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ABSTRACT

This report presents results of an examination of the 1980 seniors' and sophomores' transcript data collected in 1984 by the National Center for Education Statistics (NCES) as part of the High School and Beyond (HS&B) study. An introduction describes the purposes of this study of course-taking patterns in less-than-four-year institutions, which included creation of transcript analysis files available on data tapes. Part 1 provides the potential user of the transcript data with general information on the postsecondary transcript studies, structure of the transcript data files, analysis files, and postsecondary c taxonomy that was developed as a framework for describing post ary curricula and classifying course data from the HS&B transcript surveys. Part 2 describes course-taking patterns in less-than-four-year postsecondary institutions and shows researchers how standardized transcript data can be used to analyze course taking. Part 2 includes the following: attendance at less-than-four-year institutions; an overview of course taking at four types of institutions; and a more detailed discussion of course-taking patterns in public two-year institutions. Nine tables and 16 figures are provided. Appendixes include the following: a description of the data organization in the HS&B transcript studies; description of adjustments to the transcript files; credit adjustment factors for institutions requiring special treatment; course and taxonomy codes for each taxonomy category; and supplementary tables. (YLB)

A GUIDE TO USING POSTSECONDARY TRANSCRIPT DATA AND AN OVERVIEW OF COURSE TAKING IN LESS-THAN-FOUR-YEAR POSTSECONDARY INSTITUTIONS

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INTRODUCTION

By 1986 (six years after high school graduation), seventy-one percent of 1980 high school graduates reported that they had entered some type of postsecondary institution. Thirteen percent had enrolled in less-than-two-year institutions and thirty percent in two-year institutions. Also by 1986 (four years after high school graduation), sixty-seven percent of 1982 high school graduates had participated in some type of postsecondary education. Thirteen percent had enrolled in less-than-two-year institutions and twenty-seven percent in two-year institutions (Eagle & Schmitt, 1990, p. 9). What did they study? To answer this question, we examined the 1980 seniors' transcript data collected in 1984 by the National Center for Education Statistics (NCES) as part of the High School and Beyond (HS&B) study.

The project had three specific purposes: (1) to create and document analysis files using the transcript data that would be useful to other researchers as well as ourselves; (2) to create a taxonomy of postsecondary courses useful for analyzing course-taking patterns in less-than-four-year institutions; and (3) to present and overview of course-taking patterns in less-than-four-year institutions using the postsecondary transcript data for the 1980 high school seniors. It is important to remember that the sample used to examine postsecondary course-taking patterns in this report is nationally representative of 1980 high school seniors who entered postsecondary education between 1980 and 1984. It is *not* representative of all students who participated in postsecondary education during those years. We hope this report will encourage other researchers in vocational education to use this valuable data source.

The transcript data, collected in 1984 (for 1980 high school seniors) and in 1986 (for 1980 high school sophomores), are a rich source of information on the postsecondary course-taking patterns of high school graduates within the four to six years after they have finished their secondary education. However, the raw transcript data cannot be used for analyses that involve comparisons across institutions, because postsecondary institutions have different course titles, grading schemes, academic term types, and numbers of credits assigned for similar amounts of class time.

Although a uniform structure was imposed on the transcript information when it was converted to standardized, machine-readable data files, the actual information

contained in the original documents was preserved as much as possible. Course codes were added to indicate subject area, but grades and credit values were stored as they were reported in the original transcripts and were not transformed or rescaled to common metrics. This approach allows the individual researcher greater flexibility in organizing the data to meet the particular needs of a given analysis, but it also leaves the researcher the task of assessing the properties of the transcript elements of interest and making appropriate adjustments to the data to make comparisons across institutions valid.

In the course of this project, MPR Associates researchers have studied the transcript data carefully and have created analysis files for both the 1980 senior and sophomore cohorts that can be made available to other researchers upon request. To obtain the data tapes containing the transcript analysis files, contact

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In preparing the analysis files, we created common metrics for grades and credits, added some variables (including the taxonomy variable), and corrected some errors in institution and term types. Researchers planning to analyze these files should read this report carefully and also familiarize themselves with the users' manuals for the transcript studies, which describe in detail the sampling designs, response rates, and structure of the data files (Jones, Baker, & Borchers, 1986; Knight et al., 1988).

This report is designed to serve two purposes: (1) to provide the potential user of the transcript data with general information on the data and on the analysis files and taxonomy MPR created, and (2) to describe course-taking patterns in less-than-four-year postsecondary institutions. The description of course-taking patterns will be of interest to both the general reader and the researcher considering further analysis of transcript data.

THE TRANSCRIPT DATA AND COURSE TAXONOMY

The Postsecondary Transcript Studies

The HS&B study began with a base year data collection in spring 1980. More than twenty-eight thousand seniors and thirty thousand sophomores enrolled in 1,015 public and private high schools nationwide provided information on their individual and family backgrounds, high school and work experiences, and plans for the future. All of the 1980 sophomores and a sample of 12,200 of the 1980 seniors were followed up in 1982, in 1984, and again in 1986 to obtain information on topics such as their participation in postsecondary education, work experiences, and family status.

Drawing from the same sample, the NCES conducted a number of related studies, among which were postsecondary transcript studies for both the senior and sophomore cohorts. In 1984, NCES contracted with the National Opinion Research Center (NORC) to collect postsecondary transcripts for all members of the 1980 senior cohort who reported in either the first or second follow-up survey that they had attended a postsecondary institution after leaving high school. A total of 7,776 members of the senior cohort named at least one institution in at least one of the follow-up surveys. Transcripts were requested from each institution attended so that the study would have a complete history of the 1980 seniors' postsecondary attendance in the first four years after they graduated from high school.

In 1987, NORC collected transcripts for a sample of 1980 sophomores which was more restrictive than the sample of seniors. The sophomore transcript study focused on students who exhibited a normal pattern of postsecondary attendance—that is, students who entered a postsecondary institution in the fall immediately after they graduated from high school. Transcripts were not always collected from all the institutions attended. If a student transferred, transcripts were collected only if the student continued to follow a normal progression through postsecondary education. If a student stopped out and later enrolled in a second postsecondary institution, no transcript was collected from the second institution. In addition to the normal persisters, all students who were not normal persisters but who attended a proprietary institution, a private technical or a two-year institution, or a public technical institution during the study period were included in the sample. A total of 6,098 students were selected for the sample.

For both the 1980 seniors and sophomores, NCES obtained transcripts from all types of postsecondary institutions, ranging from those with only short-term vocational or occupational programs to universities with graduate and professional programs. NORC coded transcript information on terms of attendance, fields of study, degrees earned, and the titles, grades, and credits of every course attempted, then put the information into a system of data files designed to be linked with the HS&B questionnaire data files through the student identification number. Thus, the transcript studies allow researchers to examine course-taking patterns and postsecondary performance in conjunction with a wide assortment of other variables such as student characteristics and occupational and economic outcomes.

Structure of the Transcript Data Files

NORC organized the vast amount of information collected in the transcript studies into four separate files, each describing one of the following: students, transcripts, terms, or courses. Analysts may use the files separately or together, depending on their research needs, but most studies require merging the four files into a single hierarchical file in which courses are nested within terms, terms within transcripts, and transcripts by student. Appendix A lists the specific data included in each of the four files. The following summarizes how NORC organized the transcript data files into four separate records:

1. *Student Record*

   The student record contains identifying and survey control data, information about the student from the HS&B student questionnaires, and the sampling weight associated with the student. The inclusion of the student identification numbers allows merging of the transcript data with HS&B base year and follow-up data as well as with the other transcript files.

2. *Transcript Record*

   The transcript record indicates whether or not the requested transcript was received and contains information related to the entire period of attendance at the institution, such as the degree or certificate awarded, grade-point average, and field of study. A transcript record was created for each transcript requested for each student in the study. Multiple transcript records exist for students who attended more than one institution.

3. *Term Record*

The term record contains data such as the dates of the term, the type of term (semester, quarter, and so on), and the grading system in effect during the term. There is a term record for each term covered by each transcript. The number of term records associated with a student depends on the amount of time the student spent in postsecondary education.

4. *Course Record*

The course record contains the title of the course, entered verbatim from the transcript and then assigned an appropriate code. For the seniors, six-digit Classification of Instructional Programs (CIP) codes were used (Malitz, 1981). For the sophomores, a much less detailed coding system was developed. This coding system was based on the CIP, and the codes roughly correspond to the two-digit CIP codes, but they are more detailed: there are seventy-eight categories as opposed to fifty two-digit CIP codes. A course record was created for every course reported on the transcript.

The MPR Analysis Files

As mentioned above, postsecondary institutions have different course titles, grading schemes, term types, and numbers of credits assigned for similar amounts of class time. Consequently, raw transcript data cannot be used for analyses that involve comparisons across institutions. To make meaningful comparisons among institutions or types of institutions, the researcher must convert the data to common metrics.

To create the MPR analysis files, we made adjustments to the transcript files at the transcript, term, and course levels. These adjustments are described in detail in Appendix B and therefore are summarized only briefly here. At the transcript level, we added a new variable that describes institution type more accurately and in more detail than the original variable. At the term level, we added a new variable to describe term type and a flag to identify transfer terms that were not duplicated in later transcripts. The major changes to the transcript data were made at the course level, where credits were standardized to a semester metric. This process was simple for institutions with quarters, but not for vocational and proprietary institutions, many of which use clock hours rather than credits.

Clock hours are not computed in the same way in all institutions—that is, sometimes they indicate the number of hours in the classroom, but other times they appear to measure the amount of time a student works on the course material out of class as well as in class. Also at the course level, all grades were changed to a numerical four-point scale so that grade-point averages could be computed. This adjustment was not difficult because almost all institutions used an A, B, C, D, F convention.

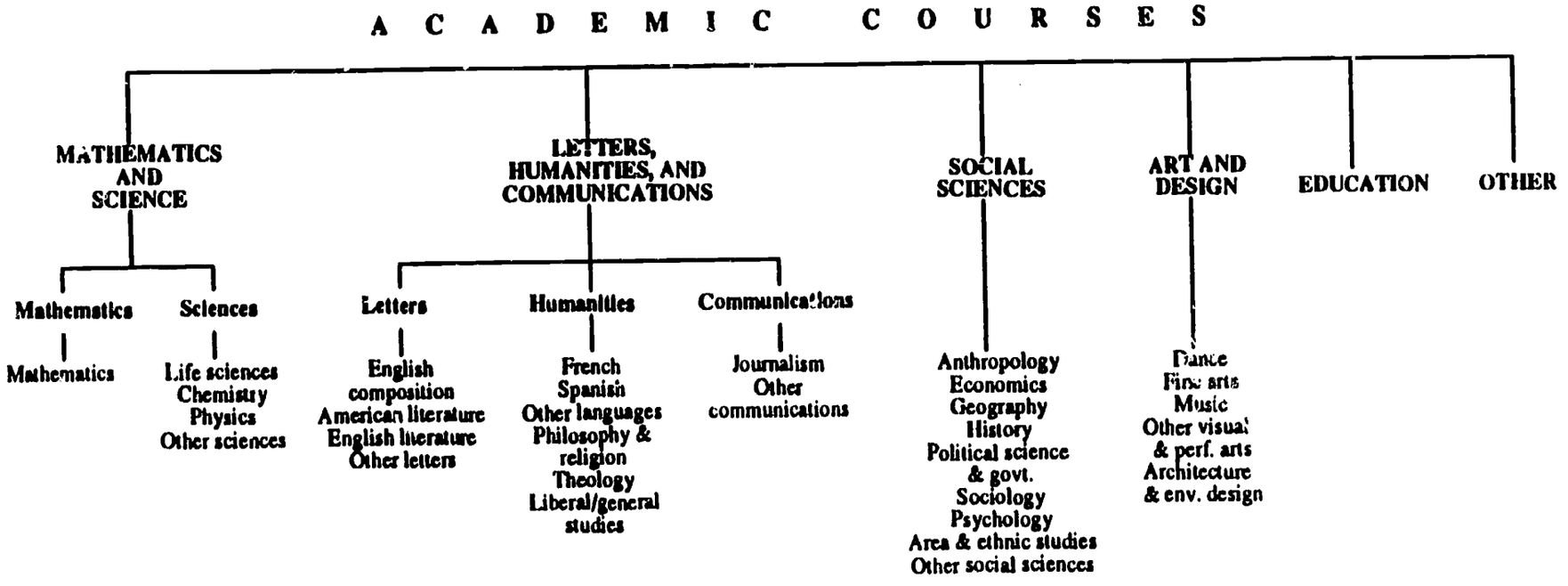
The Course Taxonomy

The Postsecondary Course Taxonomy was developed as a framework for describing postsecondary curricula and classifying course data from the HS&B transcript surveys. The taxonomy classifies postsecondary courses into categories that are disaggregated enough to make distinctions among groups of courses that are clearly different, but aggregated enough so that each category contains sufficient data to conduct analyses. At the most aggregated level, the taxonomy divides courses into three broad areas: vocational, academic, and personal skills (Figure 1). At the next level, the taxonomy breaks down the vocational and academic categories into seven vocational and six academic subject areas. At the third level, these thirteen areas are further broken down into detailed subject areas. A new variable, TAXON, was added to the MPR analysis file to indicate where each course belonged in each subject area. Appendix C lists the HS&B transcript study course codes included in each subject area.

The taxonomy was designed specifically for less-than-four-year postsecondary institutions, which include public two-year institutions, public vocational-technical institutions, private less-than-four-year institutions, and private proprietary institutions. The original intent was to create a taxonomy that was applicable to all types of postsecondary institutions. A single taxonomy, however, does not work very well if a distinction between vocational and academic course taking is important. Courses in many fields—business and engineering being prominent examples—are considered academic in four-year institutions, but vocational in two-year institutions. Nevertheless, the taxonomy could be used for four-year institutions without the vocational and academic distinction.

For the 1980 seniors, most course taking in less-than-four-year institutions occurred at public two-year institutions (Table 1). Of the fifty-nine thousand courses taken at less-than-four-year institutions, fifty thousand were at public two-year institutions.

