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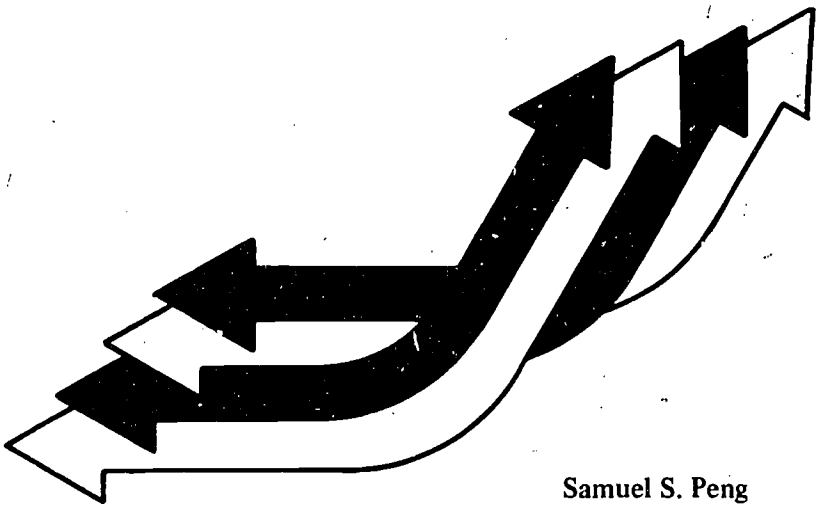
ABSTRACT

This report of the High School and Beyond (HS&B) study (a national longitudinal study of over 30,000 sophomores and 28,000 seniors enrolled in 1,015 public and private schools) contains nine graphs and 28 tables summarizing data on students' high school experiences, activities outside school, values and attitudes, plans for college, and plans of high school seniors. Specific areas covered include curriculum placement, mathematics and science courses taken, grades and homework, participation in federally funded programs, basic remedial skills instruction, vocational training, proper school behavior, minimum competency tests, working for pay, organized group activities, leisure activities, life goals, factors in occupational choice, national service, short- and long-range plans, criteria for choosing a college, plans to use financial aid, type of college chosen, and expected field of study. (Survey data sources and data files, student classification variables, and a discussion of limitations on the use of data are appended.) (MN)

High School and Beyond

a national longitudinal study for the 1980's

A Capsule Description of High School Students



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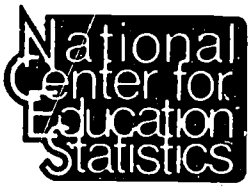

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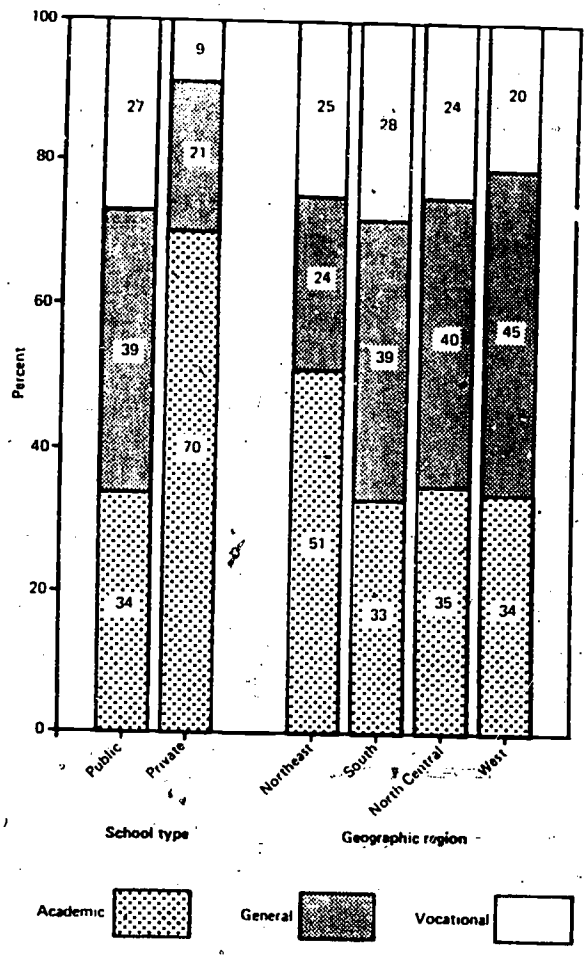
FIGURE 1 Percentage of 1980 high school seniors in general, academic and vocational curriculum, by geographic region and school type



FOREWORD

The High School and Beyond (HS&B) study was designed to provide a data base containing longitudinal statistics on a national sample of high school sophomores and seniors as they move out of the American school system into the critical years of early adulthood. The study began with a group-administered survey in the spring of 1980 prior to the students leaving high school and will continue with planned follow-up surveys of the same sample in 1982 and 1984. Results from the study are being presented in a series of reports designed to highlight selected findings in educational and occupational development.

This general report, the first HS&B publication, is a summary of descriptive information about the students' high school experiences, activities outside of school, attitudes, and plans for after high school. Many details are not included in this report because its purpose is to highlight the breadth of the HS&B data. Basic student data files are available to researchers who wish to pursue these or other topics in depth.

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April 1981

ACKNOWLEDGMENTS

A host of individuals and organizations contributed to High School and Beyond. Chief among them were the 58,000 secondary school students who participated in the base-year survey, their school principals and other school personnel, district superintendents, Chief State School Officers, and coordinators in each state's department of education.

The overall research design of HS&B was developed primarily by William B. Fetters of the National Center for Education Statistics. Special thanks are due to members of the National Planning Committee, who have been active in advising NCES on the design, implementation, and uses of the study: Ellis B. Page, Chairman (Duke University), Robert F. Boruch (Northwestern University), Bruce K. Eckland (University of North Carolina, Chapel Hill), Barbara Heyns (New York University), David S. Mundel (Employment and Economic Policy Administration, City of Boston), Robert C. Nichols (State University of New York, Buffalo), Sally B. Pancrazio (Illinois Office of Education), and David E. Wiley (Northwestern University).

Thanks are also due to John W. Meyer (Stanford University) for helping crystallize study objectives and for developing first drafts of the student questionnaires, to Thomas L. Hilton and other staff members at Educational Testing Service (ETS) for developing cognitive tests for the project, and to members of a special panel on test development: Anne Anastasi (Fordham University), William H. Angoff (ETS), John B. Carroll and Bruce K. Eckland (both of the University of North Carolina, Chapel Hill), and Eric F. Gardner (Syracuse University).

The National Opinion Research Center (NORC), under the direction of NCES, took responsibility for the remainder of the design and conducted the base-year survey; NORC's preliminary analysis of the base-year data contributed to the development of this publication. James S. Coleman served as Principal Investigator at NORC, with Carol B. Stocking as Project Director. Other contributing NORC staff members were Fansayde Calloway, who directed field work for the project, and Antoinette Delk, Larry Dornacker, Martin Frankel, and Natalie Suter.

This capsule report was prepared by members of the Division of Multilevel Education Statistics, NCES. The principal authors were William B. Fetters, Andrew J. Kolstad, and Samuel S. Peng; they were assisted by Marjorie O. Chandler, Edith M. Huddleston, Jeffrey A. Owings, and Ricky Takai. Early drafts were typed by Roberta Bernstein, Martha Hollins, and Crystal Hutchinson; Denise Wood was responsible for the final typing of the tables and manuscript.

HOW TO OBTAIN MORE INFORMATION

Information about the Center's statistical program and a catalog of NCES publications may be obtained from the Statistical Information Office, National Center for Education Statistics, 1001 Presidential Building, 400 Maryland Avenue, SW, Washington, D.C. 20202, telephone (301) 436-7900.

Inquiries for related computer tapes should also be directed to the Statistical Information Office.

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INTRODUCTION

The High School and Beyond (HS&B) study is a nationally representative sample survey of 1980 high school sophomores and seniors in the United States. As a large-scale, longitudinal survey, the study's primary purpose is to observe the educational and occupational plans and activities of young people as they pass through the American educational system and take on their adult roles. The study should ultimately contribute to an understanding of student development and of the factors that determine individual education and career outcomes. Such information is useful as a basis for review and reformulation of Federal, State, and local policies affecting the transition of youth from school to adult life.

The availability of this longitudinal data base encourages in-depth research for meeting the educational policy needs of the 1980's at local, State, and Federal levels. HS&B data should contribute to evaluating: the strength of secondary school curricula; the demand for postsecondary education; problems of financing postsecondary education; the adequacy of postsecondary alternatives open to high school students; the need for new types of educational programs and facilities to develop the talents of our youth; and the relationships among the educational, vocational, and personal development of young people and the institutional, familial, social, and cultural factors that affect that development.

HS&B is the second in a program of longitudinal studies sponsored by the National Center for Education Statistics (NCES). This study is similar to NCES's first, the National Longitudinal Study of the High School Class of 1972 (NLS-72), which began in 1972 and has completed its fourth followup survey. NCES's longitudinal studies program is based on the assumption that Federal, State, and local policies affecting the transition from school to work ought to be grounded on factual analyses of the intervening processes of the American educational system, not simply on the inputs and degrees and diplomas awarded. The longitudinal studies program provides statistics on the education, work, and family experiences of young adults for the pivotal years during and immediately following high school. The Fourth Followup of the NLS-72 provides current information on the outcomes of schooling seven years after high school, while the base-year HS&B study provides current information on high school experiences near the beginning of the transition to adult life.

The HS&B study design seeks to gather the same type of data collected by NCES's first longitudinal study. The study of the HS&B senior cohort replicates many aspects of the NLS-72, both in the questionnaires and in the cognitive tests. This allows inter-study comparisons to be made of the economic and social changes that occurred in the eight years since 1972. However, the second study differs from the first in two significant ways. First, it addresses elements in the educational process that were ignored in the first study. HS&B is the first longitudinal study of students to survey parents concerning their aspirations for their children and their ability and desire to pay for the fulfillment of these aspirations. HS&B is also the first study to survey teachers concerning their assessment of their students' futures. Second, it extends the scope of the population to the sophomores of 1980 as well as the seniors, and thus makes possible a fuller understanding of the dimensions of secondary school experience, their long-term impact on students, and the factors that influence the process of dropping out of school early.

The base-year survey was conducted in spring 1980. The study design included a highly stratified national probability sample of over 1,100 high schools with 36 seniors and 36 sophomores per school. (In those schools with fewer than 36 seniors or sophomores, all eligible students were included in the sample.) Cooperation from both schools and students was excellent. Over 30,000 sophomores and 28,000 seniors enrolled in 1,015 public and private high schools across the nation participated in the base-year survey.[1] The samples represent the nation's 10th and 12th grade populations, totaling about 3,800,000 sophomores and 3,000,000 seniors in more than 21,000 schools in spring 1980.

[1]The overall response rate for schools was 91 percent and for students was 84 percent.

Questionnaires and cognitive tests were administered to each student in the HS&B sample. The student questionnaire covered school experiences, activities, attitudes, plans, selected background characteristics, and language proficiency. Other groups of respondents provided other types of information. The administrator in each selected school filled out a questionnaire about the school; teachers in each school were asked to make comments on students in the sample; twins in the sample were identified and their counterpart twins were also surveyed; and a sample of parents of sophomores and seniors (about 3,600 for each cohort) was surveyed primarily for information on financing of higher education. The total survey effort thus provided a comprehensive data base for analyses in education and other areas of social sciences.

This report is organized in five sections. The first describes experiences in high school (coursework, grades, vocational training, behavior, school practices, and student opinions on high school); the second outlines activities outside of school; the third discusses the students' life goals; the fourth section describes short-range and long-range plans after high school; and the last examines college plans in somewhat more detail.

Appendix A presents a detailed description of data sources available from the survey. Appendix B describes procedures for dividing the total population into subgroups for analytic purposes. Appendix C discusses limitations on the use and interpretation of the data at this time, and indicates how the precision of the statistics presented in the report may be approximated.

CHAPTER I. HIGH SCHOOL EXPERIENCES

School is the major activity in the lives of nearly all young people. High school experiences are designed to prepare young people for further education or for an occupation after high school, in accordance with the plans of the students, their parents, and their communities.

This section presents some basic findings about student educational experiences in high school, including curriculum placement, mathematics and science coursework, participation in Federally-funded education programs, requirements of State and local minimum competency testing programs, training in basic and vocational skills, and student behavior. It describes these experiences, based on student reports, for selected subgroups defined by sex, race and ethnicity, socioeconomic status, general academic achievement of students, and by the type and location of their high schools. Appendix B provides a full explanation of how these subgroups were defined.

A. Curriculum Placement

Curriculum placement largely determines the kinds of courses taken and is associated with future educational and career choices. Of the 1980 seniors, 39 percent reported they were enrolled in academic programs, 37 percent in general programs, and 24 percent in vocational programs. This distribution, however, varied by geographic region and by type of school (figure 1). While students in the Northeast were most likely to enroll in academic programs (51 percent), students in other regions were more likely to enroll in general programs. In particular, 45 percent of students in the West were enrolled in general programs, compared with 34 percent in academic programs.

About one-third of the 1980 seniors in public high schools (34 percent) took an academic program to prepare for college, and 27 percent took a vocational program to prepare for an occupation after high school. In private high schools, this distribution was markedly different. Over two-thirds (70 percent) took an academic program, and 9 percent took a vocational program. These distributions reflect a basic difference in orientation of the two types of schools. Yet the experiences and concerns of students in the same type of program are often more similar to one another, even though they are in different types of schools, than they are to those in a different program in the same type of school.

