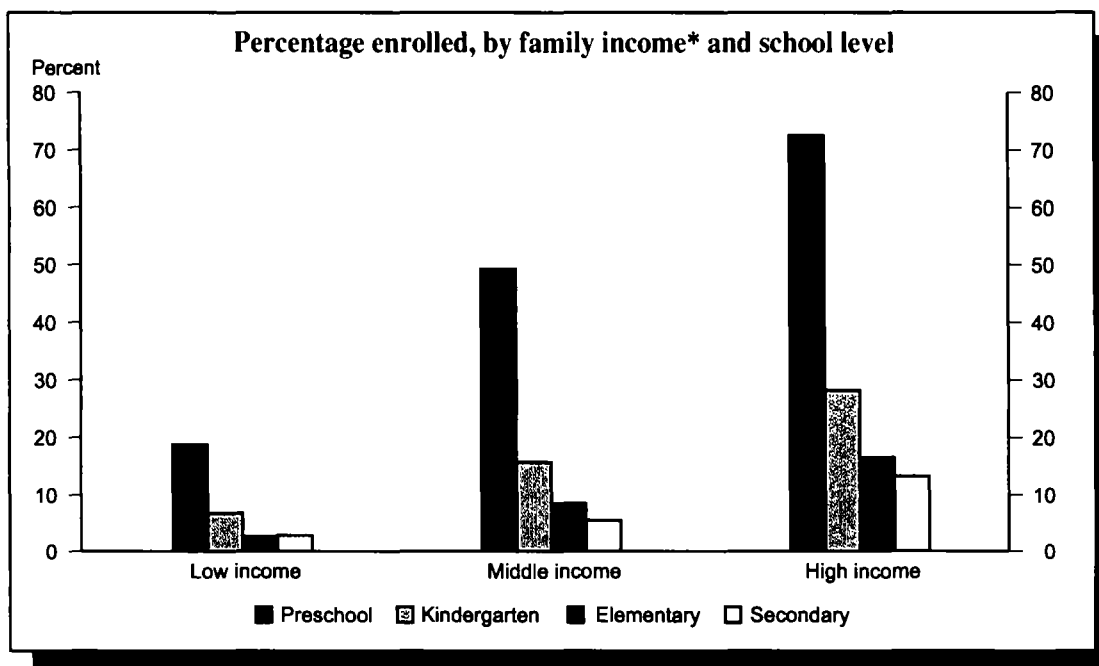
Tuition at selected percentiles (in constant 1998 dollars), by school level and type: October 1979, 1991, 1994, and 1997

School level and type	1979			1991			1994			1997		
	25th	50th	75th	25th	50th	75th	25th	50th	75th	25th	50th	75th
Preschool	\$517	\$838	\$2,190	\$573	\$1,092	\$2,913	\$433	\$1,013	\$2,670	\$650	\$1,358	\$3,636
K-12	622	1,386	2,606	942	1,725	3,036	993	1,888	3,232	1,431	2,546	4,980
Kindergarten	530	952	1,786	705	1,552	2,736	664	1,306	2,679	1,066	1,813	3,570
Elementary	305	811	1,538	817	1,388	2,288	930	1,700	2,746	1,275	2,115	4,622
Secondary	1,525	1,983	2,569	2,175	3,198	4,699	1,938	3,140	4,307	2,778	4,166	9,374

NOTE: In 1994 and 1997, the Current Population Survey (CPS) changed the questions used to obtain tuition data. See the supplemental note to this Indicator for further discussion. Additionally, in 1994, the survey methodology for the CPS was changed and weights were adjusted. See the supplemental note to Indicator 51 for further discussion.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Percentage of students who were enrolled in private schools and tuition at selected percentiles: October 1997



* Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in between. See *Indicator 53* for further discussion.

NOTE: In 1994 and 1997, the Current Population Survey (CPS) changed the questions used to obtain tuition data. See the

supplemental note to this indicator for further discussion. Additionally, in 1994, the survey methodology for the CPS was changed and weights were adjusted. See the supplemental note to *Indicator 51* for further discussion.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.