Figure 1 Taxonomy of Vocational and Academic Courses for Less-Than-Four Year Postsecondary Institutions



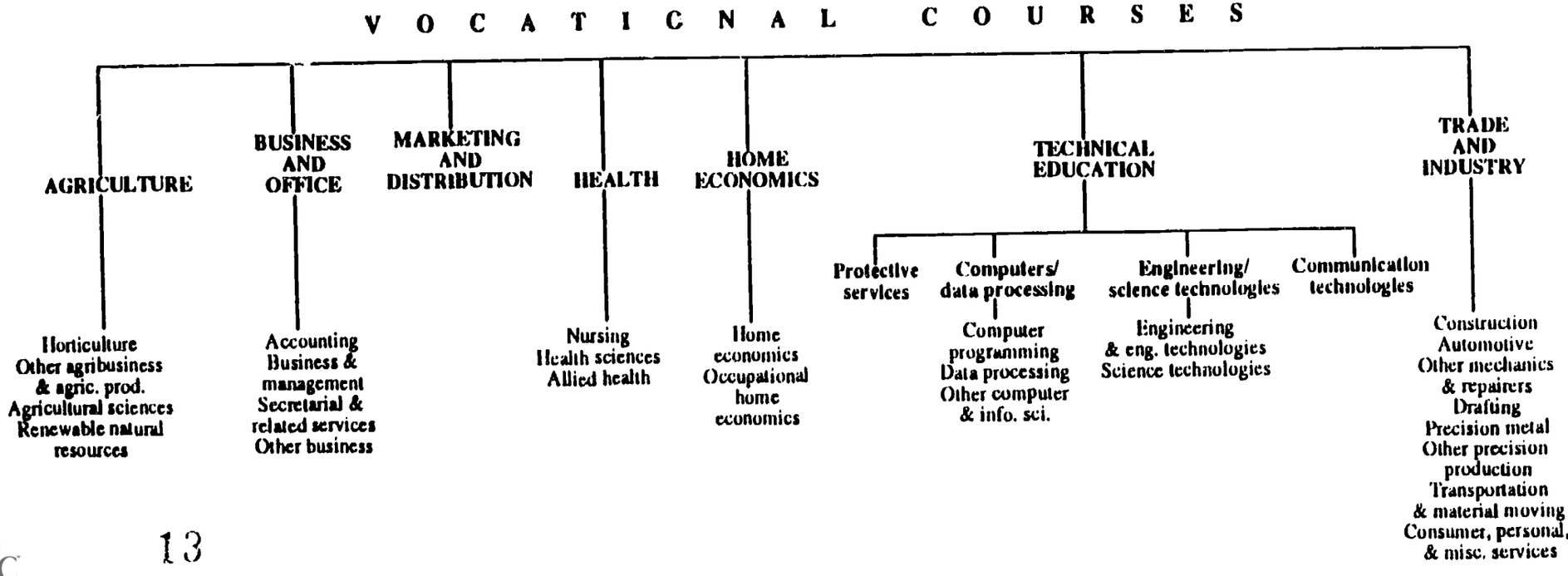


Table 1 Course Frequencies for 1980 Seniors

		Public 2-Year	Private Nonprofit < 4-year	Public Voc.-Tech.	Proprietary	All Institutions	Percent of All Courses
	ALL COURSES	49,916	2,722	2,336	4,148	59,122	100.0
A	ACADEMIC	29,594	1,594	479	1,288	32,955	55.7
1.0	MATHEMATICS AND SCIENCE	8,857	428	221	286	9,792	16.6
1.1	Mathematics	4,866	159	165	187	5,377	9.1
1.2	Science	3,991	269	56	99	4,415	7.5
1.2.1	Life sciences	1,925	176	38	56	2,195	3.7
1.2.2	Chemistry	1,006	49	10	18	1,083	1.8
1.2.3	Physics	444	14	7	25	490	0.8
1.2.4	Other sciences	616	30	1	0	647	1.1
2.0	LETTERS, HUMANITIES, AND COMMUNICATIONS	8,717	541	146	418	9,822	16.6
2.1	Letters	5,907	327	80	232	6,546	11.1
2.1.1	English composition	2,568	129	7	30	2,734	4.6
2.1.2	American literature	121	11	0	0	132	0.2
2.1.3	English literature	81	13	0	0	94	0.2
2.1.4	Other letters	3,137	174	73	202	3,586	6.1
2.2	Humanities	1,819	176	11	20	2,026	3.4
2.2.1	French	131	9	0	0	140	0.2
2.2.2	Spanish	448	8	5	1	462	0.8
2.2.3	Other languages	88	2	0	0	90	0.2
2.2.4	Philosophy and religion	495	67	1	10	573	1.0
2.2.5	Theology	18	58	0	0	76	0.1
2.2.6	Liberal/general studies	639	32	5	9	685	1.2
2.3	Communications	991	38	55	166	1,250	2.1
2.3.1	Journalism	159	5	0	10	174	0.3
2.3.2	Other communications	832	33	55	156	1,076	1.8
3.0	SOCIAL SCIENCES	8,124	381	58	155	8,718	14.7
3.1.1	Anthropology	169	4	0	1	174	0.3
3.1.2	Economics	1,025	49	15	34	1,123	1.9
3.1.3	Geography	218	5	3	3	229	0.4
3.1.4	History	1,776	92	9	29	1,906	3.2
3.1.5	Political science/government	1,033	23	5	14	1,075	1.8
3.1.6	Sociology	1,064	74	2	18	1,158	2.0
3.1.7	Psychology	2,255	124	15	49	2,443	4.1
3.1.8	Area and ethnic studies	81	4	0	7	92	0.2
3.1.9	Other social sciences	503	6	9	0	518	0.9

Table 1 Course Frequencies for 1980 Seniors—continued

		Public 2-Year	Private Nonprofit < 4-year	Public Voc.-Tech.	Proprietary	All Institutions	Percent of All Courses
4.0	ART AND DESIGN	2,610	177	31	344	3,162	5.3
4.1.1	Dance	259	16	1	0	276	0.5
4.1.2	Fine arts	556	56	5	137	754	1.3
4.1.3	Music	996	57	0	0	1,053	1.8
4.1.4	Other visual and perf. arts	710	48	10	187	955	1.6
4.1.5	Architecture/env. design	89	0	15	20	124	0.2
5.0	EDUCATION	454	14	3	1	472	0.8
6.0	OTHER	832	53	20	84	989	1.7
6.1.1	Law	671	35	18	82	806	1.4
6.1.2	Library/archival science	29	4	0	1	34	0.1
6.1.3	Social work	36	0	0	0	36	0.1
6.1.4	Public affairs	15	9	1	1	26	0.0
6.1.5	Parks and recreation	47	0	1	0	48	0.1
6.1.6	Military sciences	34	5	0	0	39	0.1
B	VOCATIONAL	14,299	880	1,722	2,678	19,579	33.1
7.0	AGRICULTURE	406	18	137	5	566	1.0
7.1.1	Horticulture	65	0	42	0	107	0.2
7.1.2	Other agrib./agric. prod.	132	0	54	0	186	0.3
7.1.3	Agricultural sciences	145	2	36	5	188	0.3
7.1.4	Renewable natural resources	64	16	5	0	85	0.1
8.0	BUSINESS AND OFFICE	5,628	280	547	1,182	7,637	12.9
8.1.1	Accounting	1,607	91	105	187	1,990	3.4
8.1.2	Business and management	1,685	92	70	185	2,032	3.4
8.1.3	Secretarial and related	748	34	50	315	1,147	1.9
8.1.4	Other business and office	1,588	63	322	495	2,468	4.2
9.0	MARKETING/DISTRIBUTION	461	32	51	208	752	1.3

Table 1 Course Frequencies for 1980 Seniors—continued

		Public 2-Year	Private Nonprofit < 4-year	Public Voc.-Tech.	Propri-etary	All Institutions	Percent of All Courses
10.0	HEALTH	1,264	321	220	227	2,032	3.4
10.1	Nursing	266	186	115	24	591	1.0
10.2	Health sciences	357	54	36	50	497	0.8
10.3	Allied health	641	81	69	153	944	1.6
11.0	HOME ECONOMICS	1,117	86	87	161	1,451	2.5
11.1.1	Home economics	514	41	29	129	713	1.2
11.1.2	Occupational home economics	603	45	58	32	738	1.2
12.0	TECHNICAL EDUCATION	3,774	120	290	415	4,599	7.8
12.1	Computers/data processing	1,740	54	67	184	2,045	3.5
12.1.1	Computer programming	738	25	19	95	877	1.5
12.1.2	Data processing	528	18	29	38	613	1.0
12.1.3	Other computer/info. science	474	11	19	51	555	0.9
12.2	Engineering/science technologies	1,433	53	179	223	1,888	3.2
12.2.1	Eng./eng. technologies	1,418	38	178	223	1,857	3.1
12.2.2	Science technologies	15	15	1	0	31	0.1
12.3	Protective services	529	9	0	2	540	0.9
12.4	Communications technologies	72	4	44	6	126	0.2
13.0	TRADE AND INDUSTRY	1,649	23	390	480	2,542	4.3
13.1.1	Construction	61	1	42	5	109	0.2
13.1.2	Automotive	437	0	97	83	617	1.0
13.1.3	Other mechanics and repairers	153	8	50	63	274	0.5
13.1.4	Drafting	246	2	25	54	327	0.6
13.1.5	Precision metal	217	0	66	14	297	0.5
13.1.6	Other precision production	333	12	74	73	492	0.8
13.1.7	Transportation/material moving	100	0	13	16	129	0.2
13.1.8	Consumer/personal/misc. serv.	102	0	23	172	297	0.5
C	**PERSONAL SKILLS, AVOCATIONAL, AND REMEDIAL COURSES**						
14.0	PERS. SKILLS/AVOC./REMED.	6,023	248	135	182	6,588	11.1

More than one-half (56%) of the courses taken at less-than-four-year institutions were in academic areas, thirty-three percent were in vocational areas, and eleven percent were in the personal skills/avocational area. Table 1 can be used by researchers as a guide to determine what types of analyses and comparisons are feasible. For example, it shows that there was relatively little course taking at private, nonprofit, less-than-four-year institutions or at public vocational-technical institutions, which would make it very difficult to analyze course taking in these types of institutions using the taxonomy's detailed categories.

Using the Transcript Data

We hope that other researchers will find the MPR analysis files and taxonomy useful for their own research and that the work done to increase the accuracy of the transcript data and to standardize grades and credits will enable others to avoid going through the same process. Because others might disagree with some of the adjustments made, the original credits, grades, and course codes have not been removed; instead, new variables were simply added to the file. Therefore, a researcher who might want to make a different type of credit adjustment could still start with the MPR analysis files and take advantage of the other adjustments and the taxonomy.

The prospective user of the transcript data is cautioned that the transcripts for proprietary institutions, public vocational-technical institutions, and private less-than-four-year institutions are quite varied and are different from transcripts from the other types of postsecondary institutions. Therefore, it is extremely difficult to make valid comparisons either among institutions within one of these categories or between institutions in any of these categories and other types of postsecondary institutions such as public two-year or public or private four-year institutions. Many vocational institutions do not have terms, courses, or credit systems that resemble (or can be easily converted to) the metrics typically used in two- and four-year institutions. A more serious problem, however, is that the transcripts from these institutions are missing a lot of data on term dates, grades, credits, and course titles. Researchers who are interested in using transcripts from less-than-four-year institutions other than public two-year institutions are urged to print out and examine a sample of transcripts from these institutions. The researcher must look at the transcripts to judge whether or not the planned analysis is feasible.

Missing credit data is a particularly significant problem for proprietary and public vocational-technical institutions. Approximately twenty-two percent of all courses from proprietary institutions and fifteen percent of all courses from public vocational-technical institutions are missing credits. By contrast, only one percent of all courses in the other types of institutions have missing credits. Because it is difficult to examine credits meaningfully when there is so much missing data, we recommend that course counts rather than credits earned be used when making comparisons involving proprietary and public vocational-technical institutions.

The prospective user of course codes should be aware that for the 1980 seniors, the four- and six-digit CIP codes are not very reliable, a judgment based on examination of the coding of a sample of course titles. In fact, the six-digit codes should probably not be used at all. Anyone wanting to use the four-digit code should print out samples of courses in the series of interest to get an idea of how many courses might be misclassified within the series. The two-digit CIP codes tend to be quite reliable, with two exceptions: the 24XXX (liberal/general studies) and 30XXX (interdisciplinary) series. Misclassified courses in these two series were correctly classified for the taxonomy, but the original transcript course codes were not changed.

COURSE-TAKING PATTERNS: STUDENTS ATTENDING LESS-THAN-FOUR-YEAR POSTSECONDARY INSTITUTIONS

This description of course taking includes all 1980 high school seniors who enrolled in less-than-four-year postsecondary institutions in the first four years after high school (between 1980 and 1984), regardless of when they entered or stopped attending these institutions and whether or not they earned a degree. It includes students with a wide range of educational objectives, including those who hope to transfer to a four-year institution, students who want to earn an associate degree or vocational certificate, and students who have no degree objective. Those with no degree objective may either be students who want to take courses to strengthen specific skills, or they may be students who wish to explore possible fields of study. In addition to having various educational objectives, students included in this study have also attended less-than-four-year

institutions for varying lengths of time. For example, they may have attended for the entire four-year period; they may have just entered; or they may have entered once, stopped attending, and reentered.

This description is intended to summarize course taking in less-than-four-year postsecondary institutions for the general reader and to show researchers how standardized transcript data can be used to analyze course taking. All the differences discussed in this report are statistically significant ($p \leq 0.05$) using a *Student's t test.*

Attendance at Less-Than-Four-Year Institutions

The great majority of students (85%) who attended less-than-four-year institutions were enrolled in public two-year institutions (Table 2). Approximately nine percent attended private proprietary institutions, while five percent and four percent, respectively, attended public vocational-technical and private less-than-four-year institutions.

As illustrated in Figure 2, among students who attended public two-year institutions, proprietary institutions, and private less-than-four-year institutions, a greater percentage were female than male. Although the difference between the percentages of males and females at public vocational-technical institutions was relatively large, the difference was not statistically significant because of the small size of the sample of students attending this type of institution.

Overall among students who attended less-than-four-year institutions, the percentage of minorities was small (Figure 3). Because of the small sample of students attending types of institutions other than public two-year, it was difficult to determine the extent to which the racial/ethnic compositions of the different types of institutions varied. However, there were a few significant differences. For example, Native Americans accounted for a greater percentage of the students in public vocational-technical institutions than they did in either private proprietary or public two-year institutions (2% compared with less than 1% in either proprietary or public two-year institutions). Black students also accounted for a greater percentage of the students in public vocational-technical institutions than they did in public two-year institutions (15% compared with 10%) Asian students

accounted for two percent of the students who attended public two-year institutions, but none attended public vocational-technical institutions.

Overview of Course Taking in Less-Than-Four-Year Institutions

This section provides an overview of course taking at the four types of less-than-four-year institutions. Comparisons are limited by the variable nature of transcripts from proprietary, public vocational-technical, and private less-than-four-year institutions. Many of these institutions did not have academic terms or credit systems that resembled the standard collegiate metric. Therefore, making direct comparisons of credits completed is difficult. These institutions also had a great deal of missing data for term dates, grades, credits, and so on. The extent of missing data for credits is shown in Figure 4. Because of the large amount of missing data on credits, we examined only courses attempted rather than credits earned in order to make reasonably valid comparisons of course taking in these institutions. (See Appendix B, "Using the Transcript Data," for a more detailed discussion of making comparisons among different types of institutions.)

Two aspects of course taking are presented here. The first is general participation, which is the percentage of students who attempted courses in a given area. The second is course-taking intensity, as measured by the average number of courses attempted within a given area. Generally, these two measures exhibit similar patterns. For example, if a greater percentage of students take courses in Field A than in Field B, the average number of courses taken in Field A is usually also larger than the number taken in Field B. However, this is not always the case, and exceptions to the pattern are discussed.

The taxonomy of courses developed for this study designates three major areas of study: vocational, academic, and personal skills. Overall eighty-two percent took vocational courses, eighty-seven percent of the students took academic courses, and fifty-three percent took personal skills courses (Figure 5). The intensity of course taking was greatest in the academic area, with students taking an average of 8.4 academic courses (Figure 6). By comparison, students took an average of 5.5 vocational courses and 1.6 personal skills courses. These course-taking patterns, however, reflect primarily the course taking of students in public two-year institutions because eighty-two percent of the students in less-than-four-year institutions attended public two-year institutions. Figure 7

Table 2 **Percentage of 1980 High School Seniors Who Attended Less-Than-Four-Year Institutions Between 1980 and 1984**

Institution type	Percent	N
Public 2-year	82	3,036
Private proprietary	9	335
Public vocational-technical	5	195
Private less-than (lt)-4-year	4	145
Total	100	3,711

Figure 2 **Percentage of 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984, by Gender**

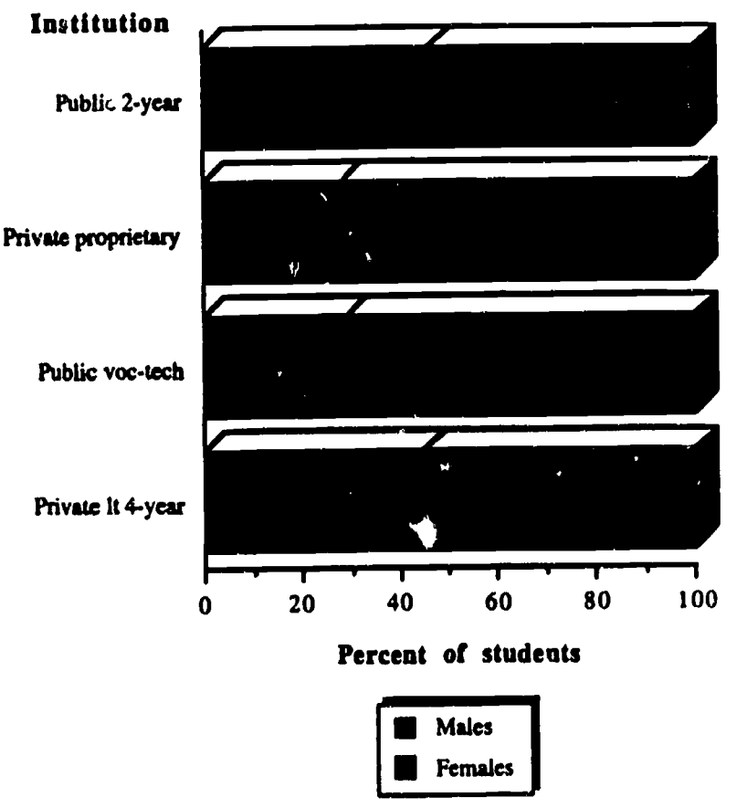


Figure 3 Percentage of 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984, by Race/ Ethnicity