Curriculum placements for 1980 seniors changed somewhat from those of 1972 seniors. From 1972 to 1980, the overall proportion of students in academic programs declined by about 4 percentage points while the proportion of students in general programs increased by 4 percentage points (table 1). The proportion of males in vocational programs increased, but the proportion of females in these programs decreased. In 1980, the proportion of women in academic programs was almost identical to the proportion of men in these programs. In 1972, however, the difference amounted to 5 percentage points in favor of men.

B. Mathematics and Science Courses Taken

A strong background in mathematics and sciences is usually required for access to postsecondary opportunities in science, engineering, and other quantitative fields. Of all seniors in 1980, an estimated 67 percent took at least two years of mathematics, including advanced mathematics coursework and remedial mathematics coursework (to be discussed in section E).

Sex differences in total mathematics and science coursework were sizable. About 71 percent of male seniors took two years or more of mathematics since the beginning of the tenth grade, compared to 63 percent of female students who did so (table 2). Similarly, males more often had two years or more of coursework in science (57 percent) compared with 50 percent of female students.

Race differences in mathematics and science coursework were also substantial (figure 2). Asian Americans[2] were highest of the five racial/ethnic groups in both mathematics and science. Whites were the second highest in science, while blacks

[2] See appendix B for exact wording used to describe racial/ethnic groups.

FIGURE 1.-- Percentage of 1980 high school seniors in general, academic, and vocational curriculum, by geographic region and school type

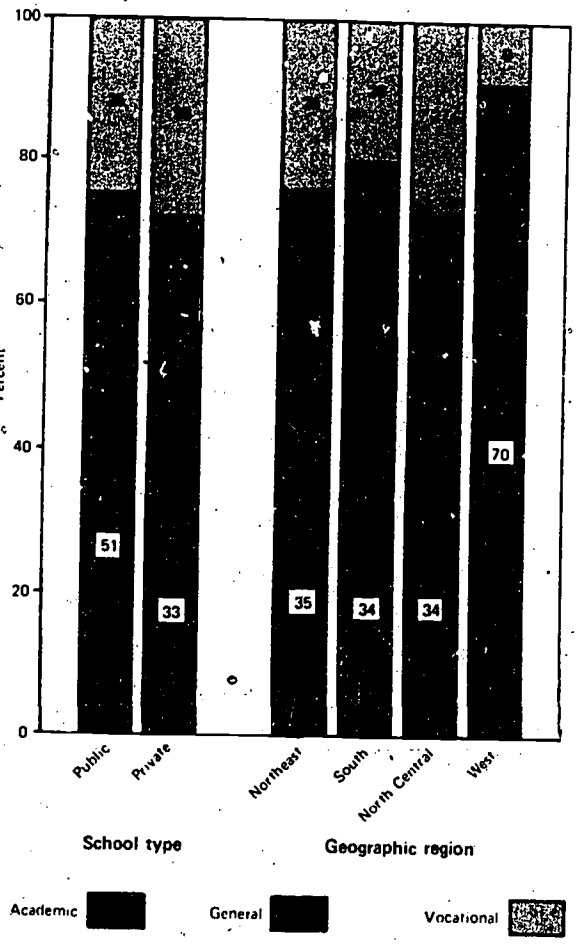


FIGURE 2.-- Percentage of 1980 high school seniors taking three years or more of coursework in mathematics and science, by racial/ethnic group

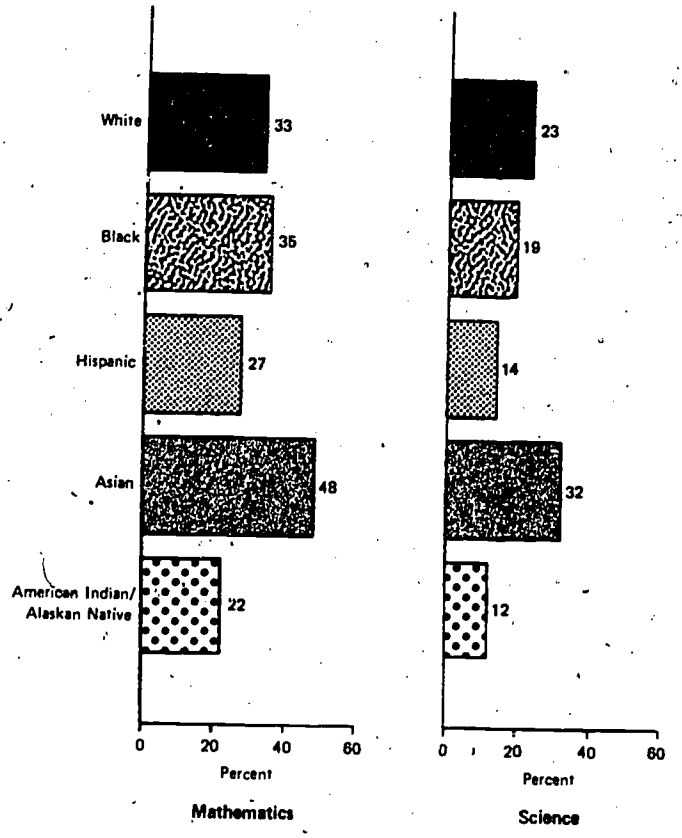


Table 1.--Percentage of 1980 high school seniors in academic, general, and vocational curricula and change since 1972, by sex

Curriculum placement	Percent in curriculum 1980 seniors			Change since 1972		
	All	Male	Female	All	Male	Female
Total	100	100	100	0	0	0
Academic	39	39	38	-4	-6	-2
General	37	38	36	+4	+3	+5
Vocational	24	23	26	0	+3	-3

Table 2.--Cumulative percentage of 1980 high school seniors taking varying amounts of mathematics and science coursework, by sex

Amount of coursework	Mathematics			Sciences		
	All	Male	Female	All	Male	Female
Total, including those with no coursework	100	100	100	100	100	100
One year or more	93	94	92	90	91	89
2 years or more	67	71	63	53	57	50
3 years or more	34	40	28	23	27	19

were the second highest in mathematics.

Sex and race differences also exist in the percentages of students taking advanced mathematics and science courses. While the majority of students (over 79 percent) have taken Algebra I and Geometry (56 percent), only 8 percent of students have taken Calculus (table 3). The percentage of male students exceeded that for female students in all mathematical areas except Algebra I. Asians again ranked highest in proportions taking advanced courses.

Differences in exposure to mathematics and science are related to curriculum placement. As might be expected, students in academic programs generally have taken more years of coursework in both mathematics and science (table 4). For example, 55 percent of students in academic programs took three years or more of coursework in mathematics compared with only 18 percent of students in vocational programs. Similarly, 41 percent of students in academic programs, compared with 9 percent of students in vocational programs, reported having taken three years or more of science coursework.

Geographic differences also showed up in analyses of coursework in mathematics and science (table 5). In general, students in the Northeast had more years of coursework in both mathematics and science than students in other regions. These differences may be associated with the tendency of students in the Northeast to enroll more often in academic programs.

C. Grades and Homework

Educators and employers, in light of widely-publicized test score declines of recent years, have been concerned about grade inflation. "Grade inflation" means that students receive the same grades while achieving lower standards of performance. Seniors in 1980 received somewhat better grades than their counterparts in 1972, even though they spent less time on their homework (see table 6 and figure 3). Specifically, the percentage of seniors receiving "mostly A" or "about half A and half B" increased from 29 percent in 1972 to 33 percent in 1980, while the percentage of seniors spending five hours or more per week on homework decreased from 36 to 25 percent.

The grade averages and the time spent on homework per week varied among subgroups of 1980 seniors. Female students received better grades than male students and spent more time on homework. Whites and Asian Americans reported better grades than other racial/ethnic groups and also spent more time on homework. As expected, students with higher achievement test scores received better grades in school than students with lower test scores. Interestingly, they also spent more time on homework than students of lower test scores. The majority of students (over 65 percent) spent less than five hours per week on homework. There were slightly more students in the Northeast (9 percent) than in the other regions who spent more than ten hours on homework per week.

Grades received in high school and time spent on homework are related to curriculum and to control of the school. Students in academic curricula reported spending more time on homework than students in general or vocational curricula. Public school students in academic programs received better grades but spent less time on homework than their counterparts in private schools. While 51 percent of the academic students in public schools reported grades "about half A and half B" or better, only 46 per-cent of the academic students in private schools reported such grades. On the other hand, while 39 percent of the academic students in public schools reported spending at least five hours per week on homework, 48 percent of the academic students in private schools reported at least that much time on homework.

D. Participation in Federally-funded Programs

More high school seniors in 1980 than 1972 participated in high school programs that were partially supported by Federal funds. About 13 percent of 1980 seniors, but 10 percent of 1972 seniors, reported

Table 3.--Percentage of 1980 high school seniors taking mathematics and science courses, by course title, sex, and racial/ethnic group

Course	Sex			Racial/ethnic group				
	All seniors	Male	Female	Hispanic	Black	White	American Indian/ or Alaskan Native	Asian or Pacific Islander
Algebra I	79	79	79	67	68	81	61	88
Algebra II	49	51	47	38	39	50	32	76
Geometry	56	58	55	39	38	60	34	79
Trigonometry	26	30	22	15	15	27	17	50
Calculus	8	10	6	4	5	8	5	22
Physics	19	26	14	15	19	20	17	35
Chemistry	37	39	35	26	28	39	24	59

Table 4.--Cumulative percentage of 1980 high school seniors taking varying amounts of mathematics and science coursework, by curriculum

Amount of coursework	Mathematics			Science		
	Academic	General	Vocational	Academic	General	Vocational
Total, including those with no coursework ..	100	100	100	100	100	100
1 year or more .	98	90	89	96	88	83
2 years or more	86	57	52	74	44	35
3 years or more	55	22	18	41	13	9

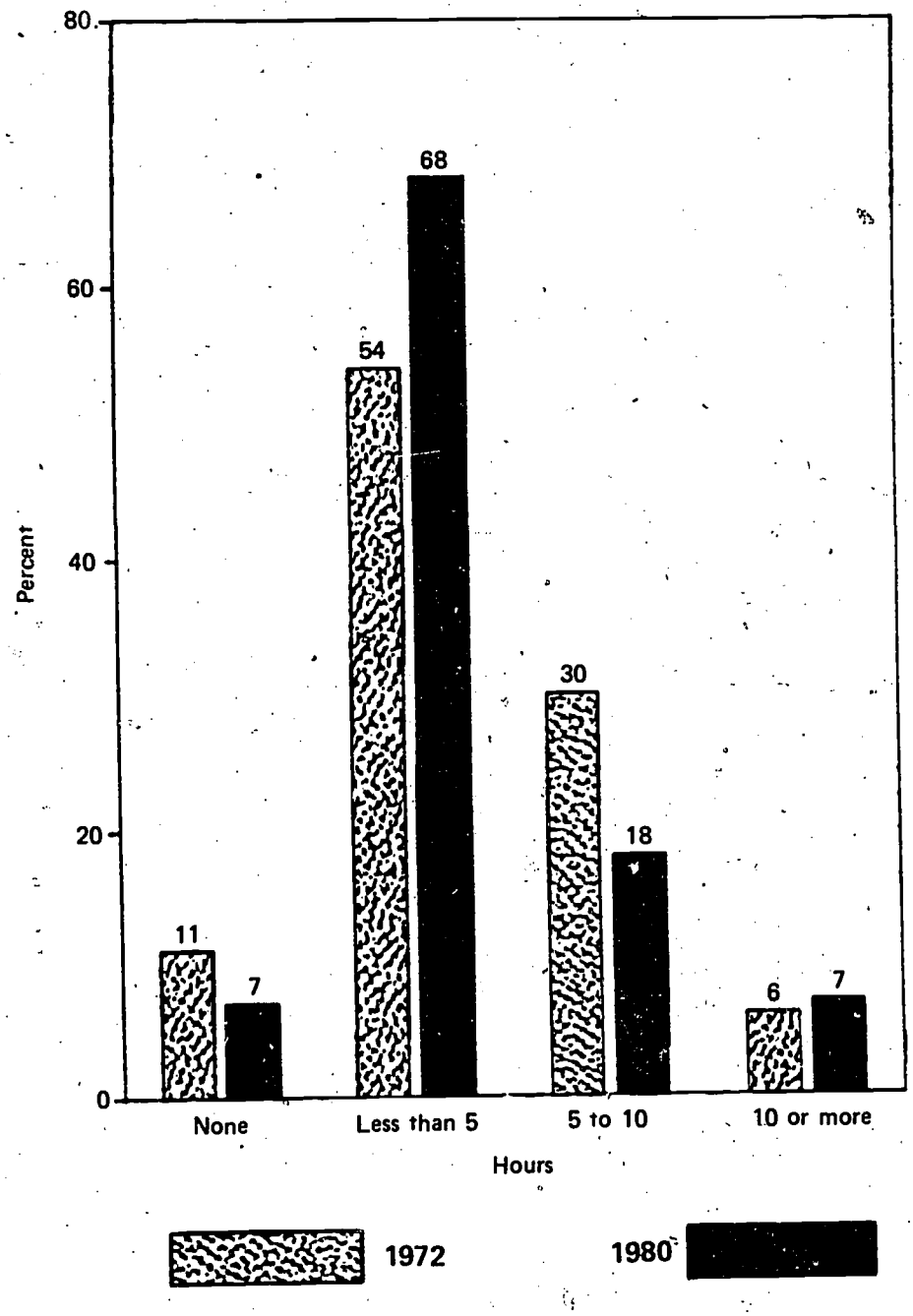
Table 5.--Cumulative percentage of 1980 high school seniors taking varying amounts of mathematics and science coursework, by geographic region

Amount of coursework	Mathematics				Science			
	North-east	South	North Central	West	North-east	South	North Central	West
Total, including those with no coursework	100	100	100	100	100	100	100	100
1 year or more	96	96	89	91	93	92	86	90
2 years or more	79	73	60	58	66	56	48	44
3 years or more	48	36	29	24	35	20	21	15

Table 6.--Percentage of seniors reporting varying high school grades for 1980 and 1972, and change since 1972

High school grade	Percent of seniors		Change since 1972
	1980	1972	
Total	100	100	0
Mostly A, or half A and half B	33	29	+4
Mostly B, or half B and half C	47	49	-2
Mostly C, or half C and half D	19	21	-2
Mostly D or below	1	1	0

FIGURE 3.-- Percentage of 1980 high school seniors reporting varying amounts of time spent on homework per week, for 1972 and 1980



having participated in Work-Study programs (table 7). Similarly, 11 percent of 1980 seniors, compared with 8 percent in 1972, participated in Co-op programs. Both programs are vocational education programs in which students spend some school time outside school at a workplace learning occupational skills. As expected, more students in vocational curricula than students in academic curricula participated in these programs: about 7 to 1 in favor of vocational students.