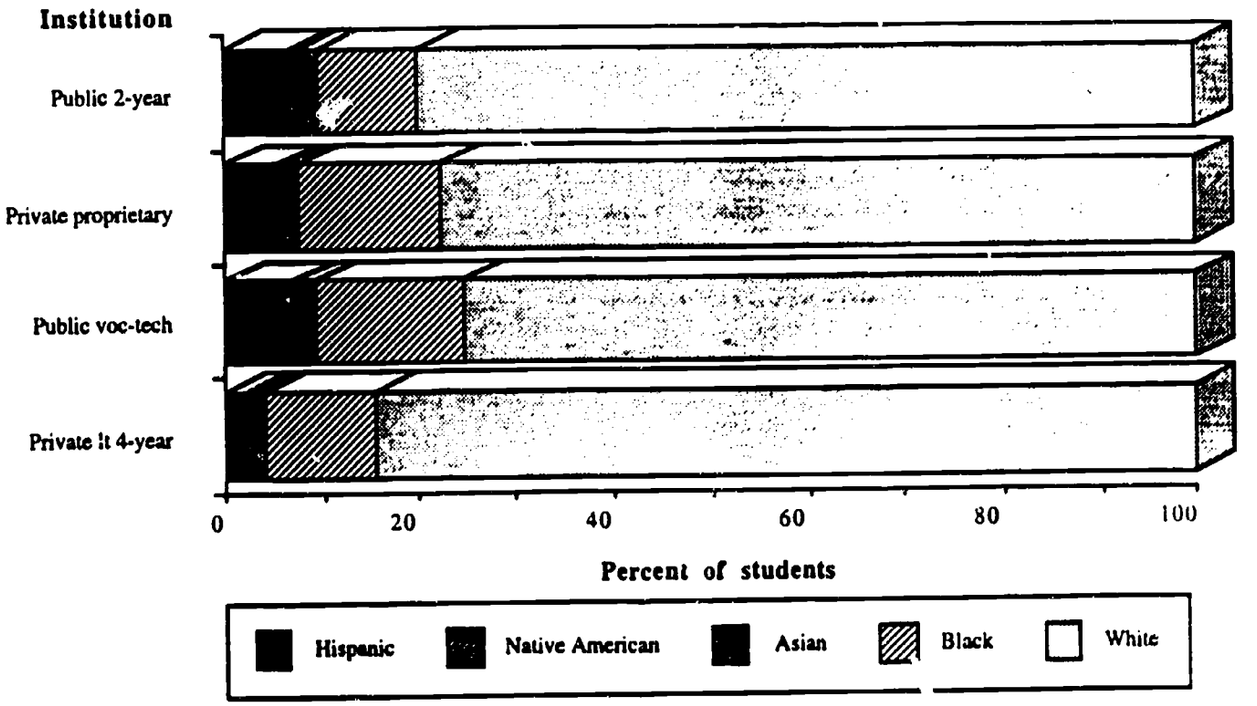


Figure 4 **Percentage of 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984 With Missing Credit Data**

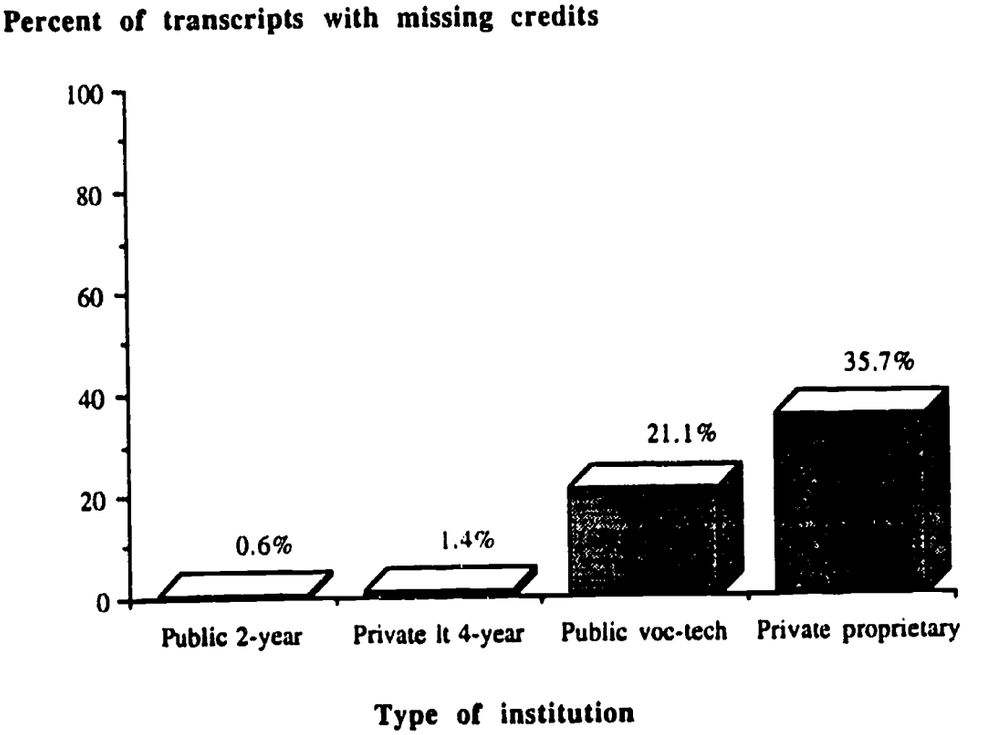


Figure 5 Percentage of 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984 Taking Courses in Various Areas of Study

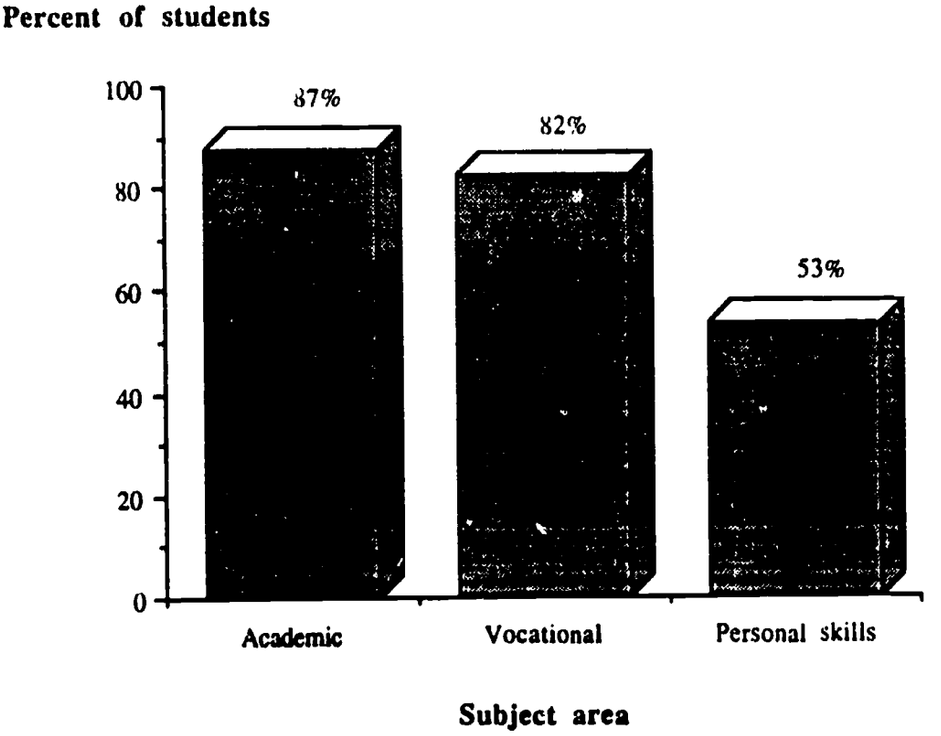


Figure 6 Average Number of Courses Taken by 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984 in Various Areas of Study

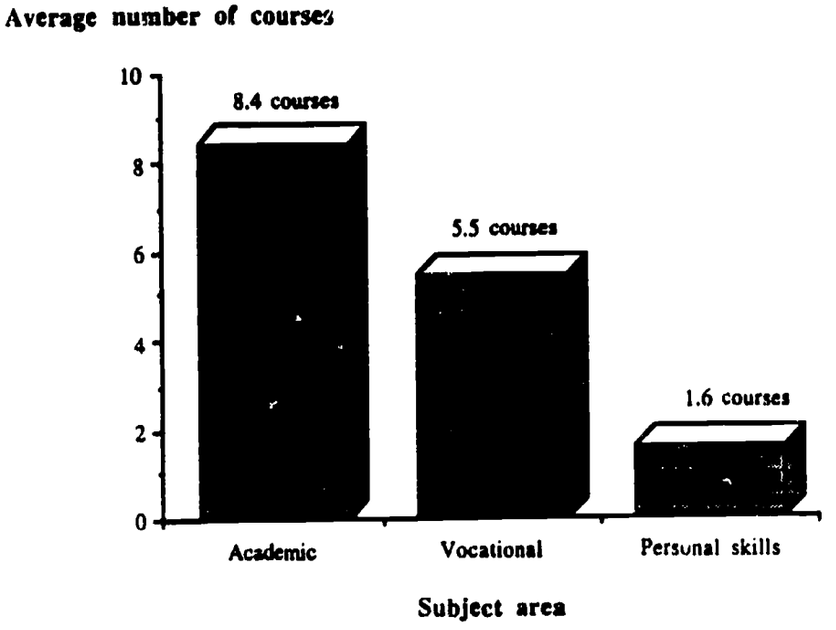
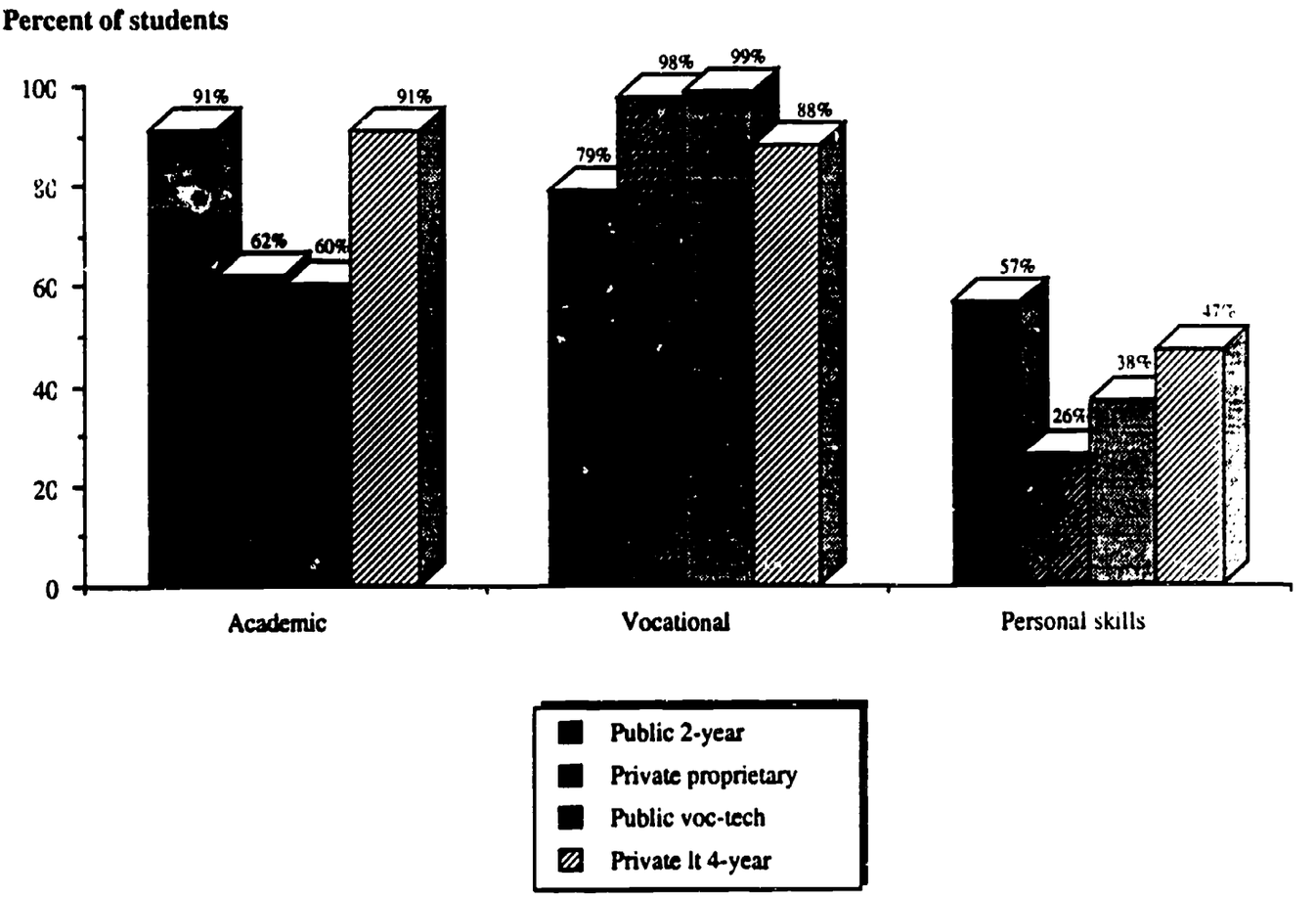


Figure 7 Percentage of 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984, Taking Courses in Various Areas of Study, by Institution Type



shows the percentage of students taking courses in the three areas of study for each type of less-than-four-year institution. Given the vocational emphasis of private proprietary and vocational-technical institutions, it is not surprising that among students attending these institutions, nearly all took vocational courses, while only about sixty percent took academic courses. In private less-than-four-year institutions, on the other hand, similar percentages of students took vocational and academic courses (88% and 91%, respectively). (See Appendix E for detailed tables of the percentage of students taking courses and the average number of courses taken.)

The participation of students in specific academic and vocational courses is shown in Figures 8a and 8b. More than sixty percent of students in less-than-four-year institutions took courses in three academic fields: social sciences, letters, and mathematics. In the vocational area, fifty percent of the students participated in business, more than the percentage participating in any other field. Students also took more courses in the fields of high participation—social sciences, letters, and mathematics in the academic area and business in the vocational area—than they did in other fields (Figures 9a and 9b).

Vocational Course Taking in Less-than-Four-Year Institutions

In all types of less-than-four-year institutions, a greater percentage of students took courses in business than in any other field (Table 3). Second to business, the fields that had the highest participation were trade and industry in private proprietary and public vocational-technical institutions, computer/data processing in public two-year institutions, and both home economics and health in private less-than-four-year institutions. Participation in other vocational fields (not shown in Table 3) including agriculture, protective services, and communications was very low (7% or fewer took courses in these fields).

As already indicated, when a large percentage of students took courses in a specific field, they usually also took a relatively large number of courses in that field. However, business course taking in public vocational-technical institutions and health course taking in private less-than-four-year institutions were exceptions to this pattern. In public vocational-technical institutions, the percentage of students taking business courses was lower than in other types of institutions (e.g., 41% compared with 54% in private proprietary institutions). However, the average number of courses taken in business was

as great in public vocational-technical institutions as it was in private proprietary institutions (3.6 courses), the type of institution with the highest participation (Table 4). In private less-than-four-year institutions, a greater percentage of students participated in business than in health (48% compared with 27%), but students actually took more courses in health than in business, on average (3.2 courses compared with 1.9 courses), as shown in Tables 3 and 4.

Course Taking in Public Two-Year Institutions

This section provides a more detailed discussion of course-taking patterns of students in public two-year institutions—the type of institution attended by eighty-two percent of the students who enrolled in less-than-four-year institutions. Transcript data from these institutions are standard and relatively complete, making it possible to examine participation in specific fields of study in terms of the percentage of students who earned any credits rather than simply the percentage who enrolled in courses, as was necessary when examining all types of institutions.

Participation in both vocational and academic fields of study in public two-year institutions was high: seventy-one percent of students earned vocational credits and eighty-five percent earned academic credits (Table 5). (See Appendix E for detailed tables of course taking in public two-year institutions.) However, the intensity of course taking in academic fields was much greater than in vocational fields: students earned an average of twenty academic credits compared with eleven vocational credits (Table 6). Fifty percent of the students earned personal skills credits, earning an average of two credits.

Slightly more than one-half (51%) of all students in public two-year institutions earned five or fewer vocational credits, and twenty-nine percent earned no vocational credits (Figure 10). However, as shown in Table 7, the students who earned no vocational credits also completed relatively few academic credits (12.9 on average). On the other hand, students who earned even a minimal number of vocational credits (up to five credits) earned an average of eighteen academic credits.

Approximately one-fourth of the students completed more than five up to fifteen credits. Approximately twenty-four percent of the students earned more than fifteen

Figure 8a Percentage of 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984 Taking Courses in Various Academic Subjects

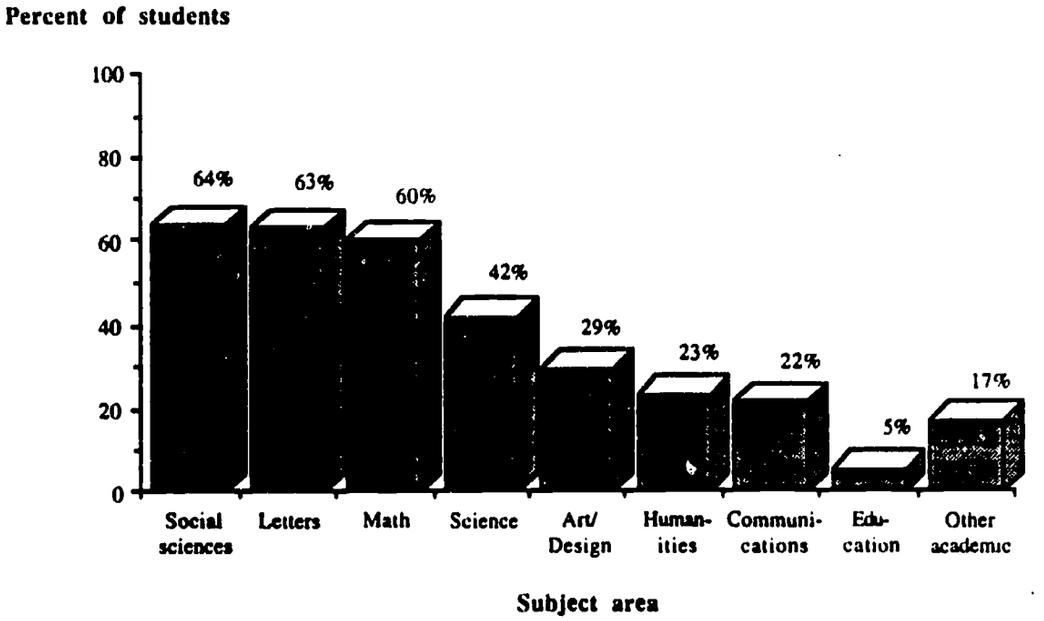


Figure 8b Percentage of 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984 Taking Courses in Various Vocational Subjects

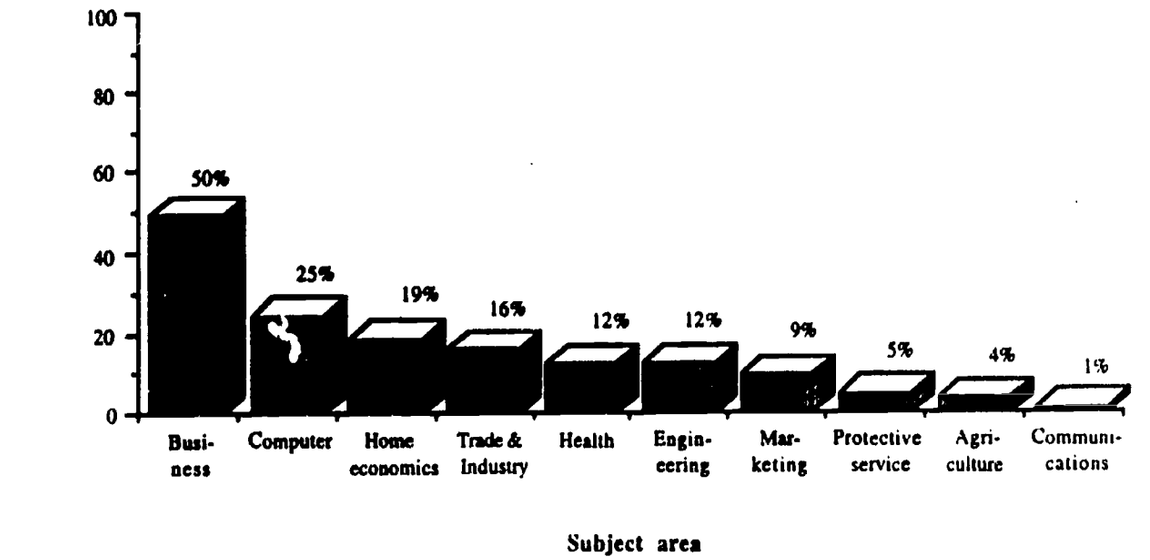


Figure 9a Average Number of Courses Taken by 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984 in Various Academic Subjects

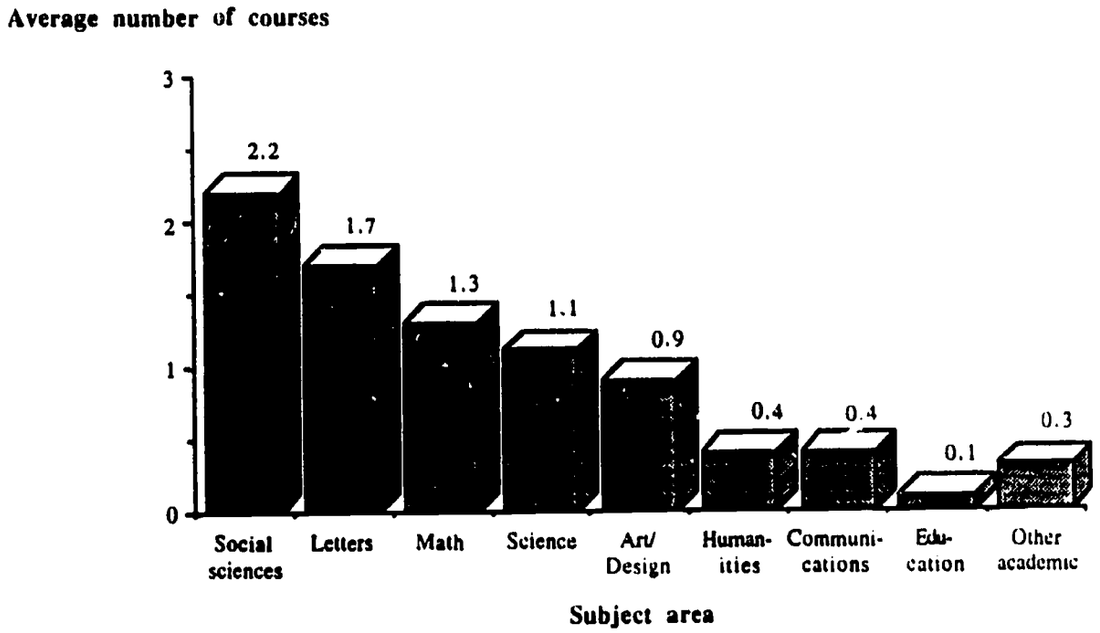


Figure 9b Average Number of Courses Taken by 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984 in Various Vocational Subjects

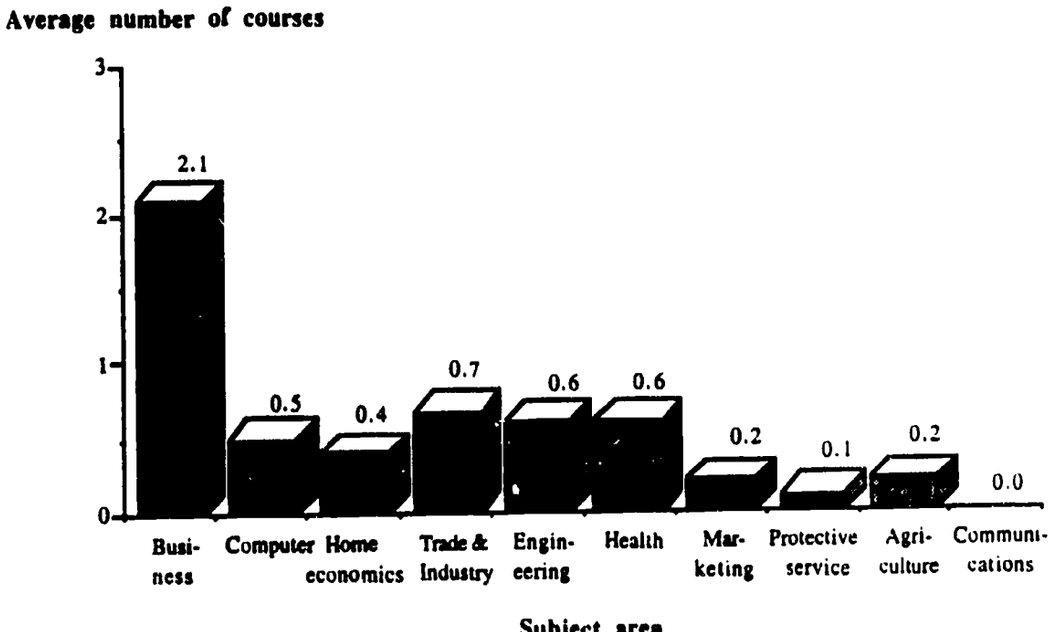


Table 3 **Percentage of 1980 High School Seniors Taking Courses in Less-Than-Four-Year Institutions Between 1980 and 1984, by Vocational Field**

	Percent of students taking courses in						
	Business	Mkting.	Computers	Trade & Indust.	Home Ec.	Health	Engin.
Institution type							
Public 2-year	48.8	7.6	24.9	13.2	18.6	11.4	11.6
Private proprietary	53.5	15.3	19.5	30.0	11.5	9.1	12.3
Public vocational-tech.	41.0	12.4	18.6	31.8	15.5	13.9	21.4
Private less-than-4-year	48.1	8.4	22.2	6.2	29.7	26.6	8.7

Table 4 **Average Number of Courses Taken by 1980 High School Seniors Attending Less-Than-Four-Year Institutions Between 1980 and 1984, by Vocational Field**

	Average number of courses taken in						
	Business	Mrkting	Computers	Trade & Indust.	Home Ec.	Health	Engin.
Institution type							
Public 2-year	1.7	0.1	0.5	0.5	0.3	0.4	0.6
Private proprietary	3.6	0.5	0.6	1.0	0.3	0.7	0.7
Public vocational-tech.	3.6	0.4	0.4	2.0	0.6	1.4	0.4
Private less-than-4-year	1.9	0.2	0.3	0.2	0.8	3.2	0.4

Table 5 **Percentage of 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984, Earning Credits in Various Areas of Study**

	Percent of public two-year institution students earning		
	Academic Credits	Vocational Credits	Personal Skills Credits
TOTAL	85.2	71.3	50.0
Sex			
Male	84.7	74.3	53.1
Female	85.5	68.7	47.3
Race/ethnicity			
Hispanic	82.4	72.3	61.7
Native American	92.4	68.5	75.6
Asian	90.1	72.8	64.0
Black	85.2	61.9	48.0
White	85.3	72.3	48.7
Socioeconomic status			
Low	83.8	72.5	54.7
25-49%	84.3	73.0	53.2
50-75%	86.3	72.8	48.0
High	87.9	67.3	47.7

Table 6 Average Number of Credits Earned by 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984, in Various Areas of Study

	Average number of credits earned		
	Academic Credits	Vocational Credits	Personal Skills Credits
TOTAL	19.9	10.9	2.1
Sex			
Male	20.0	12.2	2.3
Female	19.8	9.7	1.9
Race/ethnicity			
Hispanic	20.0	10.4	2.9
Native American	22.8	8.9	3.7
Asian	28.7	9.4	3.6
Black	14.9	8.0	2.5
White	20.3	11.3	1.9
Socioeconomic status			
Low	16.8	11.8	2.4
25-49%	18.8	13.5	2.3
50-75%	20.5	11.5	1.9
High	22.9	8.7	1.9

Figure 10 Percentage of 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984, Who Earned Various Numbers of Vocational Credits

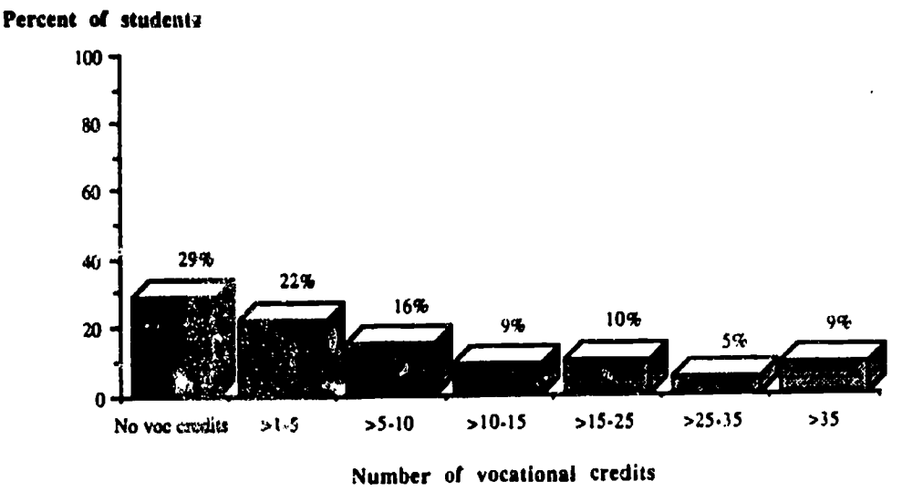


Table 7 **Average Number of Academic Credits Earned in Relation to the Number of Vocational Credits by 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984**

Number of vocational credits	Average number of academic credits
None	12.9
>0-5 credits	18.0
>5-10 credits	20.6
>10-15 credits	27.3
>15-25 credits	29.0
>25-35 credits	26.1
>35 credits	23.9

credits, with fifteen percent of them earning more than fifteen up to thirty-five credits and nine percent completing more than thirty-five credits.

Females and males were equally likely to earn academic credits (Table 5). However, males were more likely than females to earn vocational credits (74% compared with 69%). Males were also more likely than females to earn personal skills credits (53% compared with 47%).

There were racial/ethnic group differences in the average number of credits earned in vocational and academic fields. Black students, for example, earned fewer vocational credits on average (8.0 credits) than white students, who earned an average of 11.3 credits, and Hispanic students, who earned an average of 10.4 credits. The average number of vocational credits earned by Asians (9.4 credits) was not statistically different from the number earned by black students (8.0 credits). Black students also earned fewer academic credits (14.9 on average) than Asian, white, or Hispanic students, who earned an average of 28.7, 20.3, and 20.0 academic credits, respectively (Table 6).

The number of vocational and academic credits earned was also related to a student's socioeconomic status. Students with high socioeconomic status earned fewer vocational credits (8.7 on average) and more academic credits (22.9 on average) than did students with low socioeconomic status, who earned 11.8 vocational and 16.8 academic credits on average.

Academic Fields

Social science was the academic field in which students participated the most and earned the largest number of credits. Sixty-three percent of the students participated in social science, and they earned an average of 5.8 credits in this area (Figure 11 and Table 8). Social science was followed by letters, mathematics, and science. Fifty-nine percent earned credits in letters (an average of 3.8 credits), fifty-two percent in mathematics (an average of 3.0 credits), and thirty-nine percent in science (an average of 3.2 credits). Fewer than thirty percent of the students in public two-year institutions participated in any of the following academic fields: art/design (28%), humanities (20%), communications (18%), and education (5%).

There were gender differences in the percentage of students earning credits in mathematics and education (Figure 12). Fifty-eight percent of males earned mathematics credits (an average of 3.7) compared with forty-seven percent of females (who earned an average of 2.4 mathematics credits). In the field of education, on the other hand, females participated more than males (7% compared with 3%) and also earned more credits on average (0.5 compared with 0.1).

There were some racial/ethnic group differences both in participation and in the number of credits earned in specific academic fields (Figure 13). Greater percentages of Asian students than white or black students participated in mathematics, science, and humanities. Sixty-nine percent of Asian students participated in mathematics, compared with forty-five percent of black students and fifty-two percent of white students. Similarly, fifty-two percent of Asian students participated in science, compared with thirty percent of black students and forty percent of white students; forty-one percent of Asian students participated in humanities, compared with fifteen percent of black students and nineteen percent of white students. Moreover, white students participated in mathematics and science and earned more credits in these fields than black students. Hispanic students, on the other hand, participated in humanities at a greater rate and earned more credits in this field on average than either black or white students.