Two Federal programs not included in the 1972 study were added to the HS&B Student Questionnaire: the CETA Work Program and Junior ROTC. The student participation rates were 9 and 3 percent, respectively.

Students from families with lower indexes of socioeconomic status (SES) had a substantially greater participation rate than students of higher SES families in Work-Study, Co-op, and CETA work programs. When information on later performance of these students becomes available, the impact of these programs can be examined.

E. Basic Skills Remedial Instruction

About three-tenths of 1980 seniors reported participation in remedial English and/or mathematics courses in high school. Hispanic, black, and American Indian/Alaskan Native students were more likely than whites (and Asians were less likely) to have taken remedial mathematics courses (figure 4). American Indian/Alaskan Native students were also more likely than the other racial/ethnic groups to have taken remedial English courses.

The percentage of students who had ever enrolled in remedial instruction also varied with students' socioeconomic status (SES) and curriculum placement. Seniors from low SES families were about twice as likely as students from high SES families to take remedial courses in mathematics. Similarly, students in general and vocational curricula were twice as likely as students in academic curricula to have enrolled in remedial English or mathematics courses.

F. Vocational Training

Education and employment are inextricably linked in American society, but are nowhere more closely aligned than in vocational education. Federal policy has for many years stressed direct support for programs to enhance employment opportunities for young people. Only a small percentage of the seniors of the 1980 cohort reported two years or more of courses in business-sales, trade-industry, technical, or other vocational areas (table 8). The majority of the students have taken such courses for either less than a year or not at all. Not suprisingly, students in vocational programs had a significantly higher representation in these courses than students in academic programs.

Despite the changes in women's roles in recent years, there still is a large amount of traditional sex-role identification in vocational coursework. Male seniors of the 1980 cohort were more likely than female students to have taken courses in drafting, carpentry, machine shop, and auto mechanics. Female students, in contrast, were more likely than male students to have taken courses in office work, home economics, and practical nursing, and were somewhat more likely to have taken courses in sales or merchandising and quantity food production.

G. Proper School Behavior

School administrators, teachers, and parents have been concerned about the relaxed standards and improper behavior of students in the high schools of today. In the HS&B study, the students themselves were asked about their perceptions and experiences in several areas related to what is generally thought to be proper student behavior.

Nearly half the 1980 seniors (45 percent) reported that "every once in a while I cut a class." Since many schools permit a moderate frequency of absences from classes, the degree to which this behavior represents improper conduct is difficult to determine.

Table 7.--Percentage of seniors participating in various Federal education programs, for 1980 by SES and for 1972

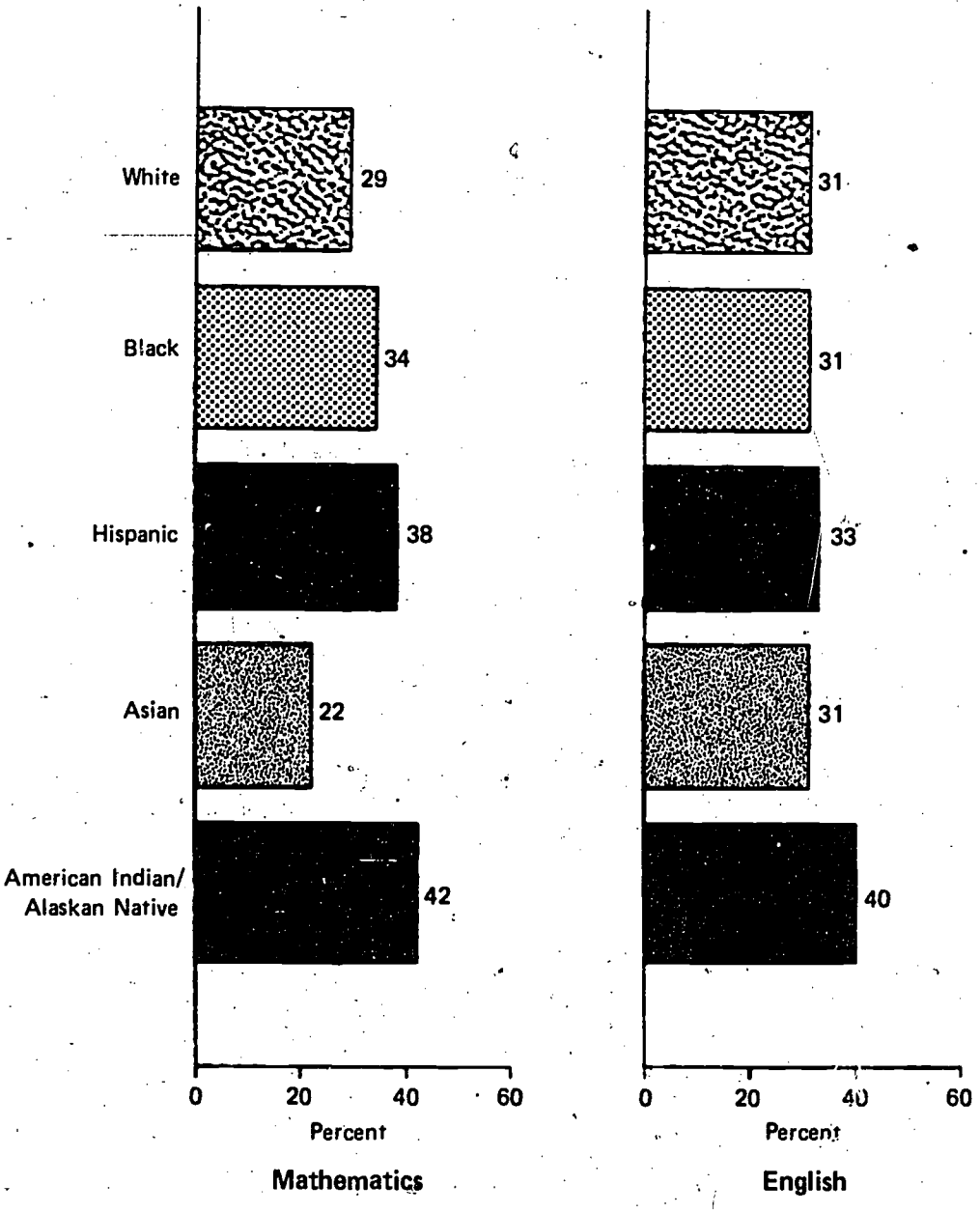
Program	1980 Seniors				1972 Seniors
	Socioeconomic status				
	All	High	Middle	Low	All
Work-study program	13	8	14	17	10
Co-op program	11	7	11	13	8
Talent Search	3	3	3	4	2
Upward Bound	1	1	1	2	1
CETA work program	9	3	7	17	NA*
Junior ROTC	3	1	3	3	NA*

*Indicates that students were not asked about the program.

Table 8.--Percentage of 1980 high school seniors taking 2 years or more of vocational coursework, by sex and curriculum

Course area	All seniors	Sex		Curriculum		
		Male	Female	Academic	General	Vocational
Business-sales	27	13	40	19	27	42
Trade-industry	13	23	4	6	13	26
Technical	10	17	3	7	9	17
Other	17	19	15	11	19	27

FIGURE 4.-- Percentage of 1980 high school seniors taking remedial coursework in mathematics and english, by racial/ethnic group



More serious deviations from proper school behavior--disciplinary problems, probations, and suspensions--were reported by one out of seven seniors (table 9). Male students were more likely than female students to report cutting classes once in a while and more serious problems. More students from high SES families than students from low SES families reported cutting a class once in a while. Students of lower SES, however, tended to report problems in other disciplinary areas more often than students of higher SES backgrounds.

Academic students in both public and private schools reported lower levels both of cutting classes and of the more serious violations of school standards. Those in private schools reported the lowest level of cutting classes, but the more serious violations were about equally frequent in both types of schools.

Students are generally expected both to attend school and to appear on time unless they have a permitted excuse. Table 10 shows that about a fifth of all seniors were late to school five days or more this year, and a fifth were absent for reasons other than illness five times or more. However, striking differences among the regions of the U.S. were reported with respect to frequent absences and tardiness. Students from the West--for reasons not yet known--are almost twice as likely to report very frequent absence or tardiness than are students from other regions.

Students apparently shared some of the concerns of parents, teachers, and school administrators about proper school behavior. Less than half of all seniors rated their schools as "good" or "excellent" in terms of the effectiveness and fairness of discipline (table 11). Academic students rated the discipline in their schools more favorably than did students in general or vocational curricula.

Seniors rated private school discipline more favorably than public school discipline; about four-tenths of the seniors in public high schools rated highly the "effective discipline" at their schools, while in private high schools, nearly seven-tenths rated the discipline in their school highly on effectiveness. The 1980 seniors in both public and private high schools were less positive about the "fairness" of their school's discipline: 36 percent of public school seniors and 47 percent of private school seniors rated the discipline at their school as "good" or "excellent" in fairness.

H. Minimum Competency Test

The decline of student test scores and other indicators of student performance in recent years has led some educators and policymakers to favor minimum competency requirements for high school graduation. According to HS&B school administrators' reports, about one out of five high schools in the nation required their seniors to pass a minimum competency test for graduation. This requirement, however, varied significantly by geographic region. While 37 percent of schools in the Northeast and 29 percent of schools in the West reported such a requirement, only 15 percent of schools in the South and 3 percent of schools in the North Central had the requirement (figure 5).

Among those schools with minimum competency requirements for graduation, two out of three schools had a specific remedial program for students who failed the test. The availability of such remedial instructions also depended on the location of schools. The percentages that had remedial programs were 70, 52, 39, and 92 respectively, for schools in the Northeast, South, North Central, and West.

I. Student Opinions of their School

Students develop opinions of their high school based on their experiences and preconceptions. The HS&B survey asked 1980 seniors to rate their school (as poor, fair, good, or excellent) on its library facilities, quality of instruction, condition of buildings, teacher interest in students, reputation in the community, and school spirit. A majority of the seniors (from 56 to 68 percent) rated each of these school characteristics as good or excellent (table 12).

Table 9.--Percentage of 1980 high school seniors reporting various discipline problems, by sex, SES, and school type

Behavior	All seniors	Sex		SES			Type of school 1/	
		Male	Female	Low	Middle	High	Public	Private
Cut a class once in a while	45	49	41	45	45	48	40	31
Had disciplinary problems	14	17	10	17	13	11	9	10
Suspended or put on probation .	13	17	8	15	12	10	8	10

1/ Only academic students in both public and private schools were included in the computation of percentages.

Table 10.--Percentage of 1980 high school seniors reporting absenteeism and tardiness, by geographic region

Item	All seniors	Geographic region			
		North-east	South	North Central	West
5 days or more absent this year for reasons other than illness	21	20	20	19	36
5 days or more late to school this year	19	19	17	16	35

Table 11.--Percentage of 1980 high school seniors reporting aspects of discipline as "good" or "excellent", by curriculum and school type

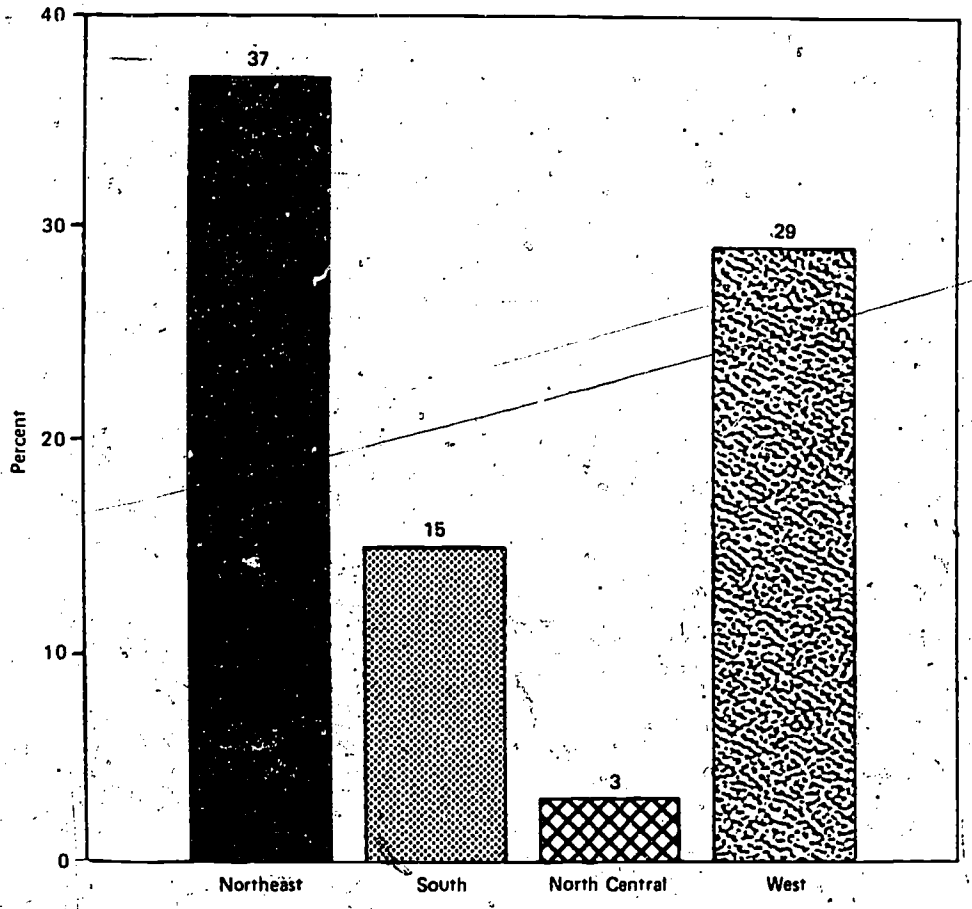
Aspect of discipline	All seniors	Curriculum			Type of school	
		Academic	General	Vocational	Public	Private
Effectiveness	47	52	42	45	42	67
Fairness	39	45	34	36	36	47

Table 12.--Percentage of 1980 high school seniors rating various school characteristics as "good" or "excellent", by curriculum and school type

School characteristic	All seniors	Curriculum			Type of school 1/	
		Academic	General	Vocational	Public	Private
Reputation in the community	68	77	64	64	73	90
Library facilities	67	66	67	71	68	60
Quality of academic instruction	63	75	55	60	73	85
Condition of buildings	62	69	60	60	67	76
School spirit	60	60	59	61	59	64
Teacher interest in students	56	66	48	50	62	82

1/ Only students in academic programs were included in the computations.

FIGURE 5.--Percentage of schools requiring minimum competency tests for high school graduation in 1980, by geographic region



Students in academic programs generally gave higher ratings than students in other programs. For example, 77 percent of academic program students, compared with 64 percent of students in general or vocational programs, gave a rating of good or excellent on school reputation in the community. Similarly, 75 percent of academic program students, but only 55 percent of general program students and 60 percent of vocational students, rated the quality of academic instruction as good or excellent. Library facilities, which may be more important to the school work of academic students, were less highly rated by academic than vocational students. Among academic students, those in private schools gave substantially higher ratings of all school characteristics except library facilities. Differences over 10 percentage points appeared for "reputation in the community;" "quality of academic instruction;" and "teacher interest in students."

Student opinions of school characteristics have changed slightly since 1972. Ratings on "library facilities" and "teacher interest in students" rose slightly while ratings declined for "condition of buildings and classrooms;" "quality of academic instruction;" and "reputation in the community."

The HS&B survey also asked 1980 seniors their opinions about the allocation of school resources toward meeting their needs as students in several areas: vocational programs, academic coursework, employment counseling, college counseling, and work experience. A sizable majority of the seniors agreed that schools should have placed more emphasis both on vocational programs (70 percent), and on basic academic subjects (67 percent) (table 13). A majority also agreed that their school had provided them with counseling that would help them continue their schooling (64 percent).

The seniors were less satisfied with employment-related school programs. A majority felt that the school did not offer enough practical experience (59 percent) while a minority felt that the school provided them with counseling that would help them find employment (44 percent).

Student opinions varied, however, by the type of curriculum in which they were enrolled. For example, more students in vocational programs than academic programs agreed that schools should have placed more emphasis on vocational and technical programs (81 vs. 57 percent) and that schools provided counseling that would help them find employment (57 vs. 35 percent). Student opinions also varied by type of school. Academic program students in public schools more often thought a greater emphasis should have been placed on basic academic subjects than did their counterparts in private schools. Academic students in private schools, on the other hand, more often believed greater emphasis should have been placed on vocational programs than did academic students in public schools.

Students' perceptions have changed since 1972, particularly concerning the emphasis they believe high schools should place on academic subjects. While 67 percent of 1980 seniors agreed that schools should have placed more emphasis on academic subjects, only about 50 percent of 1972 seniors agreed. Whether this difference is attributable to public concern over test scores, to the "back to basics" movement, to actual changes in curriculum between 1972 and 1980, or other factors is not clear from analyses to date.

Table 13.--Percentage of 1980 seniors agreeing with various statements about high school education or practice, by curriculum and school type

Statements	All seniors	Curriculum			Type of school 1/	
		Academic	General	Vocational	Public	Private
School should have placed more emphasis on vocational and technical programs ..	70	57	75	81	55	63
School should have placed more emphasis on basic academic subjects	67	67	67	65	72	48
School provided me with counseling that will help me continue my education	64	67	58	61	66	69
School did not offer enough practical work experience	59	52	63	60	50	65
School provided me with counseling that will help me find employment	44	35	43	57	36	30

1/ Only academic students were included in the computations.

This section presents some basic findings about student activities outside of school, including working for pay, participating in organized group activities (such as athletics and church groups), and other informal, leisure-time pursuits.

A. Working for Pay

Over two-fifths of the sophomores (42 percent) worked in the week before the survey, while over three-fifths (63 percent) of the 1980 seniors worked (table 14). Students in a vocational curriculum were more likely to work than students in general and academic curricula (68 percent compared to 62 and 61 percent, respectively). Among racial/ethnic groups, whites were most likely to be working (66 percent) and blacks least likely to be working (50 percent). Male seniors were somewhat more likely than their female classmates to be working (6 percentage points); this difference was smaller for whites (4 percentage points) than for other racial/ethnic groups.

The jobs that high school seniors held varied a good deal in the amount of time spent on training, but about two-thirds of the seniors held jobs in which they reported spending almost no time in training. Students in a vocational curriculum were somewhat more successful than others in receiving some job training (38 percent compared with 29 and 32 percent in academic and general curricula). Differences between males and females and among racial/ethnic groups were also small.

Students were asked to compare how they felt about their jobs with how they felt about school. About half of the seniors agreed that their jobs were more enjoyable than school. This attitude varied by high school program: two-fifths of the seniors in the academic curriculum found their job more enjoyable than school, while about three-fifths of those in a vocational program enjoyed their job more than school. Hispanics and blacks were less likely, and Asians much less likely, than whites to enjoy their job more than school.

Jobs were considered more important than school by a small minority of the seniors (15 percent). For vocational students, who are less likely to continue their schooling after high school, this attitude was much more prevalent than for academic students (22 percent compared with 8 percent, respectively). Blacks and Asians were the least likely of the racial/ethnic groups to place more importance on their jobs than school (7 and 6 percent, compared to 16 percent for whites).

Some have argued that the Federal minimum wage exacerbates the problem of youth unemployment. While space does not permit this report to address the complex issues involved in this argument, this report can describe the distribution of wages around the Federal minimum wage ($3.10 at the time of the survey). The seniors worked, on the average, 20.7 hours and earned $3.18 per hour, only 8 cents an hour above the minimum wage (table 15). About four-tenths of the seniors and seven-tenths of the sophomores earned less than $3.10 per hour.[3] Larger proportions (69 percent of the seniors and 82 percent of the sophomores) reported that they would be willing to work for less than minimum wage while still in high school. The difference in earnings between young men and young women was fairly large. Young women earned a wage rate that was 88 percent of that earned by young men and 11 cents below the minimum wage.

The differences in hours worked and pay rates among racial/ethnic groups were not as large as the differences between males and females. Hispanics, whites, and Asians received the highest pay rates ($3.22, $3.19, and $3.23 compared to $3.11 and $3.10 for blacks and American Indians); Hispanics and American Indians worked slightly longer hours than the other racial/ethnic groups.

B. Organized Group Activities

When high school seniors are not busy with school or work, they use their time in a variety of leisure activities. Table 16 reports on participation in organized group activities that appeal to the many different interests and pursuits of young people.

[3] These pay rates may not necessarily violate Federal laws since Federal requirements are not universal; they apply to the more regular, structured kinds of employment in which the majority of seniors worked.

Table 14.--Work experience of 1980 high school seniors, by curriculum and racial/ethnic group

(Percentage)

Work experience	All seniors	Curriculum			Racial/ethnic group				
		Academic	General	Vocational	Hispanic	Black	White	American Indian/ or Alaskan Native	Asian or Pacific Islander
Worked for pay during week prior to survey	63	61	62	68	60	50	66	57	53
Spent almost no time on job training	68	71	68	62	65	63	69	66	58
Agreed that job is more enjoyable than school	51	42	56	60	44	39	54	65	29
Agreed that job is more important than school	15	8	18	22	14	7	16	20	6

Table 15.--Average work hours and earnings of 1980 high school seniors, by sex and racial/ethnic group

Item	All seniors	Sex		Racial/ethnic group				
		Male	Female	Hispanic	Black	White	American Indian/ or Alaskan Native	Asian or Pacific Islander
Average number of hours worked for per week	20.7	22.5	18.6	21.4	20.0	20.5	22.8	19.2
Average earnings per hour (dollars)	$3.18	$3.38	$2.99	$3.22	$3.11	$3.19	$3.10	$3.23

Table 16.--Percentages of 1972 and 1980 seniors who participated actively or as a leader in various organized group activities, by sex

Activity 1/	1972 Seniors			1980 Seniors		
	All seniors	Male	Female	All seniors	Male	Female
Athletic teams	45	58	32	52	64	41
Pep club, cheerleaders	17	5	29	15	5	25
Debate, drama, band, chorus	33	27	39	36	28	44
Hobby clubs	19	24	13	23	27	19
Honor Society	14	11	18	17	14	20
Newspaper, yearbook	20	15	26	20	15	24
Science, history, or art clubs	26	20	31	24	19	28
Student government	19	18	21	18	16	21
Vocational education clubs	22	15	29	23	19	27
Any of the above except athletics	73	67	80	75	69	81
Community youth clubs	NA	NA	NA	22	24	21
Church groups	NA	NA	NA	39	35	42
Junior Achievement	NA	NA	NA	6	6	6

1/ Descriptions are abbreviated. The survey items were slightly different in 1972 and 1980. NA indicates information not available.

Athletic activities are the most popular, with about half of all seniors in 1980 participating (52 percent). Since the wording of the athletic participation items changed slightly from 1972 to 1980, the apparent 7 percentage point increase shown in the table (from 45 to 52 percent) may not reflect the true extent of change. In both 1972 and 1980, a larger proportion of males than of females participated in sports (64 percent compared with 41 percent in 1980). Despite increased attention on female participation by the media, the courts, and the legislatures, the large gap between the sexes has decreased only slightly, from 26 percentage points to 23 percentage points. The proportion of females who are organized spectators--the cheerleaders, pep club members, and majorettes--has decreased slightly from 29 to 25 percent, while the small proportion of males in this category has remained stable at 5 percent.

Every other school-organized group activity except hobby clubs ("such as photography, model building, hot rod, electronics, [and] crafts") shows the reverse pattern: young women participate more frequently than young men. While three-quarters of all seniors in both 1972 and 1980 participated in at least one of the non-athletic school-organized activities listed in table 16, young women were more likely to participate in something than young men (by 12 percentage points in 1980, about the same as 1972).

Activities organized outside the school also attract substantial numbers of seniors. After athletics, church activities were the second most popular organized activity, with nearly two-fifths of the 1980 seniors participating. Community youth groups, such as the YMCA, the Scouts, and Boy's Clubs, recruited about a fifth of the 1980 seniors as active participants.

C. Other Leisure Activities

Besides school, work, and organized group activities, high school students spend their time in a variety of informal, leisure-time pursuits. As the students grow older, some pursuits become more popular: the fraction who go out on dates once a week or more increased from two-fifths for sophomores to three-fifths for seniors, and those who drive around in cars once a week or more increased from about five-tenths to six-tenths of the students (table 17). On the other hand, one major, time-consuming pursuit became less popular: the percentage watching four hours or more per day of weekday television decreased from 40 percent to 26 percent.

Some activities, like reading for pleasure, talking with friends on the telephone, and talking with parents about personal experiences, were engaged in more frequently by females than males. Visiting with friends and reading the front page of the newspaper were found to be more frequent among males than females.

Table 17.--Percentages of 1980 sophomores and seniors who participated in various leisure activities, by sex

Activity	1980 Sophomores			1980 Seniors		
	All sophomores	Males	Females	All seniors	Males	Females
	Percent once or more per week					
Visiting with friends at a local gathering place	67	69	65	69	75	65
Reading for pleasure	41	34	47	45	39	51
Going out on dates	39	37	41	57	56	57
Just driving or riding around (alone or with friends)	47	51	43	60	65	56
Talking with friends on the telephone	77	66	86	77	72	82
Thinking or daydreaming alone	65	55	75	72	65	79
Talking with your mother or father about personal experiences	41	34	48	47	40	54
Reading the front page of the newspaper	59	61	57	68	72	65
	Percent 4 or more hours per day					
Watching weekday T.V.	40	42	38	26	27	25

As young people make the transition from school to adult life, they make a number of decisions with important consequences for their future. Their life goals, personal values, and attitudes are important elements in their choice. This section details the things that are important to 1980 seniors in planning their lives, the factors that are important to them in choosing an occupation, and their preferences with regard to a hypothetical national service program.