The socioeconomic status (SES) of students made more of a difference in the number of credits that they earned in academic fields than it did in the extent of their participation. For example, as shown in Figure 14, high SES students participated more than low SES students in science (46% compared with 32%), in social science (67% compared with 54%), and in art/design (34% compared with 21%). High SES students earned more credits than low SES students not only in these fields, but also in mathematics and letters (Table 8). Low SES students participated in education more than high SES students (9% compared with 4%), but there was no statistically significant difference between black and white students in the number of education credits earned (0.1 and 0.3).

Vocational Fields

More students participated in business than in any other vocational field: forty-one percent earned business credits, with an average of 3.8 credits (Figure 15 and Table 9).

Figure 11 **Percentage of 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984, Participating in Various Academic Fields**

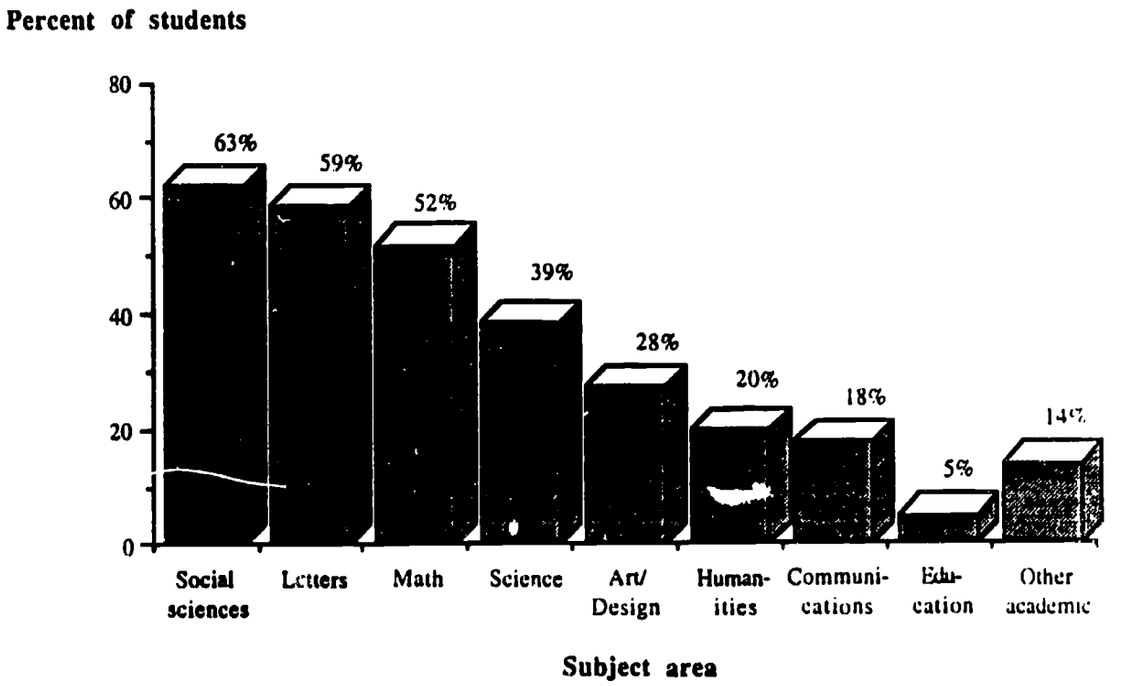


Table 8 Average Number of Credits Earned by 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984 in Various Academic Fields

	Average number of credits earned								
	Math Credits	Science Credits	Letter Credits	Humanit Credits	Commun Credits	Soc Sci Credits	Art/ Design Credits	Educ Credits	Other Acad Credits
TOTAL	3.0	3.2	3.8	1.0	0.7	5.8	1.4	0.3	0.6
Sex									
Male	3.7	3.3	3.7	1.0	0.6	5.8	1.4	0.1	0.5
Female	2.4	3.2	3.9	1.0	0.9	5.8	1.5	0.5	0.7
Race/ethnicity									
Hispanic	3.1	2.5	4.1	2.0	0.6	5.5	1.3	0.3	0.6
Native Am	3.2	3.6	5.1	1.1	0.7	6.6	1.5	0.1	0.9
Asian	4.7	5.4	4.0	2.7	0.5	8.1	2.4	0.3	0.5
Black	2.3	1.8	3.4	0.7	0.6	4.5	1.0	0.1	0.5
White	3.0	3.4	3.8	0.9	0.8	5.9	1.5	0.3	0.6
Socioeconomic status									
Low	2.7	2.4	3.3	1.1	0.6	4.5	1.1	0.7	0.5
25-49%	2.7	3.0	3.9	0.9	0.6	5.3	1.5	0.1	0.9
50-75%	2.9	3.3	4.0	1.0	0.7	6.2	1.5	0.3	0.5
High	3.5	3.9	4.2	1.2	0.8	6.7	1.6	0.3	0.6

Figure 12 Percentage of 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984, Participating in Mathematics and Education, by Gender

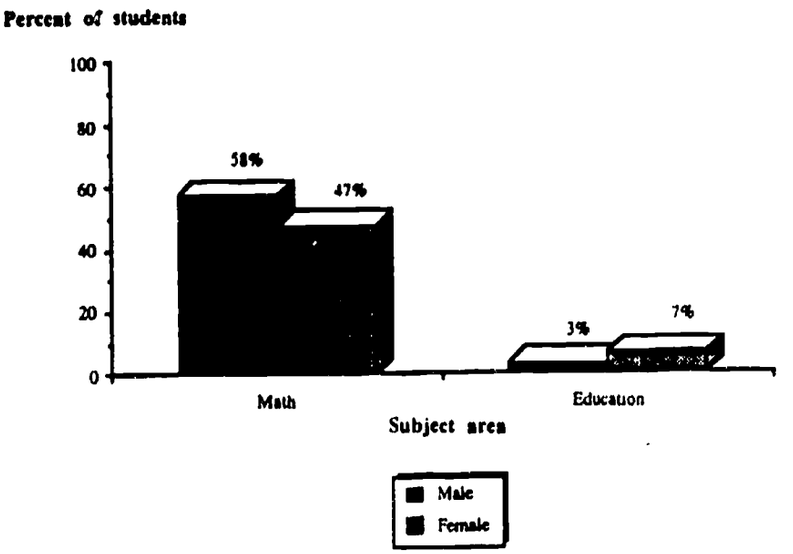


Figure 13 Percentage of 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984 Participating in Various Academic Fields, by Race/Ethnicity

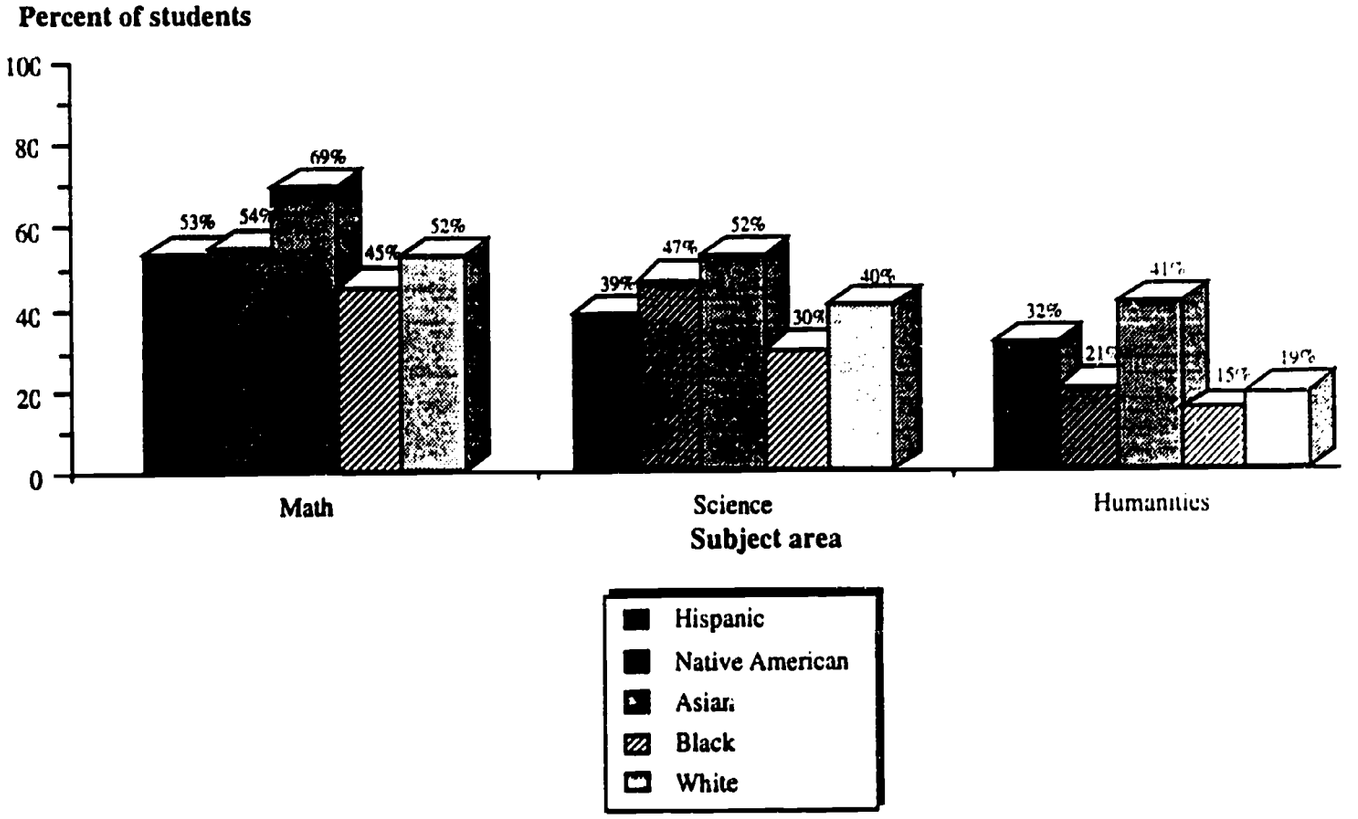


Figure 14 Percentage of 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984, Participating in Various Academic Fields, by Low and High SES Classes

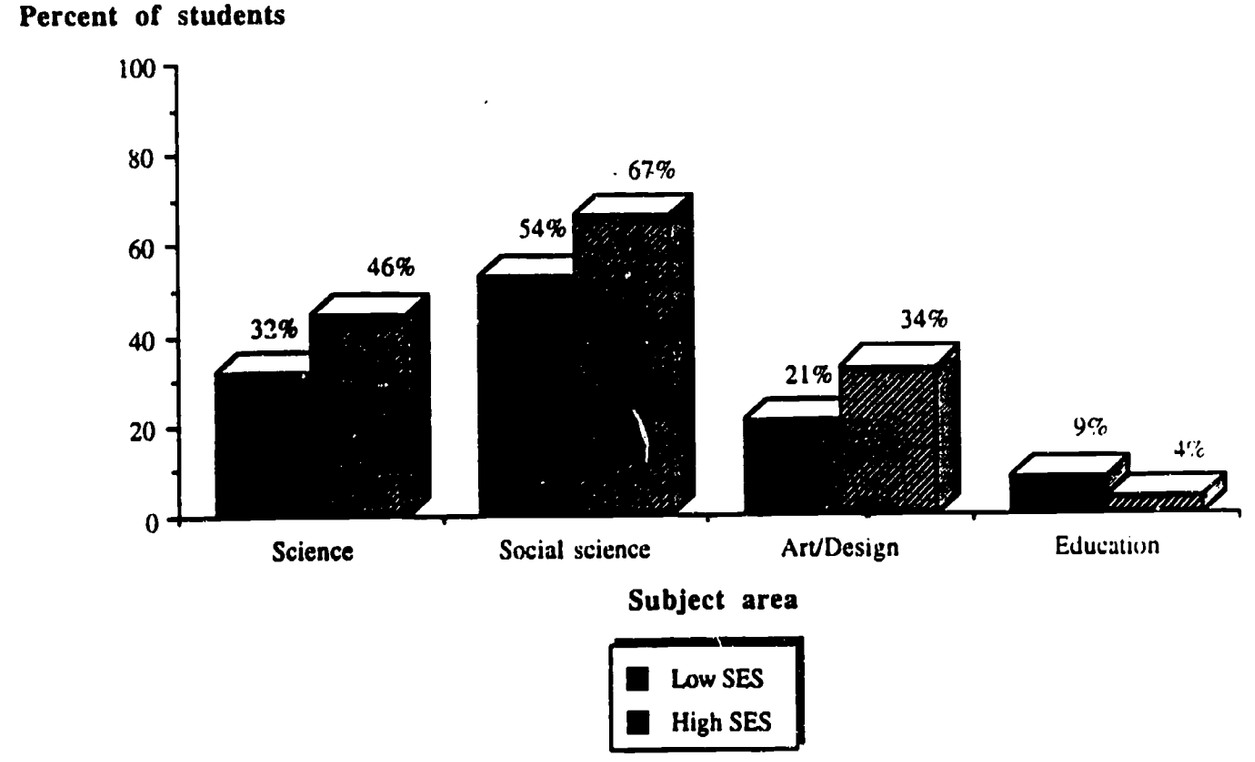


Figure 15 Percentage of 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984 Participating in Various Vocational Fields

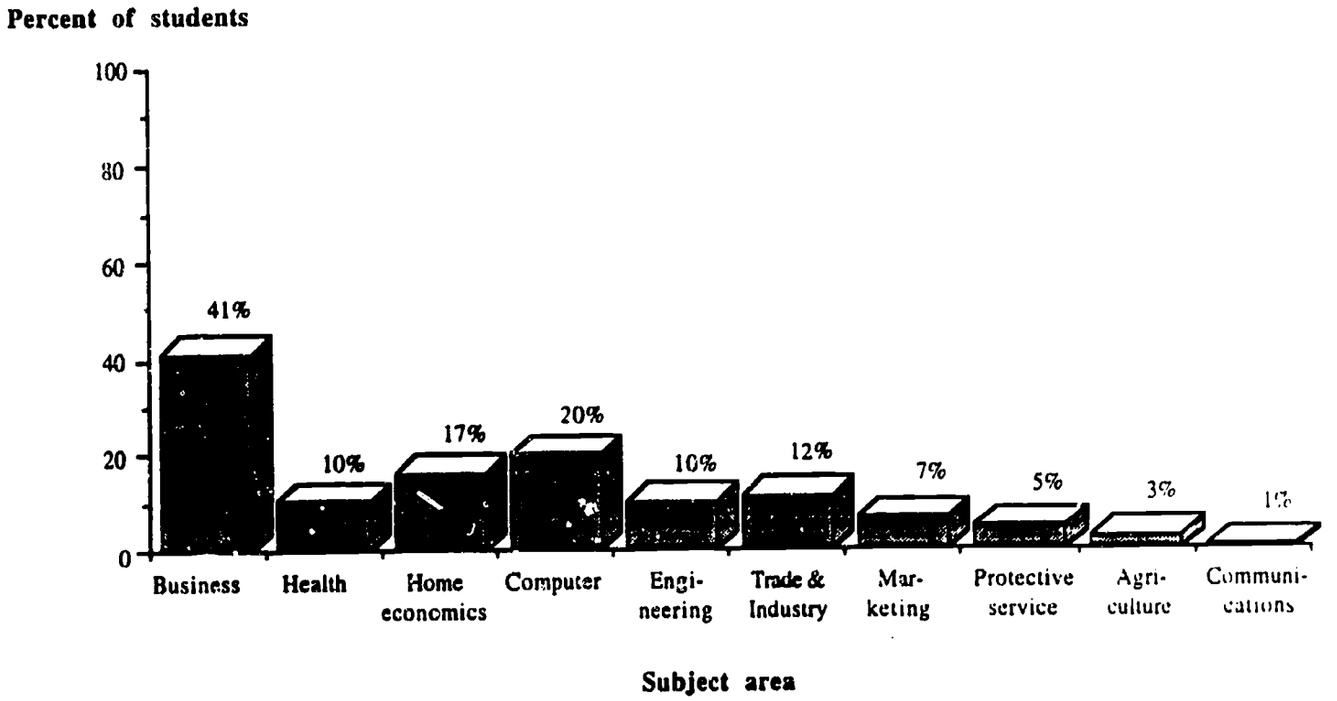


Table 9 **Average Number of Credits Earned by 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984 in Various Vocational Fields**

	Average number of credits earned									
	Agric Credits	Bus Credits	Mktg Credits	Health Credits	Home Ec Credits	Computer Credits	Engin Credits	Prot Servc Credits	Commun-ication Credits	T&I Credits
TOTAL	0.3	3.8	0.3	1.3	0.8	1.2	1.3	0.4	0.0	1.6
Sex										
Male	0.5	2.7	0.3	0.5	0.5	1.5	2.7	0.5	0.0	3.0
Female	0.1	4.7	0.4	1.9	1.0	0.9	0.1	0.3	0.0	0.3
Race/ethnicity										
Hispanic	0.2	4.0	0.5	0.9	0.7	0.8	0.9	0.3	0.1	1.9
Native Am	0.4	3.2	0.1	0.6	0.5	0.4	1.8	0.4	0.0	1.4
Asian	0.2	3.0	0.2	0.5	1.2	1.0	1.0	0.5	0.0	1.9
Black	0.0	3.9	0.3	0.6	0.5	0.7	1.0	0.2	0.1	0.6
White	0.3	3.7	0.3	1.4	0.8	1.3	1.4	0.4	0.0	1.6
Socioeconomic status										
Low	0.7	4.0	0.3	1.3	0.7	0.9	1.3	0.3	0.0	2.3
25-49%	0.6	5.0	0.3	1.5	0.8	1.4	1.2	0.3	0.0	2.3
50-75%	0.1	3.7	0.3	1.7	0.8	1.4	1.8	0.7	0.0	1.1
High	0.1	3.2	0.4	0.8	0.8	0.9	1.3	0.2	0.1	0.9

The field with the second highest participation was computer/data processing, with twenty percent participating. However, this is a field in which relatively large numbers of students participate, but those who do earn few credits. The average number of credits earned in computer/data processing (1.2) was similar to the average number of credits earned in trade and industry (1.6), engineering (1.3), and health (1.3)—fields in which only ten percent to twelve percent of public two-year institution students earned any credits.