A. Life Goals

Some goals are more important than others to high school seniors in planning their careers and family lives. The HS&B study presented a list of goals to the 1980 seniors. Four items on the list were clearly more important than the rest; they were rated "very important" by more than four-fifths of the seniors. "Being successful in my line of work" and "being able to find steady work" were very important to the lives of 88 and 84 percent of the 1980 seniors respectively (table 18). "Having strong friendships" and "finding the right person to marry and having a happy family life" were also very important to most seniors (82 and 81 percent, respectively). The ratings of these four items were quite similar for male and female seniors, although slightly more females than males valued a happy family life and strong friendships, while the reverse was true of the work-related items.

Items that were very important to a small proportion of the 1980 seniors included "living close to parents and relatives," "being a leader in my community," "working to correct social and economic inequalities," and "getting away from this area of the country." Sex differences were generally small, though young women were less eager for a leadership role (5 percentage points less than males), and a good deal less worried about having lots of money (18 percentage points less than males). The importance of the items on the list followed about the same order for the 1972 seniors as for the 1980 seniors. However, the 1980 seniors placed relatively greater importance on "having lots of money" (31 vs. 19 percent) and "living close to parents and relatives" (14 vs. 8 percent). Interestingly, "working to correct social and economic inequalities" was less often viewed as important by 1980 seniors than by 1972 seniors (13 vs. 27 percent).

B. Factors in Occupational Choice

At this stage of their lives, most high school seniors make general decisions about groups of possible careers, rather than specific choices among job offers. Their career decisions are based in part on the importance they ascribe to a number of factors. The HS&B study presented to the 1980 seniors a list of six factors that could be important in determining the kind of work they plan to do for most of their lives. One factor stood out for four-fifths of the seniors; 86 percent reported that "work that seems important and interesting to me" was a very important factor (table 19). About three-fifths of the seniors rated each of the next three items as very important: "meeting and working with sociable friendly people" (66 percent), "freedom to make my own decisions" (62 percent), and "job security and permanence" (58 percent).

Several sex differences appear in the importance assigned to factors in occupational choice, though these differences are not large enough to affect seriously the rank ordering among the factors. Female students more frequently gave "very important" ratings than male students to two factors: "meeting and working with sociable friendly people" (73 percent vs. 58 percent), and "work that seems important and interesting" (89 percent vs. 81 percent). In contrast, more male students than female students considered "good income to start or within a few years" very important.

C. National Service

Today, public policy discussions concern recruitment into military service and the possible resumption of the draft. The attitudes of those young people who are directly affected by such efforts are of

Table 18.--Percentage of 1980 high school seniors rating various life goals as "very important", by sex and change since 1972

Life goals	1980 Seniors			Change since 1972
	All	Male	Female	All seniors
Work:				
Being successful in my line of work	88	89	88	+4
Having lots of money	31	41	23	+12
Being able to find steady work	84	86	83	+6
Family:				
Finding the right person to marry and having a happy family life	81	78	83	-1
Being able to give my children better opportunities than I've had	67	67	67	0
Living close to parents and relatives	14	13	15	+6
Community/Society:				
Being a leader in my community	10	12	7	-1
Working to correct social and economic inequalities	13	12	14	-14
Other:				
Getting away from this area of the country	14	15	14	-1
Having strong friendships	82	81	82	+3

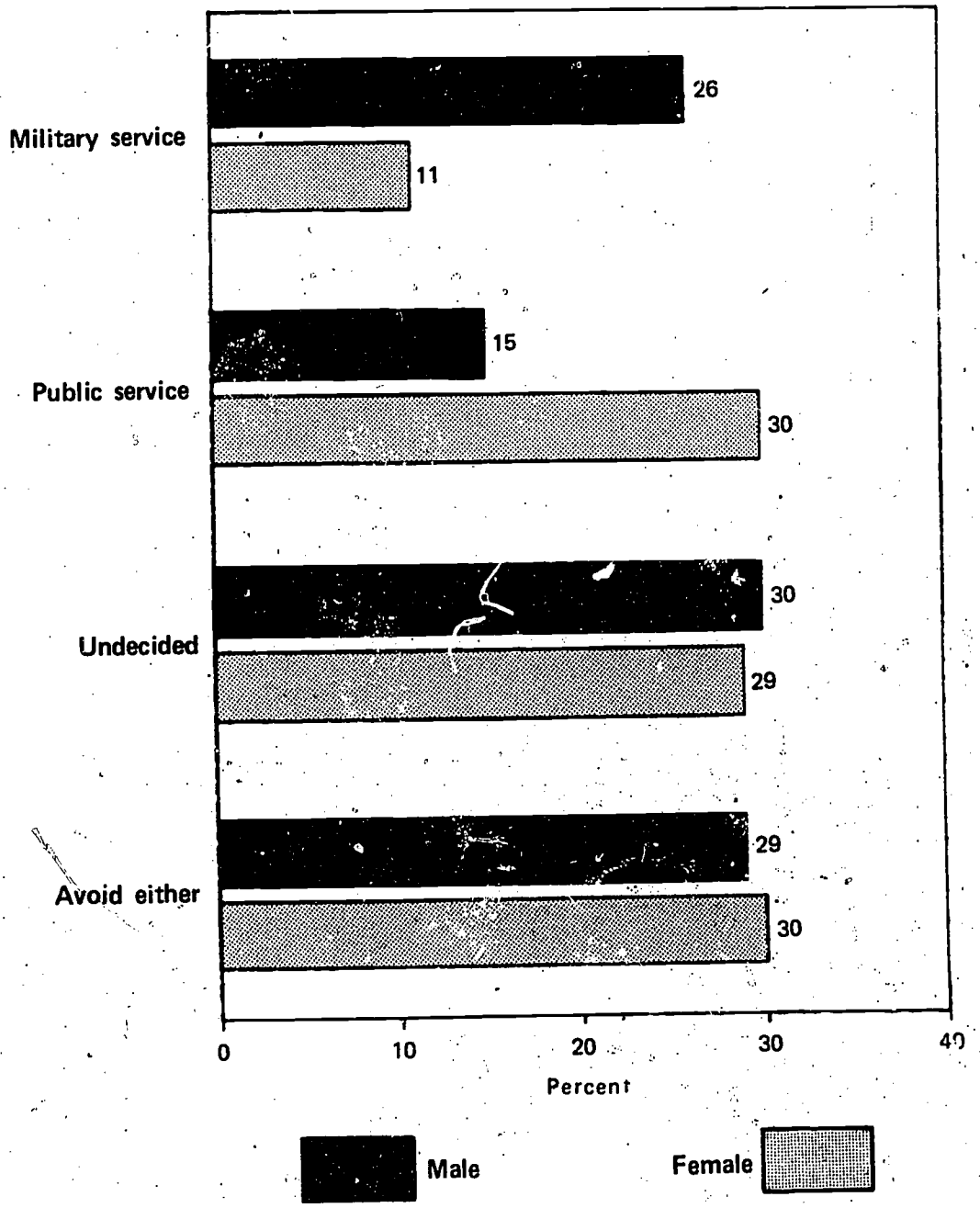
Table 19.--Percentage of 1980 high school seniors rating various factors as "important" in choosing an occupation, by sex

Factor	All seniors	Male	Female
Work that seems important and interesting to me	86	81	89
Meeting and working with sociable friendly people	66	58	73
Freedom to make my own decisions	62	61	63
Job security and permanence	58	58	58
Good income to start or within a few years	46	48	43
Previous work experience in the area	31	30	43

special interest. The HS&B survey asked high school students, "If there were a program of compulsory two-year service after high school, with options of military service or community service as listed below, what would you most likely do?" For both sophomores and seniors, the most frequent response was "undecided between the options proposed" (30 percent seniors and 39 percent sophomores). Twenty-four percent of the sophomores and 30 percent of the seniors reported that they would attempt to avoid both options. Sophomores were somewhat more likely than seniors to choose military service.

Approximately the same percentage of both males and females were undecided or would attempt to avoid either option (figure 6). Among those who expressed a preference, however, males were more likely to choose military service (26 percent compared with 11 percent) and females were more likely to choose a non-military, public service option. The preferences regarding national service did not differ substantially among subgroups defined by socioeconomic status, curriculum placement, or racial/ethnic group.

FIGURE 6.-- Percentage of 1980 high school seniors expressing various preferences about national service, by sex



CHAPTER IV. PLANS OF HIGH SCHOOL SENIORS

High school graduation is a key transition event in the lives of young adults. For many, it represents the transition from adolescence to adulthood. Although the majority of seniors had job experiences while still in high school and may have long known whether they would attend college, many decisions and choices are made at this time as they embark upon various courses leading to additional education and training, occupational careers, and the formation of their own families.

This section describes what seniors plan to do the first year after leaving high school, what their long-range occupational goals are, when they expect to marry and have their first child, how many children they expect to have, how much postsecondary education they plan to obtain, and at what age they expect to complete their education.

A. Short-Range Plans

Seniors in both 1972 and 1980 were asked, "What is the one big thing that most likely will take the largest share of your time in the year after you leave high school?" The pattern of responses for 1972 and 1980 are quite similar (table 20). About the same percentage from each class planned to pursue academic coursework; however, the 1980 group shifted slightly away from 2-year to 4-year colleges. More planned to work full-time than was the case in 1972; and, apparently reflecting the increasing rates of women entering the labor force, the percentage of females planning to be full-time homemakers dropped from 6 to 2 percent.

Most persons planned to engage in more than one activity. For example, many college students also planned to work. The 1980 seniors were asked, "What other things do you now plan to do after you leave college?" By combining the information from this question with other responses about the primary activity, it was found that 77 percent planned to work as either their primary or secondary activity (figure 7). In addition, many more persons planned to obtain various kinds of postsecondary schooling and job training than would appear to be the case from table 20

B. Long-Range Plans

In this section, the long-range plans of 1980 seniors are examined in three areas: plans for postsecondary education, occupational goals, and family formation.

1. Postsecondary Education. About 80 percent of all seniors planned to get some kind of postsecondary education: 19 percent, schooling at a vocational, trade, or business school; 15 percent, some college education short of a 4-year degree; 26 percent, a 4- or 5-year degree; and 20 percent, an advanced degree. Educational plans are highly associated with students' socioeconomic backgrounds (table 21). Almost three times as many seniors from the high SES group as from the low SES group planned to finish four years or more of postsecondary education (76 vs. 26 percent.)

College plans varied little between the sexes. The percentages of males and females planning to obtain a 4-year degree or more were about the same (47 vs. 45 percent). The percentages of whites and blacks planning to achieve this level of education did not differ by much (46 vs. 48 percent). But there were large differences among the other minority groups, ranging from only 32 percent for American Indians to 78 per cent for Asians (table 22).

College degree expectations vary considerably by academic achievement level, as measured by the HS&B test battery (figure 8). Fully 88 percent of the 1980 seniors in the highest achievement decile, compared to only 17 percent of those in the lowest decile, expected to complete a 4-year bachelor's degree or a more advanced degree. Over half (52 percent) of those in the highest achievement decile expected to complete an advanced degree beyond the bachelor's level.

2. Occupational Goals Seniors were asked to indicate which of 17 categories comes closest to describing the job or occupation they expect to have when they are 30 years old. About 13 percent planned to be dentists, physicians, lawyers, scientists,

Table 20.--Percentage of 1972 and 1980 seniors reporting various activities as "the one thing that will take the largest share of time in the year after high school", by sex

Activity	1972 Seniors	1980 Seniors		
		All	Male	Female
Total	100	100	100	100
Attend college full or part-time:				
4-year college	34	38	37	39
2-year college, academic courses	11	9	7	10
2-year college, technical/ vocational courses	5	6	5	7
Attend trade/business school full or part-time	9	6	5	7
Work full-time	26	29	32	27
Military service or service academy	3	3	5	2
Apprenticeship or on-the-job training program	3	2	3	2
Work part-time, not attend school	2	2	2	2
Full-time homemaker	3	1	0	2
Other: travel, take a break, no plans	4	3	3	3

Table 21.--Percentage of 1980 high school seniors expecting various amounts and types of postsecondary education, by SES

"How far in school do you think you will get?"	All seniors	SES		
		Low	Middle	High
High school graduation only or less	20	34	19	5
Vocational, trade or business school:				
Less than 2 years	8	11	9	2
Two years or more	11	14	13	6
College program:				
Less than 2 years	3	3	3	1
Two years or more	12	12	14	9
Four-or-five year degree	26	16	25	37
Master's degree or equivalent	11	5	9	22
Ph. D., M.D., etc.	9	5	7	17

Table 22.--Percentage of 1980 high school seniors expecting a 4-year degree or more, by racial/ethnic group and sex

Race and sex	All seniors
Racial/ethnic group:	
Hispanic	36
White	46
Black	48
American Indian/Alaskan Native	32
Asian or Pacific Islander	78
Sex:	
Male	47
Female	45

FIGURE 7.-- Percentage of 1980 high school seniors reporting various activities planned for the first year after graduation

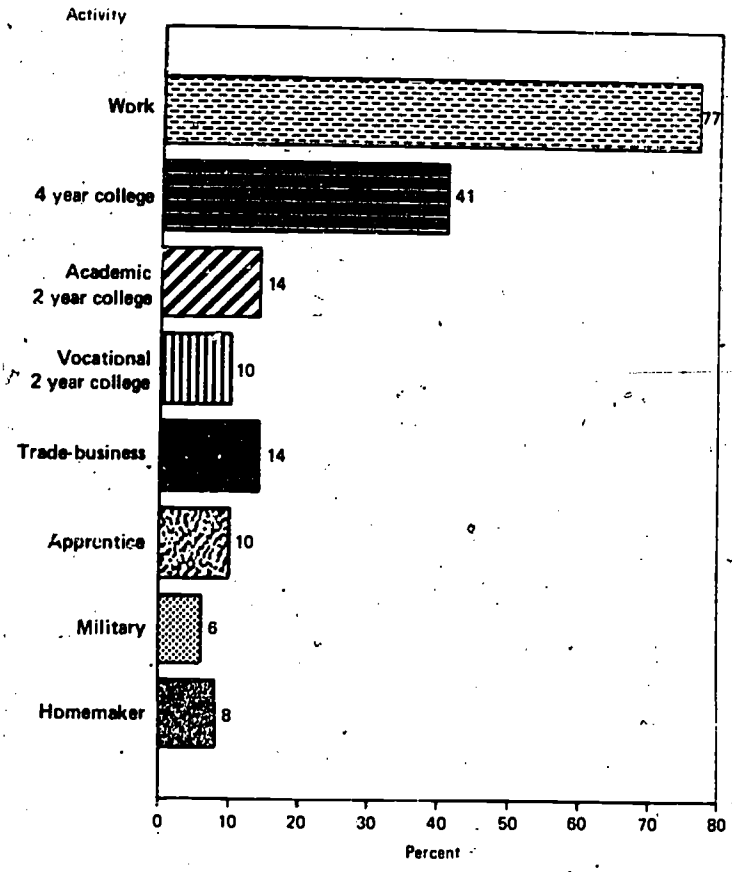
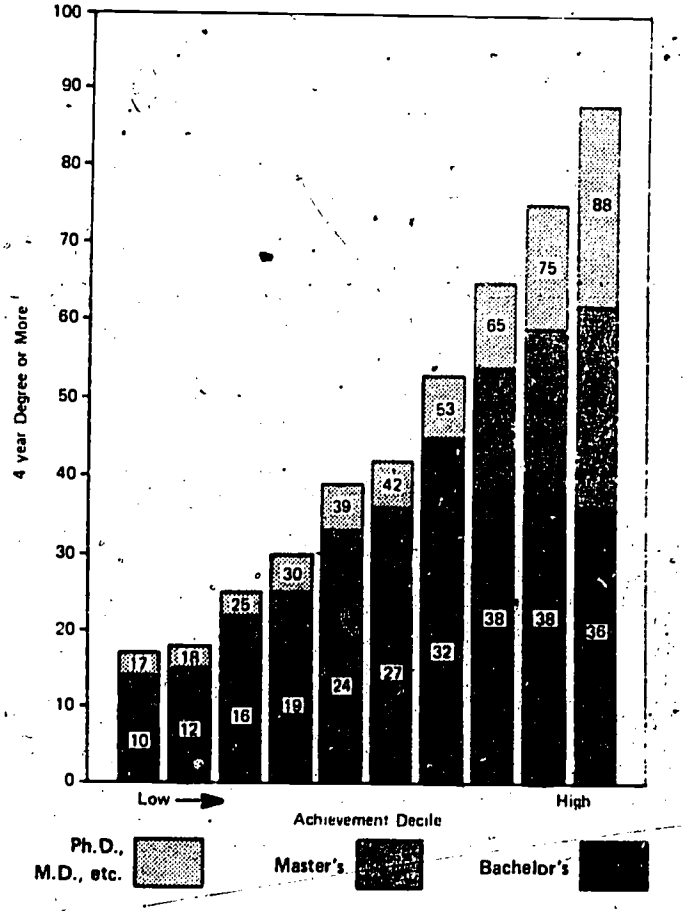


FIGURE 8.-- Percentage of 1980 high school seniors expecting bachelor's, master's, and degrees beyond master's, by achievement deciles



and members of other professional occupations that generally require an advanced degree (table 23).

In 1980 there were still very pronounced sex differences in planned occupations. About 39 percent of the males (versus only 7 percent of the females) planned to be in one of the following seven categories: craftsman, proprietor or owner, farmer or farm-manager, laborer, military, operative, or protective service. On the other hand, only 3 percent of the males (versus 29 percent of the females) planned to be a school teacher or in a clerical or service occupation. Future surveys will assess the extent to which occupational plans are fulfilled, whether aspirations tend to rise or fall in response to later experiences, and the extent to which the sex differences indicated in table 23 persist.

3. Family Formation. The traditional sequence of major life events for young adults is generally: completing full-time education, then getting married, and finally having children. While unforeseen events may result in changes from this typical sequence, most 1980 seniors conformed with it in reporting their plans for the future.[4]

The ages at which seniors planned to finish their full-time education, get married, and have their first child varied considerably, depending on their educational plans. Males expected to get married and have children later than females, whatever the level of education planned (figure 9). But the more education planned, the later in life both males and females planned to get married and start having children. This tendency is stronger for females than for males: females who planned to get an advanced degree expected to get married four years later than those who planned to stop with a high school diploma; for males this difference was only two years. The more education planned, however, the shorter the lag between completion of full-time education and marriage and parenthood. For example, on the average, males who planned to get an advanced degree intended to marry only 1.3 years after receiving their degree. By comparison, males not planning any postsecondary education expected a delay of 4.9 years from school completion to marriage. While postsecondary education delays the planned ages of marriage and having a first child, males and females planning to finish college intended eventually to have at least as many children as those who did not plan to finish college (table 24).

Followup HS&B surveys over the next decade will gather data on the actual timing of the major life events of this group of 1980 seniors. This information will enable analysts to determine how many young adults depart from their plans and to investigate the effects of family formation and educational attainments on one another.

[4] More males than females did not expect to marry at all (15 percent compared with 6 percent) and did not expect to have any children (18 percent compared with 11 percent). These seniors were excluded from the median age computations reported in figure 9.

Table 23.--Percentage of 1980 high school seniors expecting various jobs or occupations when 30 years old, by sex

Job or occupation category	All seniors	Male	Female
Total	100	100	100
Professional (except school teacher):			
Advanced degree normally required 1/	13	13	12
Advanced degree not normally required 2/	27	24	30
Nonprofessional:			
Predominance of males:			
Craftsman	8	16	1
Technical	8	10	6
Manager or administrator	7	8	6
Proprietor or owner	4	6	2
Farmer, laborer, military, operative, protective	10	17	4
Predominance of females:			
Clerical	10	1	17
School teacher (elementary or secondary)	4	1	6
Service	3	1	6
Homemaker or housewife only	3	0	5
Sales or not working	3	3	4

1/ Examples given in questionnaire were "clergyman, dentist, physician, lawyer, scientist, college teacher."

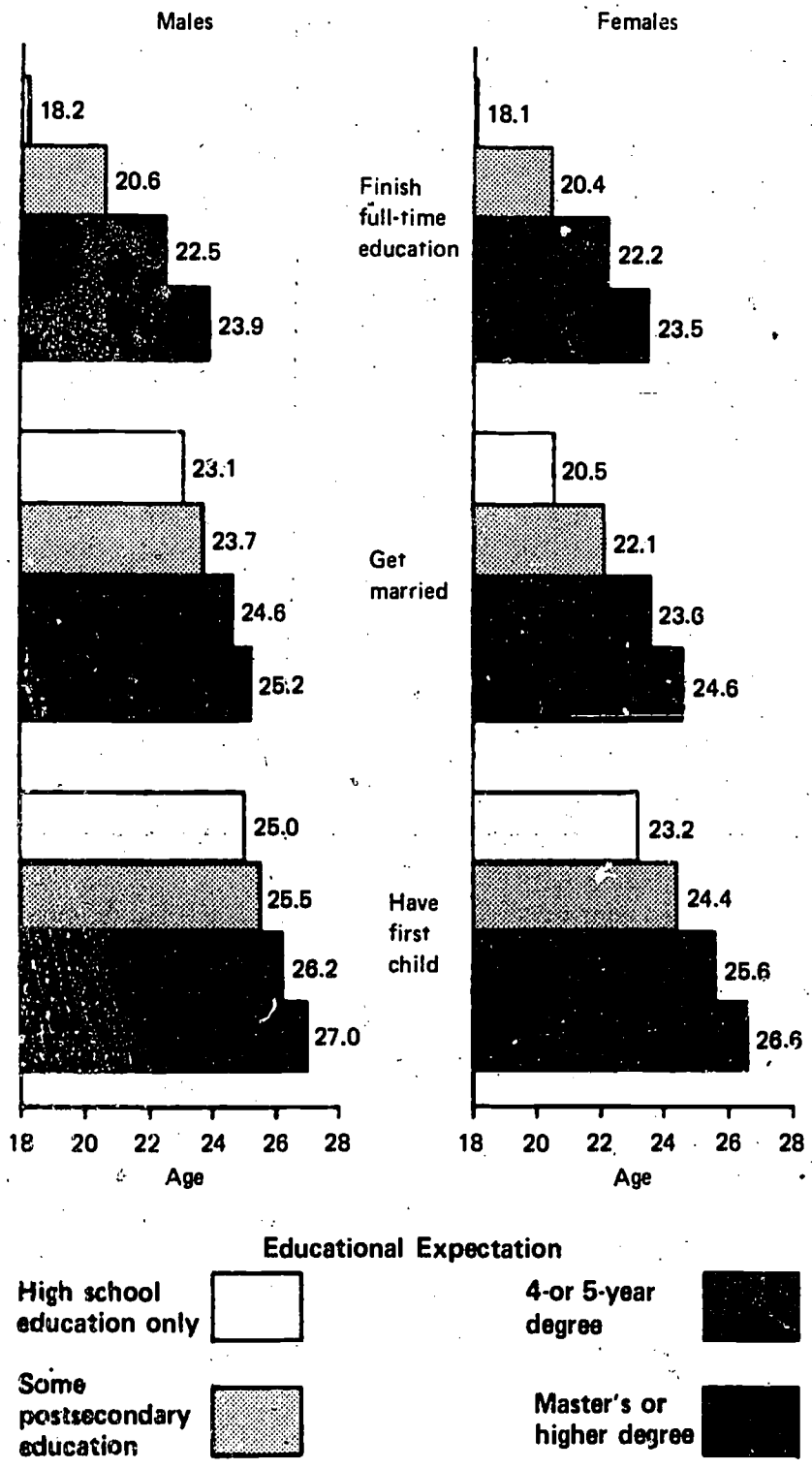
2/ Examples given in questionnaire were "accountant, artist, registered nurse, engineer, librarian, writer, social worker, actor, actress, athlete, politician, but not including school teacher."

Table 24.--Percentage of 1980 high school seniors expecting eventually to have 0, 1, 2, 3, or 4 children or more, by sex and educational expectation

Number of children eventually expected	Males				Females			
	High school only	Some post-secondary education	4- or 5-year degree	Master's or higher	High school only	Some post-secondary education	4- or 5-year degree	Master's or higher
Total	100	100	100	100	100	100	100	100
0	14	11	8	8	9	7	8	11
1	9	7	5	4	7	7	5	6
2	53	54	54	53	53	52	48	47
3	17	20	22	24	21	22	24	22
4 or more	8	7	11	11	11	11	14	15
Mean 1/	2.0	2.1	2.3	2.3	2.2	2.3	2.4	2.3

1/ In making this calculation, a value of 4.5 was used for persons who answered "4 or more."

FIGURE 9.-- Median ages at which 1980 high school seniors planned to finish full-time education, get married, and have first child, by sex and level of educational expectation



CHAPTER V. PLANS FOR COLLEGE

After leaving high school, over half of the 1980 seniors intend to make another major life transition by entering college. As seniors, the college-going group began to make their plans more specific by evaluating colleges they might want to attend, by deciding to apply to selected colleges, by informing themselves about financial aid programs that could help pay for their college expenses, and by choosing a field of study. This section describes the more specific plans of those 1980 seniors who planned to attend a 2-year or 4-year college either full-time or part-time in the year immediately after high school.

A. Criteria for Choosing a College

The 1980 seniors who intended to go to college in the year after high school were asked to rate the importance of seven criteria that could be used in choosing a college. The criterion considered very important by the largest group of people was the "availability of specific courses or curriculum," cited by 70 percent of the respondents (table 25). The next most frequently reported criteria were "reputation of the college in academic areas" (55 percent) and two items describing the net cost of college to the students: availability of financial aid (38 percent) and college expenses (36 percent).

The relative importance of these criteria varied quite a bit by racial and ethnic group. For blacks, Hispanics, and American Indians/Alaskan Natives, the items describing the net cost of college were more often cited as "very important" in choosing a college to attend than they were for whites and Asian Americans/Pacific Islanders.

B. Plans to Use Financial Aid

Programs for financing college attendance have been a major focus of education policy during the past decade. Their significance to students is underscored by the fact that over seven-tenths of the 1980 college-bound seniors (73 percent) expected to use some type of financial aid, and nearly six-tenths of the college-bound seniors (59 percent) specifically expected a scholarship or grant (table 26). Reflecting the fact that much of this aid is need-based, more of the low SES students expected to receive aid than was the case with high SES students. More than half of the high SES students (62 percent), however, expected to use financial aid, although the proportion of this group who expected Federal aid was smaller than those who expected non-Federal aid.