Participation in other vocational fields was relatively low. Seventeen percent earned credits in home economics, seven percent earned credits in marketing, and five percent or fewer earned credits in protective services (5%), agriculture (3%), and communications (1%).

Stereotypical gender differences, both in participation and in credit completion, existed in all vocational fields, except in marketing and communications (Figures 16a and 16b). Women participated more than men in business (46% compared with 36%), in health (14% compared with 6%), and in home economics (20% compared with 30%). Men, on the other hand, participated more than women in trade and industry (21% compared with 3%), in computer/data processing (24% compared with 16%), in engineering (19% compared with 2%), and in protective services (6% compared with 4%). The same pattern held for the number of credits earned in these fields. In agriculture, the percentage of males who earned credits was not statistically different from the percentage of females who earned credits (4% compared with 2%). However, males earned significantly more credits in agriculture (0.5) than females (0.1).

In contrast to gender, significant differences among racial/ethnic groups or socioeconomic classes in participation or in the number of credits earned in specific vocational fields did not exist. However, this may partially be due to the small samples of minorities participating in vocational education. When these samples are broken out into specific vocational fields, small cell sizes may preclude finding statistical differences.

Figure 16a Percentage of 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984, Taking Courses in Various Vocational Fields in Which Females Participated More Than Males

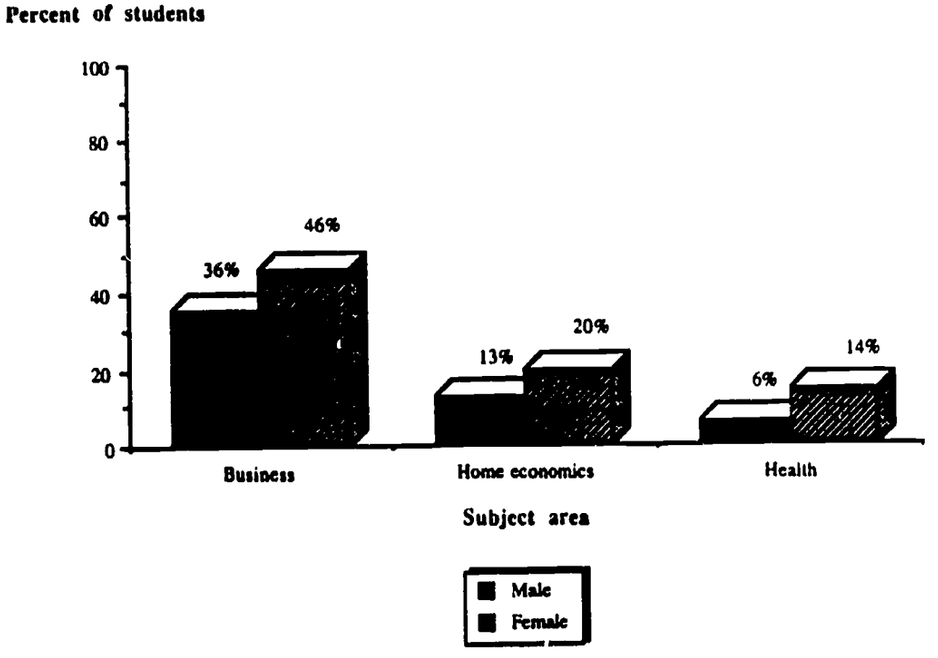
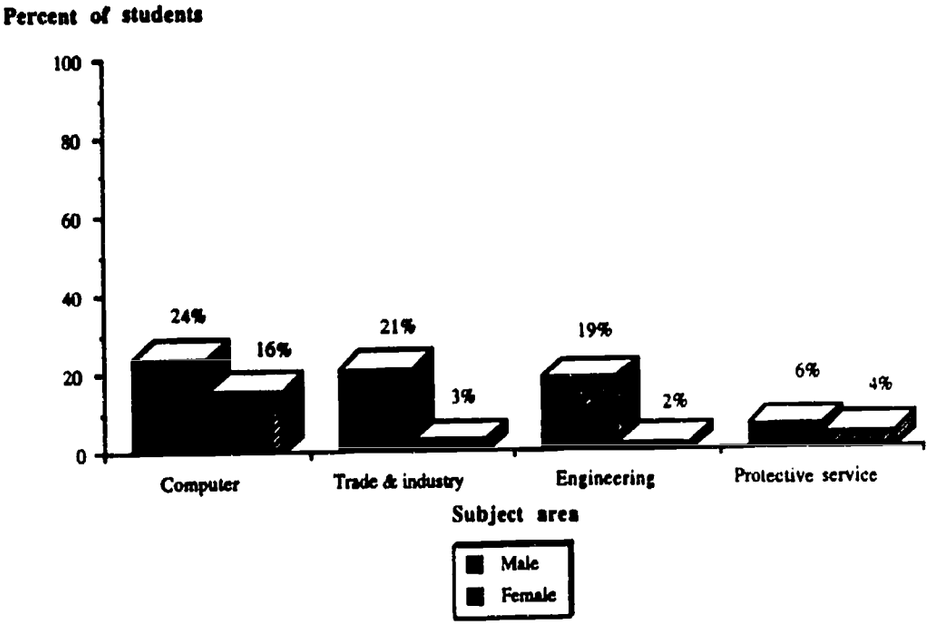


Figure 16b Percentage of 1980 High School Seniors Attending Public Two-Year Institutions Between 1980 and 1984, Taking Courses in Various Vocational Fields in Which Males Participated More Than Females



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APPENDIX A

HS&B TRANSCRIPT STUDIES: DATA ORGANIZATION

For both the senior and sophomore cohorts, the transcript data was organized into a four-level hierarchy consisting of data at the student, transcript, term, and course levels. To give the potential user a clear idea of exactly how the data was organized, this appendix describes each level for the sophomore cohort. The source of this description is the *High School and Beyond Postsecondary Education Transcript Study Data File User's Manual* (p. 22). The organization of the data for the senior cohort was similar.

Note: * Denotes data recorded from transcripts using CADE.
+ Denotes data derived from transcripts but not entered directly.
- Denotes data merged from other data sources.

I. Student-level record
- Student ID
- Numbers of transcripts requested
- Numbers of transcripts received
- Transcript data indicator
+ Transfer courses flag
- Survey data and composite variables from student data files:
  - Sociodemographic variables
  - Characteristics of secondary school attended
  - Base year and follow-up enrollment status indicators
+ Postsecondary school enrollment status indicators
- Sampling weights

II. Transcript-level record
* Student ID
* School ID (FICE or vendor number)
- IPEDS number
+ Final disposition of transcript requests
- Postsecondary school census region
- Postsecondary institution type
- Sequence number
+ Number of terms per transcript
* Degree awarded:
  - Type of degree
  - Verbatim text major
  - Date degree conferred (month and year)
* Cumulative grade point average
* Field(s) of study:
  - Verbatim text major
  - Major instructional program code
  - Verbatim text minor
  - Minor instructional program code

III. Term-level record
- + Student ID
- + School ID (FICE or vendor number)
- + Transcript number
- + NTH term of transcripts by SORTDATE
- * Date of term (month or season and year)
- * Institutional context of term (transfer or nontransfer term flag)
- * Type of term:
  - Types of academic term
    - Quarter, trimester, semester, variable length
  - Types other than academic terms
    - Test terms, other than test terms
- * Grade scale type in effect during term:
  - Letter grade scale
  - Numeric grade scale
    - Highest grade possible
    - Lowest grade possible
    - Minimum passing grade

IV. Course-Level record
- + Student ID
- + School ID (FICE or vendor number)
- + Transcript number
- + Term number
- * Grade received for course
  - Letter grade for course
  - Numeric (0-100) grade for course
  - Numeric (0-4) grade for course
- * Credits attempted for course
- * Verbatim text of course title
- * Course program code

APPENDIX B

ADJUSTMENTS TO THE TRANSCRIPT FILES

This Appendix describes in some detail the adjustments made to the HS&B transcript files to create the MPR analysis files. The MPR files have the same structure as the original files, but contain some additions and corrections. The same adjustments were made to the data for the 1980 senior and sophomore cohorts.

Transcript-Level Adjustments

To facilitate comparisons of student course taking and performance in different types of institutions, we added a variable called "college offerings and control" (COFCON) to each transcript to identify the institution type. Although the original transcript file includes a variable called INSTYPE that describes institution type, COFCON offers greater disaggregation of less-than-four-year institutions and leaves no institution unclassified. There is a COFCON code for "unknown" (code=9), but it only occurs when no transcripts were received for a student.

The codes for HS&B's INSTYPE are (1) vocational or proprietary; (2) private, nonvocational college or university; (3) public four-year college or university; (4) public two-year college (nonvocational); (5) foreign institution; and (6) unclassified institution. COFCON is coded as follows:

COFCON	
1	Proprietary
2	Public vocational-technical
3	Private nonproprietary-less-than-4-year
4	Public 2-year
5	Private 4-year
6	Public 4-year
9	Unknown
10	Foreign

COFCON was derived from information on HS&B Analysis File created by C. Dennis Carroll (NCES, 1986). Since HEGIS was specifically designed to collect institution-level information, its information on institutions is generally more detailed and reliable than that on institutions in the transcript data files.

Two other adjustments were made to the transcript-level data. The first was the deletion of duplicate transcripts. Most often, duplicate transcripts were a result of transcripts being sent for a student by both a campus and the central administration of a multicampus postsecondary institution. The second adjustment was correction of degree codes. A number of associates' and bachelors' degrees had different titles and were not coded correctly. A crosstabulation of degree names by codes was used to identify these cases, and appropriate corrections were made.

Term-Level Adjustments

The meaning of "term" varies by institution. Most institutions have the traditional semesters or quarters, a few have trimesters, and some (especially less-than-four-year institutions) have nontraditional term lengths or no terms at all. Many less-than-four-year institution transcripts show large numbers of courses taken by students in a single term (sometimes more than ten) and a high total number of credits earned (often more than thirty credits). These types of terms occur most frequently in proprietary and public vocational-technical institutions. Public two-year institutions tend to have quarters or semesters.

Data relating to semesters, quarters, and trimesters can be relatively easy to compare because the term lengths are standardized—a quarter is typically two-thirds as long as a semester, for example. It is difficult, however, to compare data for quarters or semesters to data related to nonstandardized term lengths. Users must take this into account when analyzing or interpreting term-level data.

Two variables were added to term-level transcript data. The first variable (TYPETERM) indicates the type of term the institution has (semester, quarter, and so on). Although the transcript files included a variable describing the type of term (TERMTYPE), this variable did not prove to be very reliable. There were a number of cases in which TERMTYPE varied for different terms in the same transcript or where different transcripts

from the same institution showed various types of terms. Because the Integrated Postsecondary Data System IPEDS was considered more reliable, where possible, the value for TYPETERM was obtained from this source. For institutions not found in IPEDS, the value for TERMTYPE in the transcript file was used. The codes for TYPETERM are as follows:

TYPETERM	
2	Semester (includes trimester)
4	Quarter
9	Unknown

The codes for the new variable (TYPETERM) are similar to the codes for the transcript files' TERMTYPE, with two exceptions. First, the new TYPETERM variable combines trimester calendar systems (of which there are relatively few) with semester systems (code=2). Second, TYPETERM does not have a code for variable length terms. Transcripts for which we could not ascertain the school calendar system are coded as unknown (TYPETERM=9) in the MPR analysis file.

The constructed variable (TYPETERM) was used to correct the original transcript variable (TERMTYPE) when discrepancies and inconsistencies were detected. For example, in the sophomore transcript file the original coding of TERMTYPE had a surprisingly large number of trimester terms. According to the IPEDS data, most of these terms were actually quarter terms.

TFLAG is the second term-level variable that was created. It identifies transfer terms that are not duplicated in later transcripts. The problem of duplicated terms arises when students transfer from one institution to another. For example, if a student attended Institution A in fall 1984, but transferred the credits earned to Institution B in spring 1985, Institution B's transcript may show credits for fall 1984, as would the transcript from Institution A. If a transfer term appears on the earliest transcript that a student has on record, we know it is definitely *not* duplicated in an earlier transcript. If transfer terms appear in later transcripts, on the other hand, they may be duplicated in earlier transcripts. Without examining each student's entire set of transcripts, it is not possible to delete these duplicate terms. TFLAG is coded as follows:

TFLAG	
1	Definitely *not* a duplicate term
Blank	May be a duplicate term

When the variable TFLAG is blank and the value of the variable called TRANSFER is "1," the user must be aware that the courses listed for this term may be duplicated in an earlier transcript. For our own analyses, we drop transfer terms except those on the earliest record.

Course-Level Adjustments

Credits

The major standardizations and changes applied to the transcript data were at the course level and involved credit adjustments. Please note that institutions occasionally assign credits for work experience or by examination, and these credits will appear in the transcript file associated with a course. Thus, courses do not always involve classroom instruction. The original credit variable (CRSECRED) does not allow valid comparisons to be made between institution types because institutions vary in their term types and also in the way they assign credits. Standard collegiate institutions reported credits based on similar credit scales. The typical academic course in these institutions carried a value of three credits, and most fell between three and five credits. Courses with credit values greater than five were rare. Approximately ninety-four percent of the courses taken by HS&B sample members carried values between zero and five credits.

Generally, the number of credits required for graduation from institutions on a quarter system is slightly higher than the number required by institutions on a semester system. Consequently, a credit earned under a quarter system is not equivalent to a credit earned under a semester system. To standardize credit numbers, all credits were converted to a semester metric. In most cases, this meant multiplying quarter credits by two-thirds. Thus, forty-five quarter credits would have been converted to thirty semester credits.

The most difficult aspect of adjusting credits was standardizing credit values for vocational and proprietary institutions. Many of these institutions assign credit for courses

in terms of clock hours—the number of hours of work that students complete for the course. Students at these institutions sometimes earned several hundreds of clock hour credits (sometimes ranging as high as five hundred) for completing a program made up of several modules with each lasting a short time. If a course consisted of more than fifteen semester credits (or twenty quarter credits), the credits were assumed to be clock hours and were reduced using the credit adjustment procedure. The rationale was that for courses with between fifteen and ninety semester credits, the credits were related to hours of instruction—that is, a forty-five credit course met for three hours a week for a fifteen-week semester, which would be equivalent to a three-credit course, and a ninety-credit course met for six hours a week, which would be equivalent to a six-credit course. Courses with more than ninety credits tend to be practice-oriented vocational courses, and for these the number of credits was assumed to be related to the hours of work a student put into a course. On the assumption that full-time academic students in a fifteen-week semester put in six-hundred hours (fifteen weeks x forty hours per week) to earn twelve to fifteen credits, it was assumed that each credit would require about forty-five hours of time (600/13.5). Therefore, credits higher than ninety were divided by forty-five.