Many specific aid programs are available to today's students. The HS&B questionnaire sought information on 20 of these: 6 types of loans; 11 types of scholarships, fellowships, and grants; and 3 work programs.

Substantial numbers of students expect to use Federal aid programs (table 27). For example, 36 percent of college-goers planned to use a Basic Education Opportunity Grant (Pell Grant); 11 percent planned to use a National Direct Student Loan; 16 percent, a Federal Guaranteed Student Loan; and 30 percent, a College Work-Study job. The majority of low SES students (61 percent) planned to use a Pell Grant and 42 percent planned to hold a work-study job.

A surprisingly large percentage of students across all SES levels indicated that they did not know enough about the programs to answer the question. For example, 18 percent indicated that they did not know about Pell grants, and 29 percent did not know about Supplemental Educational Opportunity Grants (SEOG). Financially disadvantaged students particularly lacked knowledge about financial aid programs and might not go to college because of this lack.

C. Type of College Chosen

After college-bound seniors know what to look for in a college and have made plans to finance their continued schooling, they take the next step by choosing a college. Among 2-year and 4-year public and private colleges are different combinations of programs of study and net costs.

Overall, 21 percent of college-bound seniors planned to attend 2-year public junior or community colleges, 52 percent

Table 25.--Percentage of 1980 college-bound high school seniors who consider various criteria as "very important" in choosing a college, by racial/ethnic group

Criteria	All college-goers	Racial/ethnic group				
		Hispanic	White	Black	American Indian/ or Alaskan Native	Asian or Pacific Islander
Availability of specific courses or curriculum	70	64	70	72	80	70
Reputation of the college in academic areas	55	51	55	54	63	57
Availability of financial aid	38	56	33	72	52	34
College expenses	36	47	32	60	39	36
Social life at the college.	28	28	27	35	31	31
Able to live at home	20	36	18	26	29	23
Reputation of the college in athletic programs	12	16	10	21	24	9

Table 26.--Percentage of 1980 college-bound high school seniors planning to use various types of financial aid, by SES

Type of financial aid	All students	SES		
		Low	Middle	High
Loans, scholarship, grant and/or work aid	73	87	76	62
Federal	58	78	63	42
Non-Federal	56	60	59	50
Loans	40	44	42	35
Federal	21	25	22	17
Non-Federal	34	37	36	29
Scholarships and grants	59	76	63	46
Federal	43	68	48	24
Non-Federal	42	46	44	38
Work aid	32	46	33	24

Table 27.--Percentage of 1980 college-bound seniors planning to use major Federal financial aid programs, by SES

Federal program	Plan to use				Don't know the program			
	SES				SES			
	All	Low	Middle	High	All	Low	Middle	High
National Direct Student Loan Program	11	14	12	9	29	34	31	26
Federal Guaranteed Student Loan Program ..	16	18	18	14	27	32	28	24
Basic Educational Opportunity Grant (Pell)	36	61	41	18	18	15	18	19
Supplemental Educational Opportunity Grant	13	26	14	6	29	32	30	25
CETA-Sponsored Youth Employment Development	4	11	3	1	20	22	21	18
College Work-Study	30	42	31	22	17	19	18	16
Co-op Education	7	10	7	5	24	29	25	20

planned to attend 4-year public colleges or universities, and most of the remainder (25 percent) planned to attend 4-year private colleges or universities. Combining public and private school students, 76 percent of the college-bound seniors planned to attend 4-year colleges.

The choice of 4-year colleges or universities varied by high school program and socioeconomic status. Eighty-seven percent of the college-bound seniors in academic programs planned to attend 4-year colleges, compared with 49 percent of those in vocational programs. Similarly, 87 percent of the high SES college-bound seniors planned to attend 4-year colleges, compared with 68 percent of the low SES seniors. The choice of 4-year over 2-year college is also more frequent among those with high achievement test scores than among those with low scores (89 percent vs. 57 percent); among males than among females (80 percent vs. 74 percent); among whites, blacks, and Asian American/Pacific Islanders than among Hispanics and American Indian/Alaskan Natives (77, 80, and 80 percent vs. 66 and 69 percent).

Similar patterns of group differences were observed in the choice between public and private colleges. In general, college-bound seniors with higher achievement test scores, from academic programs, or from a higher SES background were more likely than other students to plan to attend private colleges or universities.

D. Expected Field of Study

By a wide margin, business was the most popular choice of expected major fields, chosen by 22 percent of 1980 college-bound seniors (table 28). Fewer than half as many (10 percent) chose the next most popular field, engineering. The other top choices were health services (8 percent), preprofessional fields (8 percent), and social science (including psychology) (8 percent).

The ranking of major fields was different in 1972. Business was then second most popular (chosen by 13 percent) and engineering then ranked sixth (chosen by 5 percent). In 1972, social science was the most popular choice of expected major fields, chosen by 17 percent of 1972 college-bound seniors (compared with 8 percent in 1980). Education was ranked third at 12 percent.

From 1972 to 1980 young women showed an increase in the proportion expecting to study in traditionally male fields such as agriculture, architecture, and engineering. For example, in engineering, the percentage of females increased from 2 percent in 1972 to 15 percent in 1980.

Other group differences in field of study deserve comment. Students with more mathematics and science coursework in high school were more likely to choose science and other quantitative fields in college. Academic program students more often expected to choose engineering and preprofessional fields, while vocational program students were more likely to choose business and other vocational fields. High SES students were also more likely to choose engineering and preprofessional fields and less likely to choose vocational fields than students from low SES backgrounds.

Table 28.--Percentage of 1980 college-bound high school seniors planning to enroll in various fields of study in college

Field	Percent
Total	100
Business	22
Engineering	10
Health services	8
Preprofessional fields	8
Education	6
Computer and information science	5
Other social sciences (e.g., anthropology, economics, history, and sociology)	5
Art	4
Other fields (e.g., architecture, ethnic studies, and inter-disciplinary studies)	4
Communications	4
Vocational or technical	3
Biological sciences	3
Psychology	3
Agriculture	2
Architecture	2
English	2
Home economics	2
Music	2
Physical science	2
Foreign language	1
Mathematics	1
Philosophy or religion	1

AFTERWORD

This Capsule Description provides a general overview of the activities and experiences of high school seniors in 1980, using information from High School and Beyond's base-year survey. NCES plans to conduct or to sponsor a number of analytical reports that will address a variety of topics in greater detail than that provided here. In addition, NCES already has made computer tapes available to those wishing to carry out their own analyses of special questions and issues. Among the NCES-sponsored HS&B reports to appear in the near future are reports on the following topics: public and private schools, Hispanic students in high school, discipline in high school, and youth employment in high school.

Later reports on the base-year survey will make use of HS&B information that was not yet available when this report was being prepared: second-language background and usage; achievement test scores that are comparable for 1972 and 1980 seniors and for 1980 sophomores and seniors; teacher's assessments of the HS&B students; student twin pairs; parents' plans for financing higher education of the students; and high school characteristics.

The HS&B study is a long-term program designed to reveal what young people do after they leave high school. The findings of the base-year survey, while important in themselves, will take on additional significance when subsequent followup surveys reveal the influence of high school educational experiences on the later careers of these young adults. Reports making use of the followup survey data and the longitudinal design of the HS&B study will appear in the later years of this program. Information on the status of future reports may be obtained from the Longitudinal Studies Branch, National Center for Education Statistics, 205 Presidential Building, 400 Maryland Ave. SW, Washington, D.C. 20202.

APPENDIX A

HIGH SCHOOL AND BEYOND DATA SOURCES AND DATA FILES

Data Sources

1. Sophomore and Senior Questionnaires. The sophomore and senior questionnaires covered personal and family background, school activities, out-of-school activities, attitudes, and post-high school plans and aspirations. The 1980 questionnaires contained a number of items in common with 1972 instruments, and there are a number of items in common between the sophomore and senior questionnaires.[1] Questionnaires were translated into Spanish and used with students who requested or needed Spanish language questionnaires.[2]

2. Tests. The following test batteries were administered to the high school sophomores and seniors:

Senior Tests	Sophomore Tests
Vocabulary	Vocabulary
Reading	Reading
Mathematics	Mathematics
Picture-Number (measure of rote memory)	----
Mosaic Comparisons (perceptual speed and accuracy)	----
Visualization in Three Dimensions (the ability to visualize how a figure would look afer manipulation in three-dimensional space, by folding a flat figure to make a three-dimensional figure.)	----
Questions About Testing (measure of test confidence, involvement, and distraction)	----
----	Science
----	Writing
----	Civics Education

A number of vocabulary, reading, and mathematics items are common to both the senior and sophomore tests. These sets of common items have been scored separately to form comparable senior and sophomore test data.

3. Second-Language Information. As part of a separate identification form designed to facilitate locating students for followup surveys, students were asked questions about a second language. For those 11,000 students who gave a "non-English" response to any of five questions about language spoken at home, information about their exposure to a language other than English was obtained.

4. Twin Data. When a twin was found in the sample, the other twin was, when possible, given a questionnaire and test battery as well. Data on about 500 pairs of twins were obtained in this way. Data from the nonsample twin are not included in the national sample; an additional data file on twins will be available for analysis. A survey is planned to determine whether same-sex twins are identical or fraternal.

5. Friend Data. Students were asked the names of their three best friends in the same class in school. Some of these friends also were selected to be in the sample. In these cases it will be possible to link data on their friends and to carry out analyses of friendship associations, but unlike the twins, no effort was made to obtain additional data on friends who were not on the sample roster.

6. School Questionnaire. At each school, the principal or a staff member designated by the principal was asked to complete a School Questionnaire providing information on school programs, practices, and policies.

[1] The items in these questionnaires, and the questionnaires as a whole, are in the public domain and can be used without permission. However, NCES would like to be informed of research using the HS&B instrument, for the potential value to other research investigators.

[2] Standard translation-retranslation methods were used in creating the Spanish language questionnaires to insure that the original meaning was preserved. Fifty-six students used a Spanish language questionnaire.

7. Teacher's Comment Form. Teachers in the sampled schools were asked to respond to 14 questions in a special form to be returned by mail. Most of the questions concerned their evaluations of students in the HS&B sample. In addition, several questions dealt with the background characteristics of the teachers and with the classes they taught. For analysis purposes, this information will be merged with the questionnaire and test data concerning the student.

8. Parental Information. A sample of parents of sophomores and seniors (about 3,600 for each cohort) was selected, and data were collected through a questionnaire (mail, telephone, or personal interview). These data concentrate on financing higher education.

Data Files

Most of the data described above will be processed and made available from NCES on computer files. The files are described below. Only files one and two are currently available; others will be available soon.

File 1: Student File. This file contains questionnaire and test data (see 1 and 2 above) for 30,030 sophomores and 28,240 seniors.

File 2: School File. School questionnaire data (see 6 above) are contained in this file for 988 schools. Merging with data from the Student File is possible through common identification codes.

File 3: Language File. File 1 contains an indicator for 5,917 sophomores and 5,415 seniors who reported some non-English language background (see section 3). File 3 contains this language usage information, with records for these students only.

File 4: Teacher Comment File. This information (see section 7) will be useful primarily when merged with data from the Student File. Matching with student data will be possible through the student identification codes.

File 5: Twin File. This file will be of the same format as File 1, and will contain student questionnaire and test data for both members of each pair of twins.

APPENDIX B

STUDENT CLASSIFICATION VARIABLES

Seven major classification variables were used in this report to define subgroups for analysis: sex, race/ethnicity, high school curricular program, socioeconomic status, general achievement composite, geographical region, and school type. Except for geographical region and school type, the classifications were developed from information reported by the students. For the 1972 cohort and for the HS&B cohorts, the amount of missing data was as follows:

Classification variable	Missing data (percent)		
	1980 Seniors	1980 Sophomores	1972 Seniors
Sex	4	7	0
Race/ethnicity (missing or other)	3	3	3
High school program	2	2	1
Socioeconomic status	3	5	0
Achievement composite	11	9	5
Geographical region	0	0	0
School type	0	0	0

The amount of data missing from the present HS&B data tapes will be reduced for most variables by obtaining it from followup surveys currently being planned for 1982 and 1984.

With two major exceptions (race/ethnicity and achievement composite), the classification variables were computed in a similar manner for both the 1972 and the 1980 surveys.

Race/Ethnicity

In NLS-72, race/ethnicity was determined by student answers to the single question: "How do you describe yourself?" The response options were American Indian, Black or Afro-American or Negro, Mexican-American or Chicano, Puerto Rican, Other Latin American origin, Oriental or Asian-American, White or Caucasian, or Other.

The category "Hispanic" included those who answered Mexican-American or Chicano, Puerto Rican, or other Latin American. The HS&B survey, however, had separate questions to determine Hispanic or Spanish ethnicity and race, and somewhat different terminology was employed: Mexican, Mexican-American, Chicano; Cuban, Cubano; Puerto Rican, Puertorriqueno, or Boricua; and Other Latin American, Latino, Hispanic, or Spanish descent to identify Hispanics, and Black, White, American Indian or Alaskan Native, Asian or Pacific Islander, and Other to separately identify racial groups. In HS&B, racial classifications were assigned only to those students not classified as Hispanic. Thus, unlike the earlier study, HS&B utilized the term "Hispanic" to mean students of Hispanic origin regardless of race. Unfortunately 16 percent of the 1980 seniors and 14 percent of the 1980 sophomores did not provide answers that permitted classification by ethnicity.