All regular, exam, and transfer terms were adjusted to the semester metric. However, transfer terms were not subjected to the large credit adjustments (i.e., reduced if they had twenty or more credits). The reason was that all transfer credits are grouped into a single term, and a student might easily have earned more than twenty transfer credits.

The new standardized credit value (CREDADJ) represents the adjusted credit count and should be used instead of the transcript variable called CRSECRED. The conversion was carried out in the following way:

CREDADJ

(1) For quarter institutions if CRSECRED was:
less than 20 credits: CREDADJ=CRSECRED x 2/3
20-120 credits: CREDADJ=CRSECRED/20
greater than 120 credits: CREDADJ=CRSECRED/40

(2) For all other institutions if CRSECRED was:
less than 15 credits: CREDADJ=CRSECRED
15-90 credits: CREDADJ=CRSECRED/15
greater than 90 credits: CREDADJ=CRSECRED/45

One problem with this is that a number of institutions offer a wide range of credits for different courses. Consider, for example, a semester institution that gave two credits for a pedicure course, but eighteen credits for a haircutting course. Under the adjustment procedure, credits for the pedicure course would have been left at two, and the credits for the haircutting course would have been divided by fifteen, making the haircutting course worth less than the pedicure class. Similarly, a seventy-two-credit course in engine fuel systems would have been adjusted by dividing by fifteen, while in the same institution a one-hundred-twelve-credit course in sheet metal structures would have been divided by forty-five. For most institutions, this was not a problem. For the few with a wide range of credit offerings, the appropriate adjustment factor was not obvious. After examining these courses, individualized adjustment factors were developed. Appendix C contains a list of suggested reduction factors and FICE (institution) codes for each institution needing special treatment. A very small number of courses are affected by this problem, but how these courses are handled could influence the results of analyses of less-than-four-year institutions—particularly for the proprietary or public vocational-technical institutions.

Grades

Nearly all institutions (98%) assigned letter grades, but not all institutions used all possible grades to make distinctions between performance levels. For example, while most institutions used the + and - convention, some institutions applied these qualifiers only to selected levels such as C+ and C-, but not B+ and B-. In addition, several different schemes of numeric equivalents were used to translate letter grades to number grades for computing grade-point averages. By far, the most common convention used was the four-point collegiate scale (A=4, B=3, C=2, D=1, F=0). All nonfour-point schemes represented by the variable called GRADE were converted to this standard. In addition, to make it easier to determine whether or not a course was passed, a flag called PASSFLAG was developed. A value of 1 indicates the class was passe ' it was created using the GRADE variable (D or higher was considered passing). Courses graded pass, satisfactory, or credit, were also given a PASSFLAG value of 1.

GRADE—original grade adjusted to a 0 to 4 scale

PASSFLAG—flag indicating if a course was passed; coded as follows:

blank	Course not passed or grade is missing
1	Course passed

Course Taxonomy

To facilitate analysis of course-taking patterns, a taxonomy of courses for less-than-four-year institutions was developed. At the most aggregated level, the taxonomy divides courses into three broad areas of academic, vocational, and personal skills. At the next level, within the academic and vocational categories, the taxonomy further breaks down courses into six academic and seven vocational subject areas. At the lowest level there are sixty-eight categories. Appendix D lists the transcript codes included in each category.

TAXON
A variable ranging from 1 to 68, which categorizes courses within a taxonomy that MPR has developed specifically for less-than-four-year institutions

Variables Removed from Transcript Files

NCES constructed a number of variables to indicate the student's postsecondary enrollment status (and institution type if enrolled), along with the cumulative numbers of credits earned as of certain dates and the student's grade-point average for the whole period. These variables were not included in the MPR analysis files because they were generated using the original, unstandardized values for credits.

In the senior cohort file, these variables include

PSTSOC80, PSTSOC81, PSTSOC82, PSTSOC83, PSTSOC84
CREDOC80, CREDOC81, CREDOC82, CREDOC83, CREDOC84
PSTSFE81, PSTSFE82, PSTSFE83, PSTSFE84
CREDFE81, CREDFE82, CREDFE83, CREDFE84
PSTSJU81, PSTSJU82, PSTSJU83, PSTSJU84
CREDJU81, CREDJU82, CREDJU83, CREDJU84
GENGPA
TCREDA
TCREDE

In the sophomore cohort file, they include

PSTSOC82, PSTSOC83, PSTSOC84, PSTSOC85, PSTSOC86
PSTSFE83, PSTSFE84, PSTSFE85, PSTSFE86
PSTSJU83, PSTSJU84, PSTSJU85, PSTSJU86

The original variable for institution type (INSTYPE) was not included in the MPR analysis files because it was replaced by COFCON.

APPENDIX C

CREDIT ADJUSTMENT FACTORS FOR INSTITUTIONS REQUIRING SPECIAL TREATMENT

Sophomore file

FICE	Divisor	Type of Institution
010652	none	Public 2-year
100110	15	Proprietary
120004	15	Proprietary
139012	40	Public voc-tech
140009	15	Proprietary
140127	15	Proprietary
140874	15	Proprietary
140879	15	Proprietary
141890	15	Proprietary
160037	45	Proprietary
191682	15	Proprietary
191768	15	Public voc-tech
191790	45	Public voc-tech
191872	15	Public voc-tech
199011	45	Public voc-tech
209002	20	Public voc-tech
209022	20	Public voc-tech
220011	45	Proprietary
230097	45	Proprietary
230152	20	Private nonproprietary less-than-4-year
230157	15	Private nonproprietary less-than-4-year
230171	45	Proprietary
241005	15	Proprietary
260086	40	Proprietary
261565	15	Proprietary
279009	15	Public voc-tech
279010	45	Public voc-tech
281604	15	Public voc-tech
289028	40	Public voc-tech
289030	45	Public voc-tech
310142	15	Proprietary
310299	15	Proprietary
320433	15	Proprietary
330029	20	Private nonproprietary less-than-4-year
330088	none	Proprietary
330097	none	Proprietary
331558	15	Public voc-tech
339013	40	Public voc-tech
339015	15	Public voc-tech
339025	20	Public voc-tech
359506	15	Public voc-tech

380002	15	Proprietary
400116	15	Proprietary
419005	15	Public voc-tech
430129	15	Private nonproprietary less-than-4-year
450149	15	Proprietary
460117	15	Proprietary
480036	40	Private nonproprietary less-than-4-year
480963	45	Proprietary
481535	45	Public voc-tech
481811	45	Public voc-tech
529025	45	Public voc-tech
529037	45	Public voc-tech
580020	45	Proprietary
580080	45	Proprietary
590080	none	Proprietary
590086	15	Proprietary

Senior File

FICE	Divisor	Type of Institution	
100165	15	Proprietary	
120004	45	Proprietary	
126014	15	Proprietary	
139001	15	Public voc-tech	
140020	45	Proprietary	
140257	45	Proprietary	
199020	15	Public voc-tech	
199021	15	Public voc-tech	
200138	15	Proprietary	
209002	40	Public voc-tech	
209009	15	Public voc-tech	(only if CRSECRD gt 5)
209017	15	Public voc-tech	
209018	40	Public voc-tech	
209022	40	Public voc-tech	
230155	45	Private less-than-4-year	(only if CRSECRD gt 5)
230234	15	Private less-than-4-year	
269011	45	Public voc-tech	
279009	15	Public voc-tech	
320088	15	Proprietary	
330016	15	Proprietary	
339010	20	Public voc-tech	(only if CRSECRD gt 6)
339011	20	Public voc-tech	
339013	20	Public voc-tech	
339015	45	Public voc-tech	
339016	15	Public voc-tech	
339025	20	Public voc-tech	
339041	40	Public voc-tech	
351521	15	Proprietary	
359022	15	Public voc-tech	

359506	15	Public voc-tech	
369001	40	Public voc-tech	
369003	20	Public voc-tech	
370013	15	Private less-than-4-year	(only if CRSECRD gt 4)
379501	40	Public voc-tech	(only if CRSECRD gt 4)
410006	45	Proprietary	
410007	15	Proprietary	
410010	45	Proprietary	
419001	45	Public voc-tech	(only if CRSECRD gt 6)
419005	45	Public voc-tech	
420607	45	Private less-than-4-year	(only if CRSECRD gt 4)
420623	45	Private less-than-4-year	(only if CRSECRD gt 4)
421561	15	Private less-than-4-year	
430129	20	Private less-than-4-year	
459137	15	Public voc-tech	
459140	15	Public voc-tech	
481031	45	Private less-than-4-year	
529008	15	Public voc-tech	
529501	15	Public voc-tech	
560231	15	Proprietary	

APPENDIX D

COURSE AND TAXONOMY CODES FOR EACH TAXONOMY CATEGORY

TAXON Code		HS&B CODES (Soph.)	CIP CODES (Seniors)
	ACADEMIC		
	MATHEMATICS AND SCIENCE		
1	Mathematics	47,48	all 27
	Science		
2	Life sciences	46	all 26
3	Chemistry	55	4005
4	Physics	57	4008
5	Other sciences	54,56	all other 40
	LETTERS, HUMANITIES, AND COMMUNICATIONS		
	Letters		
6	English composition	42	230401
7	American literature	43	230701
8	English literature	44	230801
9	Other letters	41	all other 23
	Humanities		
10	French	32	160901
11	Spanish	33	160905
12	Other languages	30,31	all other 16
13	Philosophy and religion	52	all 38
14	Theology	53	all 39
15	Liberal/general studies	78	all 24, all 30
	Communications		
16	Journalism	13	0904
17	Other communications	12	all other 09
	SOCIAL SCIENCES		
18	Anthropology	64	4502
19	Economics	65	4506
20	Geography	66	4507
21	History	67	4508
22	Political science and govt.	68	4510
23	Sociology	69	4511
24	Psychology	59	all 42
25	Area and ethnic studies	5	all 05
26	Other social sciences	63	all other 45

	ART AND DESIGN		
27	Dance	75	5003
28	Fine arts	76	5007
29	Music	77	5009
30	Other visual and perf. arts	74	all other 50
31	Architecture and env. design	4	all 04
32	EDUCATION	19-24	all 13
	OTHER		
33	Law	40	all 22
34	Library and archival sci.	45	all 25
35	Social work	62	4407
36	Public affairs	61	all other 44
37	Parks and recreation	50	all 31
38	Military sciences	49	all 28, 29
	VOCATIONAL		
	AGRICULTURE		
39	Horticulture		:0106
40	Other agrib. and agric. prod.	1	all other 01
41	Agricultural sciences	2	all 02
42	Renewable natural resources	3	all 03
	BUSINESS AND OFFICE		
43	Accounting	7	:0602
44	Business and management	6,08	all other 06
45	Secretarial and related	10	:0706
46	Other business and office	9	all other 07
47	MARKETING AND DISTRIBUTION	11	all 08
	HEALTH		
48	Nursing	37	1811
49	Health sciences	36	all other 18
50	Allied health	34,35	all 17
	HOME ECONOMICS		
51	Home economics	38	all 19
52	Occupational home economics	39	all 20

	TECHNICAL EDUCATION		
	Computers/data processing		
53	Computer programming	16	1102
54	Data processing	17	1103
55	Other computer and info. sci.	15	all oth. 11
	Engineering/science technologies		
56	Eng. and eng. technologies	25-29	all 14, all 15
57	Science technologies	58	all 41
58	Protective services	60	all 43
59	Communications technologies	14	all 10
	TRADE AND INDUSTRY		
60	Construction	70	all 46
61	Automotive		4706
62	Other mechanics and repairers	71	all other 47
63	Drafting		4801
64	Precision metal		4805
65	Other precision production	72	all other 48, 21
66	Transport. and mater. moving	73	all 49
67	Consumer, personal, misc. serv.	18	all 12
	PERSONAL SKILLS, REMEDIAL, AND AVOCATIONAL COURSES		
68	PERSONAL SKILLS/REMEDIAL/AVOC.	51	all 32 37

APPENDIX E SUPPLEMENTARY TABLES

Table 1.1—Percent of 1980 high school seniors attending public two-year institutions taking courses in various fields of study

	Percent of public 2-yr school students taking		
	Academic Courses	Vocational Courses	Personal Skills Courses
TOTAL	91.4	78.7	56.8
Sex			
Male	91.3	82.5	58.7
Female	91.5	75.4	55.2
Race/ethnicity			
Hispanic	92.5	81.0	68.2
Native Am	96.6	76.3	80.3
Asian	94.7	76.2	66.6
Black	93.7	71.9	55.5
White	91.0	79.3	55.5
Socio-economic status			
Low	92.6	80.6	62.0
25-49%	90.5	81.0	58.6
50-75%	91.6	81.0	54.9
High	92.6	73.2	55.5
Parent's highest ed			
Lt HS	94.8	75.1	63.0
HS Only	90.1	84.0	56.5
Some College	91.6	78.4	55.4
College Grad	92.3	76.2	56.8
Postsecondary ed plans			
None	83.9	80.6	40.7
Vocational/Tech	85.0	85.5	50.4
Lt 4 yr	92.8	84.4	64.9
BA/BS	95.5	74.6	58.2
Adv Degree	94.2	71.3	59.5

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 1.2—Average number of courses taken by 1980 high school seniors attending public two-year institutions in various fields of study

	Average number of courses taken		
	Academic Courses	Vocational Courses	Personal Skills Courses
TOTAL	8.9	4.6	1.8
Sex			
Male	9.1	5.1	1.9
Female	8.8	4.1	1.6
Race/ethnicity			
Hispanic	9.5	4.6	2.5
Native Am	9.6	4.0	2.5
Asian	11.7	3.8	2.6
Black	8.2	3.9	1.8
White	8.9	4.6	1.6
Socio-economic status			
Low	8.2	5.0	2.0
25-49%	8.7	5.7	2.0
50-75%	9.1	4.6	1.6
High	9.6	3.7	1.6
Parent's highest ed			
Lt HS	9.3	5.3	2.1
HS Only	8.5	5.4	1.8
Some College	8.7	4.5	1.7
College Grad	9.6	3.8	1.7
P[illegible] ed plans			
[illegible]	4.9	4.5	1.2
Vo [illegible] Tech	6.1	6.6	1.3
Lt 4 yr	9.4	5.8	2.0
BA/BS	10.2	3.7	1.9
[illegible] Degree	10.7	3.2	1.9

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 2.1—Percent of 1980 high school seniors attending private proprietary institutions taking courses in various fields of study

	Percent of proprietary school students taking		
	Academic Courses	Vocational Courses	Personal Skills Courses
TOTAL	61.9	98.1	25.8
Sex			
Male	43.5	96.0	11.7
Female	68.9	98.9	31.3
Race/ethnicity			
Hispanic	62.1	99.2	22.8
Native Am	-	-	-
Asian	-	-	-
Black	66.1	99.0	41.2
White	61.6	98.0	23.2
Socio-economic status			
Low	59.1	99.8	34.3
25-49%	63.1	97.4	17.8
50-75%	70.6	99.6	32.6
High	75.2	95.0	33.5
Parent's highest ed			
Lt HS	69.9	100.0	27.6
HS Only	50.4	99.9	20.1
Some College	66.7	94.5	22.9
College Grad	69.9	99.2	36.3
Postsecondary ed plans			
None	56.9	100.0	28.2
Vocational/Tech	55.8	94.8	27.2
Lt 4 yr	76.5	100.0	26.0
BA/BS	78.9	99.0	35.9
Adv Degree	64.4	98.2	31.3

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 2.2—Average number of courses taken by 1980 high school seniors attending private proprietary institutions in various fields of study

	Average number of courses taken		
	Academic Courses	Vocational Courses	Personal Skills Courses
TOTAL	4.1	7.5	0.5
Sex			
Male	3.4	6.4	0.3
Female	4.4	7.9	0.6
Race/ethnicity			
Hispanic	4.1	7.5	1.2
Native Am	-	-	-
Asian	-	-	-
Black	3.3	7.9	0.6
White	4.3	7.4	0.5
Socio-economic status			
Low	2.7	6.9	0.5
25-49%	3.4	7.6	0.4
50-75%	4.9	9.2	0.6
High	7.2	7.5	1.0
Parent's highest ed			
Lt HS	2.8	7.6	0.4
HS Only	2.6	6.8	0.3
Some College	4.2	6.9	0.4
College Grad	6.9	9.3	1.0
Postsecondary ed plans			
None	2.8	5.6	0.4
Vocational/Tech	2.9	7.2	0.5
Lt 4 yr	5.9	8.6	0.4
BA/BS	6.6	9.3	0.8
Adv Degree	4.3	7.9	1.4