Achievement Composite

In NLS-72, the "achievement" composite was based on four standardized test scores: vocabulary, reading, mathematics, and letter-groups.[3] HS&B employed three of these four tests--a letter-groups test

[3] This composite is commonly referred to as an index of general "academic ability" in NLS-72 reports.

was not given--to develop a similar composite. In some instances, the 1972 and 1980 tests were identical (e.g., the senior vocabulary and reading tests); in others only subsets of items were identical. (Analysis of NLS-72 data shows that dropping the letter-groups test from the set of tests has virtually no effect on the composite score.) The weighted distributions of composite scores were used to group students by achievement composite (or decile).

Socioeconomic Status (SES)

For both studies, the SES index is a composite of five equally-weighted standardized components: father's education, mother's education, family income, father's occupation, and household items. The terms high, medium, and low SES refer to the upper, middle two, and lower quartiles of the weighted SES composite index distribution.

Curriculum

High school curricular program was identified from the answers of students to the question, "Which of the following best describes your present high school program?" In both studies the terminology "General" and "Academic or college preparatory" were two of the response options. In NLS-72, the third option was "Vocational or technical" with six listed subject areas. In HS&B this option was worded "Vocational (occupational preparation)" and a seventh subject area ("Technical occupations") was added.

Region

HS&B was designed to provide estimates for each of nine Census Bureau regions. For this report, however, these regions were collapsed into the four major regions employed in the design of NLS-72. These regions are:

Northeast (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania).

North Central (Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas).

South (Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, and Alabama).

West (Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii).

APPENDIX C

LIMITATIONS ON USE OF DATA

The statistics in this report are estimates derived from a sample. Two broad categories of error occur in such estimates: sampling and non-sampling errors.[4] Sampling errors occur because observations are made only on samples of students, not on entire populations. Non-sampling errors occur not only on sample surveys but also in complete censuses of entire populations.

Non-sampling errors can be attributed to many sources: inability to obtain complete information about all students in the sample (e.g., some are absent on survey day, refuse to participate, participate but answer only certain items, etc.); ambiguities in definitions; differences in interpretation of questions; inability or unwillingness to provide correct information; mistakes in recording or coding data; and other errors of collection, response, processing, sample coverage, and estimation of missing data.

The accuracy of a survey result is determined by the joint effects of sampling and non-sampling errors. In surveys with sample sizes as large as those employed in NLS-72 and HS&B, non-sampling errors are the primary concern, except where separate estimates are made for relatively small subpopulations.

Non-Sampling Errors

Nonresponse Bias. The following tabulation shows sample sizes for both studies:

Category	NLS-72 Number of schools	NLS-72 Percent	HS&B Number of schools	HS&B Percent
Drawn in sample and eligible	1,179	100	1,122	100
Participated:				
Drawn in original sample	949	80	811	72
Drawn in replacement sample	95	9	204	18
Total	1,044	89	1,015	90

Both studies employed two-stage sample designs: schools and students within schools. In the base-year surveys of both studies, substitution of similar schools for those that were initially sampled but would not or could not participate was permitted. The effect of school nonparticipation on estimates is thought to be fairly negligible but is not really known.

NLS-72 permitted a complex system for substituting other students for originally sampled students, which made it difficult to determine the student nonresponse rate. It appears to have been less than 5 percent, however while the HS&B student nonresponse rate was 16 percent. Three-quarters of the HS&B nonrespondents were absent on both survey and make-up days. In 1972, it was possible to obtain information from student files that enabled adjustment for nonresponse bias by use of such variables as sex, race, high school program, and grades. In HS&B it was not possible to obtain similar data from school files about HS&B nonrespondents because of privacy regulations. Attempts will be made in the HS&B first followup survey to have some base-year nonrespondents enter the study at that time. Other attempts will be made to adjust for nonresponding students.

Item response rates within completed questionnaires generally were quite high. For example, in NLS-72, the median response rate was 98 percent and was at least 95 percent for 90 percent of the items. For 8 items, however, the response rate was under 85 percent. In HS&B over 20 items were designated as key or critical items.

[4] Some information on the magnitudes of nonresponse bias and other types of non-sampling error in the NLS-72 survey is given in an unpublished document: Thomas F. Hilton, et al., "Final Report–The Base-Year Survey of the National Longitudinal Study of the High School Class of 1972," (including Appendix F, "Response Stability and Validity Studies"), Educational Testing Service. June 1973.

The response rates for these items generally were 98 percent or more, although for some of the most difficult or sensitive questions (e.g., parental income), the response rate fell as low as 85 percent. Unlike NLS-72, HS&B showed a decline in item response rates from the beginning to the end of the questionnaires. These rates reached limits of about 93 and 87 percent toward the end of the senior and sophomore questionnaires, respectively. Users of both studies are cautioned to be careful about interpreting the results for items that have high nonresponse rates. This applies particularly to HS&B items from the latter parts of the questionnaire that may not have been reached by slow readers or poorly motivated students.

Item nonresponse rates for classification variables are of special concern. The table in appendix B indicates that the nonresponse rates are satisfactorily low except for the academic achievement composite and sex (HS&B only).

Accuracy of Reported Data

Some information on the reliability of the tests and on the reliability and validity of certain classifications and other variables may be found in two places. One is the ETS report referenced in footnote 4 in this appendix. The other is the U.S. Department of Health, Education, and Welfare, Education Division report "Student Questionnaire and Test Results by Sex, High School Program, Ethnic Category, and Father's Education," NCES 75-208 (1975). Extensive data on the reliability of student responses are available but not yet analyzed. These data come from: (1) a re-survey in which a sub-sample of students responded to a sub-set of items a short time after answering the items initially; and (2) a comparison of answers given by twins and other siblings regarding family background. The Parent Survey questionnaire was designed to obtain validation information on a large number of student questionnaire items as well as family financial planning data; these data have not yet been analyzed.

Comparison of 1972 and 1980 Senior Cohort Data

Particular caution has to be exercised in comparing data for the two senior cohorts. A number of the problems may be inferred from the previous discussion in this appendix and appendix B. School and student response rates differ in the two surveys; furthermore, the characteristics of the nonrespondents may also differ in the two studies. Item response rates for questions that appear in both surveys differ. Not all tests were identical; a test equating analysis, not yet undertaken, may illuminate this issue. Furthermore, as indicated in appendix B, the measures of some other classification variables--and some nonclassification variables--have changed in ways that may affect the comparisons of changes between 1972 and 1980 for subgroups of seniors. Other differences between the two studies also may have some impact on the accuracy of comparisons of the two senior cohorts, although probably not as serious as the foregoing factors (e.g., change in order of administration of tests and questionnaires, administration of HS&B a month or so earlier in the school year than NLS-72, changes in administrative procedures, doubling of within-school sample size of HS&B, etc.)

Provisional Nature of Estimates

From the preceding discussion in this appendix, the reader should understand that the estimates contained in this report must be considered preliminary. They are, therefore, subject to revision when certain missing data have been captured, adjustments have been made on the basis of characteristics of nonrespondents, and studies of test score equating and response accuracy have been completed.

Sampling Errors

The particular sample used in a survey such as HS&B is only one of a large number of possible samples of the same size that could have been selected using the same

survey design. Estimates derived from the different samples would differ from each other. The standard error of a survey estimate is a measure of the variation among the estimates from the possible samples. Thus, it is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. The sample estimate, together with an estimate of its standard error, permit us to construct interval estimates with prescribed confidence that the interval includes the average result of all possible samples.

To illustrate: if all possible samples were selected, each was surveyed under the same conditions, and an estimate and its standard error were calculated from each sample, then--

- o About 95 percent of the intervals from 2 standard errors below the estimate to 2 standard errors above the estimate would include the average value of all possible samples. An interval of this size is called a 95 percent confidence interval;
- o Almost all (over 99 percent) of the intervals from 3 standard errors below to 3 standard errors above the sample estimate would include the average of all possible samples.

The closeness of these approximations depends on how closely the actual distribution of the statistic corresponds to the normal distribution. In case of sample percentages, the normal approximation is satisfactory, except for small samples and extreme percentage values. The normal approximation is sufficiently good for determining confidence intervals for all estimates presented in this report.

The standard error (s.e.) of a percentage (p) estimated from a simple random sample (SRS) of size n from a population that is much bigger than the sample size is approximately

$$\text{s.e. } (p) = [p(1-p)/n]^{1/2}$$

Since both NLS-72 and HS&B are complex stratified two-stage samples with differential sampling rates for various strata rather than simple random samples, it is necessary to adjust for design effect by multiplying the SRS estimate of the standard error of a proportion by 1.2 for NLS-72 estimated percentages and 1.6 for HS&B estimated percentages.[5]

Sample size values (n) for various subgroups are shown in table C.1. The values in this table, along with the above formula and the design effect multipliers, may be used to find standard errors of the percentages presented in the report. For example, if an estimate of 20 percent appears in the report for HS&B Hispanic sophomores, then the standard error of this estimate is

$$1.6[(20)(80)/3521]^{1/2} =$$
1.1 percentage points

The sampling error (95 chances in 100) is 2.2 percentage points; therefore, the 95 percent confidence interval is 17.8 percent to 22.2 percent.

In comparing the differences in two subpopulation percentages ($d = p-p'$), the standard error of the difference may be conservatively approximated by taking the square root of the sum of squares of the two standard errors. For example, if the estimated percentage for HS&B Hispanics is 20 percent, and the estimated percentages for HS&B non-Hispanic whites is 25 percent then the standard error for Hispanics, as we have just calculated, is 1.1 percentage points, and the standard error for non-Hispanic whites is

$$1.6[(25)(75)/(20,815)]^{1/2} =$$
0.5 percentage points

Thus the standard error of the difference is

$$[(1.1)^2 + (0.5)^2]^{1/2} =$$
1.2 percentage points

The sampling error (95 chances in 100) of the difference is 2.4 percentage points, and the 95 percent confidence interval for the difference (5 percentage points in favor of non-Hispanic whites) is 2.6 to 7.4 percentage points.

[5] These design effect multipliers generally will produce conservative estimates, except where HS&B private school students are concerned.

Table C.1.--Sample composition, by selected classification variables: NLS-72 and HS&B

Classification variable and subgroup	1972 Seniors		1980 Seniors		1980 Sophomores	
	Number	Percent	Number	Percent	Number	Percent
Total sample	16,683	100.0	28,240	100.0	30,030	100.0
Sex:						
Male	8,281	49.6	12,907	45.7	13,382	44.6
Female	8,397	50.3	14,086	49.9	14,511	48.3
Missing	5	0.0	1,247	4.4	2,137	7.1
Race/ethnicity:						
Hispanic	776	4.7	3,177	11.2	3,521	11.7
Non-Hispanic:						
Black	2,127	12.7	3,775	13.4	4,064	13.5
White	12,847	77.0	19,852	70.3	20,815	69.3
American Indian/Alaskan Native	189	1.1	217	0.8	278	0.9
Asian or Pacific Islander	193	1.2	365	1.3	323	1.1
Other or missing	551	3.3	854	3.0	1,029	3.4
Curriculum (self-reported):						
Academic or college preparatory	6,767	40.6	10,532	37.3	9,941	33.1
General	5,575	33.4	10,293	36.4	13,417	44.7
Vocational:						
Agricultural occupations	286	1.7	792	2.8	856	2.9
Business or office occupations	1,999	12.0	2,703	9.6	2,007	6.7
Distributive education	438	2.6	603	2.1	519	1.7
Health occupations	168	1.0	329	1.2	387	1.3
Home economic occupations	190	1.1	397	1.4	488	1.6
Technical occupations	NA	NA	562	2.0	517	1.7
Trade or industrial occupations	1,033	6.2	1,573	5.6	1,225	4.1
Missing	227	1.4	456	1.6	673	2.2
Socioeconomic status composite:						
Lowest quartile	4,827	28.9	8,409	29.8	8,245	27.5
Middle two quartiles	7,927	47.5	12,801	45.3	13,591	45.3
Highest quartile	3,863	23.2	6,180	21.9	6,801	22.6
Missing	66	0.4	850	3.0	1,393	4.6
Academic achievement composite:						
Lowest quartile	4,788	28.7	7,012	24.8	NA	NA
Middle two quartiles	7,000	42.0	12,195	43.2	NA	NA
Highest quartile	4,052	24.3	5,843	20.7	NA	NA
Missing	843	5.1	3,190	11.2	NA	NA

Table C.1.--Sample composition, by selected classification variables: NLS-72 and HS&B--(Continued)

Classification variable and subgroup	1972 Seniors		1980 Seniors		1980 Sophomores	
	Number	Percent	Number	Percent	Number	Percent
Region:						
Northeast	3,618	21.6	5,789	20.5	6,248	20.8
North Central	4,568	27.4	8,002	28.3	8,575	28.6
South	5,513	33.0	9,309	33.0	9,679	32.2
West	2,984	17.9	5,140	18.2	5,528	18.4
Missing	0	0	0	0	0	0
School type by curriculum:						
Public school:						
Academic program	6,038	36.2	8,029	28.4	7,554	25.2
Non-academic program	9,313	55.8	16,218	57.4	18,050	60.1
Private schools:						
Academic program	729	4.4	2,503	8.9	2,387	7.9
Non-academic program	376	2.3	1,034	3.7	1,366	4.5
Missing program data	277	1.4	456	1.6	673	2.2

NA indicates information not available.

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