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 3.1—Percent of 1980 high school seniors attending public vocational-technical institutions taking courses in various fields of study

	Percent of voc-tech school students taking		
	Academic Courses	Vocational Courses	Personal Skills Courses
TOTAL	59.9	98.9	37.5
Sex			
Male	54.3	99.7	27.4
Female	66.7	98.1	49.8
Race/ethnicity			
Hispanic	74.9	100.0	44.4
Native Am	-	-	-
Asian	-	-	-
Black	45.3	93.0	29.7
White	60.7	100.0	37.6
Socio-economic status			
Low	64.2	98.1	37.5
25-49%	65.3	98.5	47.3
50-75%	56.2	100.0	27.2
High	-	-	-
Parent's highest ed			
Lt HS	66.6	95.7	58.0
HS Only	68.1	99.5	44.7
Some College	54.5	99.4	24.5
College Grad	38.3	100.0	36.5
Postsecondary ed plans			
None	39.1	100.0	44.7
Vocational/Tech	69.5	98.8	38.7
Lt 4 yr	-	-	-
BA/BS	67.3	97.0	14.6
Adv Degree	-	-	-

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 3.2—Average number of courses taken by 1980 high school seniors attending public vocational-technical institutions in various fields of study

	Average number of courses taken		
	Academic Courses	Vocational Courses	Personal Skills Courses
TOTAL	2.2	10.5	0.7
Sex			
Male	2.2	9.7	0.5
Female	2.3	11.4	0.8
Race/ethnicity			
Hispanic	2.6	7.5	0.6
Native Am	-	-	-
Asian	-	-	-
Black	1.6	5.4	0.6
White	2.3	11.7	0.7
Socio-economic status			
Low	2.2	11.1	0.6
25-49%	2.6	12.5	0.9
50-75%	2.1	8.2	0.5
High	-	-	-
Parent's highest ed			
Lt HS	2.0	16.6	1.0
HS Only	2.8	10.9	0.9
Some College	1.9	8.1	0.4
College Grad	1.6	9.1	0.5
Postsecondary ed plans			
None	2.1	12.8	0.8
Vocational/Tech	2.5	11.0	0.6
Lt 4 yr	-	-	-
BA/BS	2.4	6.3	0.3
Adv Degree	-	-	-

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 4.1—Percent of 1980 high school seniors attending private less-than-four-year institutions taking courses in various fields of study

	Percent of private lt-4-yr school students taking		
	Academic Courses	Vocational Courses	Personal Skills Courses
TOTAL	90.7	87.5	46.8
Sex			
Male	74.2	87.0	46.6
Female	97.3	87.7	46.9
Race/ethnicity			
Hispanic	-	-	-
Native Am	-	-	-
Asian	-	-	-
Black	99.4	74.3	59.3
White	89.9	89.0	44.0
Socio-economic status			
Low	91.1	83.0	28.3
25-49%	80.2	96.8	45.9
50-75%	90.9	83.4	46.1
High	95.2	89.4	60.4
Parent's highest ed			
Lt HS	-	-	-
HS Only	82.1	93.4	55.8
Some College	89.8	88.3	28.1
College Grad	94.5	83.7	60.0
Postsecondary ed plans			
None	-	-	-
Vocational/Tech	70.9	98.6	26.1
Lt 4 yr	98.6	97.6	62.1
BA/BS	92.1	80.1	64.3
Adv Degree	100.0	75.0	50.0

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 4.2—Average number of courses taken by 1980 high school seniors attending private less-than-four-year institutions in various fields of study

	Average number of courses taken		
	Academic Courses	Vocational Courses	Personal Skills Courses
TOTAL	10.0	7.2	1.1
Sex			
Male	7.4	5.6	1.2
Female	11.1	7.9	1.1
Race/ethnicity			
Hispanic	-	-	-
Native Am	-	-	-
Asian	-	-	-
Black	10.3	3.1	2.2
White	10.2	8.0	0.9
Socio-economic status			
Low	10.1	5.6	1.0
25-49%	9.1	6.8	0.9
50-75%	11.1	8.6	1.1
High	9.9	7.5	1.2
Parent's highest ed			
Lt HS	-	-	-
HS Only	8.9	6.7	1.2
Some College	9.2	7.8	0.7
College Grad	11.5	6.1	1.4
Postsecondary ed plans			
None	-	-	-
Vocational/Tech	6.4	9.8	0.4
Lt 4 yr	10.6	8.2	1.5
BA/BS	13.9	4.5	1.7
Adv Degree	10.6	6.4	1.2

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 5.1—Percent of 1980 high school seniors attending public two-year institutions taking courses in various vocational fields

	Percent of public 2-yr school students taking									
	Agric Courses	Busin Courses	Mkting Courses	Health Courses	Home Ec Courses	Computr Courses	Engin Courses	Prot Servc Courses	Commun-ication Courses	T&I Courses
TOTAL	3.6	48.8	7.6	11.4	18.6	24.9	11.6	5.4	0.7	13.2
Sex										
Male	5.0	43.7	7.6	6.4	13.5	30.6	22.4	7.3	0.8	23.9
Female	2.4	53.2	7.6	15.7	22.9	20.0	2.2	3.8	0.5	4.0
Race/ethnicity										
Hispanic	3.0	49.7	8.6	16.1	20.3	22.3	10.7	5.6	0.4	14.9
Native Am	7.6	40.7	3.3	8.2	17.7	16.9	16.0	9.6	0.0	15.1
Asian	6.0	38.7	8.7	13.3	27.6	29.7	9.2	6.4	0.0	15.1
Black	0.8	49.9	7.0	9.4	13.0	22.5	7.3	3.6	0.6	8.1
White	3.8	49.1	7.7	11.3	19.0	25.3	12.3	5.6	0.7	13.4
Socio-economic status										
Low	4.9	54.5	8.8	12.4	17.3	24.5	11.0	4.1	1.1	14.2
25-49%	6.2	49.2	6.8	14.4	19.7	21.8	12.7	5.8	0.3	17.1
50-75%	2.3	50.1	6.4	11.3	20.1	25.1	9.9	6.9	0.3	11.9
High	2.1	46.7	8.8	8.9	17.3	26.5	13.6	5.2	1.4	10.9
Parent's highest ed										
Lt HS	4.1	50.2	9.0	10.1	12.2	30.7	11.8	4.3	1.5	15.8
HS Only	3.5	52.7	9.5	12.6	19.7	24.8	13.1	4.8	0.6	15.5
Some College	4.7	47.1	6.1	13.4	18.4	21.6	10.1	6.3	0.2	12.2
College Grad	2.0	48.0	8.0	8.5	19.7	28.4	12.6	5.3	1.2	11.9
Postsecondary ed plans										
None	4.3	46.5	9.2	10.2	10.9	23.3	14.8	8.8	0.1	21.8
Vocational/Tech	3.5	52.8	7.6	7.7	11.4	22.9	16.5	6.2	1.3	23.5
Lt 4 yr	6.0	58.6	9.3	15.7	25.8	25.6	10.5	5.9	0.3	10.9
BA/BS	2.6	46.4	6.2	13.1	18.2	26.0	10.4	4.9	0.4	10.6
Adv Degree	2.3	42.3	7.8	10.5	19.9	23.8	10.1	4.5	1.7	9.1

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 5.2—Average number of courses taken by 1980 high school seniors attending public two-year institutions in various vocational fields

	Average number of courses taken									
	Agric Courses	Busin Courses	Mkting Courses	Health Courses	Home Ec Courses	Computr Courses	Engin Courses	Prot Servc Courses	Commun-ication Courses	T&I Courses
TOTAL	0.1	1.7	0.1	0.4	0.3	0.5	0.6	0.2	0.0	0.5
Sex										
Male	0.2	1.2	0.1	0.2	0.2	0.7	1.2	0.2	0.0	1.1
Female	0.1	2.2	0.1	0.6	0.4	0.4	0.0	0.1	0.0	0.1
Race/ethnicity										
Hispanic	0.1	2.0	0.2	0.3	0.4	0.5	0.4	0.1	0.0	0.7
Native Am	0.2	1.6	0.0	0.2	0.2	0.3	0.6	0.3	0.0	0.7
Asian	0.1	1.3	0.1	0.2	0.5	0.5	0.4	0.2	0.0	0.6
Black	0.0	2.0	0.1	0.2	0.3	0.4	0.5	0.1	0.0	0.3
White	0.1	1.7	0.1	0.4	0.3	0.6	0.6	0.2	0.0	0.5
Socio-economic status										
Low	0.3	2.0	0.1	0.4	0.3	0.5	0.5	0.1	0.0	0.7
25-49%	0.2	2.3	0.1	0.6	0.4	0.6	0.6	0.1	0.0	0.9
50-75%	0.0	1.7	0.1	0.5	0.3	0.6	0.7	0.3	0.0	0.4
High	0.1	1.4	0.1	0.3	0.3	0.5	0.6	0.1	0.0	0.4
Parent's highest ed										
Lt HS	0.1	2.2	0.2	0.2	0.2	0.6	0.6	0.1	0.0	1.0
HS Only	0.2	2.3	0.2	0.5	0.3	0.5	0.6	0.2	0.0	0.7
Some College	0.1	1.6	0.1	0.5	0.4	0.6	0.6	0.2	0.0	0.4
College Grad	0.1	1.4	0.1	0.2	0.4	0.5	0.5	0.1	0.0	0.4
Postsecondary ed plans										
None	0.1	1.2	0.1	0.3	0.3	0.4	1.0	0.3	0.0	0.8
Vocational/Tech	0.2	2.3	0.2	0.3	0.3	0.7	0.9	0.2	0.0	1.4
Lt 4 yr	0.2	2.5	0.2	0.7	0.5	0.5	0.6	0.2	0.0	0.4
BA/BS	0.1	1.4	0.1	0.4	0.3	0.6	0.4	0.1	0.0	0.3
Adv Degree	0.1	1.3	0.1	0.3	0.3	0.5	0.4	0.1	0.0	0.2

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 6.1—Percent of 1980 high school seniors attending private proprietary institutions taking courses in various vocational fields

	Percent of proprietary school students taking									
	Agric Courses	Busin Courses	Mkting Courses	Health Courses	Home Ec Courses	Computr Courses	Engin Courses	Prot Servc Courses	Commun-ication Courses	T&I Courses
TOTAL	1.4	53.5	15.3	9.1	11.5	19.5	12.3	0.2	2.8	30.0
Sex										
Male	2.5	25.0	2.4	0.9	1.1	15.4	40.6	0.1	5.4	40.4
Female	0.9	64.3	20.2	12.2	15.5	21.0	1.5	0.2	1.9	25.9
Race/ethnicity										
Hispanic	12.8	64.3	12.1	7.7	6.8	2.2	11.9	0.0	0.2	28.7
Native Am	-	-	-	-	-	-	-	-	-	-
Asian	-	-	-	-	-	-	-	-	-	-
Black	0.0	55.3	18.1	11.3	12.5	12.7	8.9	0.0	0.0	30.9
White	0.8	52.2	15.1	8.6	11.6	21.9	13.1	0.2	3.6	30.2
Socio-economic status										
Low	0.0	51.7	13.9	9.4	7.3	18.3	9.2	0.0	0.0	33.4
25-49%	0.0	54.5	19.3	11.7	10.7	19.4	12.2	0.1	5.3	23.0
50-75%	0.0	68.6	25.5	12.1	17.7	15.6	8.5	0.6	5.9	28.2
High	7.2	54.7	8.2	6.8	16.5	25.0	11.4	0.0	1.0	26.1
Parent's highest ed										
Lt HS	0.0	61.2	16.2	2.0	1.4	36.5	5.1	0.0	0.0	20.0
HS Only	0.0	50.4	17.3	10.7	10.0	1[illegible].6	12.4	0.0	0.0	34.5
Some College	0.0	51.3	15.6	12.6	9.2	19.6	12.9	0.6	8.7	29.4
College Grad	5.6	54.0	12.8	5.9	21.9	22.8	15.8	0.0	0.8	30.9
Postsecondary ed plans										
None	0.0	50.3	13.4	12.5	0.0	15.3	7.1	0.0	0.0	32.0
Vocational/Tech	0.0	45.6	10.7	4.6	9.2	12.3	18.2	0.5	4.9	36.6
Lt 4 yr	0.0	68.2	19.9	[illegible]	22.0	30.8	3.3	0.0	0.0	15.8
BA/BS	0.0	66.3	34.2		19.7	5.1	6.7	0.0	9.4	32.3
Adv Degree	13.4	66.1	10.0	[illegible]	8.4	31.9	10.0	0.2	0.0	13.4

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 6.2—Average number of courses taken by 1980 high school seniors attending private proprietary institutions in various vocational fields

	Average number of courses taken									
	Agric Courses	Busin Courses	Mkting Courses	Health Courses	Home Ec Courses	Computr Courses	Engin Courses	Prot Servc Courses	Commun-ication Courses	T&I Courses
TOTAL	0.0	3.6	0.5	0.7	0.3	0.6	0.7	0.0	0.0	1.0
Sex										
Male	0.1	1.2	0.0	0.0	0.1	0.6	2.5	0.0	0.1	1.8
Female	0.0	4.5	0.7	0.9	0.4	0.6	0.0	0.0	0.0	0.7
Race/ethnicity										
Hispanic	0.4	2.7	0.6	0.3	0.5	0.1	0.8	0.0	0.0	2.1
Native Am	-	-	-	-	-	-	-	-	-	-
Asian	-	-	-	-	-	-	-	-	-	-
Black	0.0	3.5	0.5	0.6	0.5	0.6	0.5	0.0	0.0	1.9
White	0.0	3.6	0.6	0.7	0.3	0.6	0.8	0.0	0.0	0.8
Socio-economic status										
Low	0.0	3.5	0.3	0.5	0.1	0.7	0.4	0.0	0.0	1.4
25-49%	0.0	4.1	0.4	0.8	0.3	0.4	0.8	0.0	0.1	0.7
50-75%	0.0	4.7	1.2	1.0	0.4	0.4	0.6	0.0	0.1	0.9
High	0.2	3.4	0.6	0.9	0.6	0.8	0.2	0.0	0.0	1.0
Parent's highest ed										
Lt HS	0.0	4.4	0.5	0.0	0.0	1.1	0.5	0.0	0.0	0.9
HS Only	0.0	3.5	0.4	0.7	0.3	0.4	0.9	0.0	0.0	0.7
Some College	0.0	3.0	0.5	1.0	0.2	0.4	0.9	0.0	0.1	0.8
College Grad	0.1	4.0	0.8	0.7	0.7	0.7	0.6	0.0	0.0	1.6
Postsecondary ed plans										
None	0.0	3.2	0.1	0.7	0.0	0.9	0.1	0.0	0.0	0.5
Vocational/Tech	0.0	3.3	0.3	0.2	0.2	0.3	1.2	0.0	0.0	1.6
Lt 4 yr	0.0	4.9	0.6	1.0	0.6	0.8	0.1	0.0	0.0	0.6
BA/BS	0.0	4.5	1.7	1.0	0.6	0.2	0.1	0.0	0.1	1.1
Adv Degree	0.3	3.6	0.7	1.5	0.5	0.7	0.3	0.0	0.0	0.3

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 7.1—Percent of 1980 high school seniors attending public vocational-technical institutions taking courses in various vocational fields

	Percent of voc-tech school students taking									
	Agric Courses	Busin Courses	Mkting Courses	Health Courses	Home Ec Courses	Computr Courses	Engin Courses	Prot Servc Courses	Commun-ication Courses	T&I Courses
TOTAL	7.4	41.0	12.4	13.9	15.5	18.6	21.4	0.0	2.3	31.8
Sex										
Male	13.1	27.3	10.3	3.3	7.4	11.0	38.5	0.0	1.5	53.2
Female	0.5	57.7	15.0	26.8	25.3	27.9	0.6	0.0	3.3	5.8
Race/ethnicity										
Hispanic	0.0	55.8	30.5	9.8	1.3	6.7	10.4	0.0	4.0	33.7
Native Am	-	-	-	-	-	-	-	-	-	-
Asian	-	-	-	-	-	-	-	-	-	-
Black	0.0	39.3	3.0	12.2	14.2	28.7	10.1	0.0	1.6	20.4
White	9.7	39.9	12.9	14.9	16.8	17.4	23.4	0.0	2.0	33.7
Socio-economic status										
Low	11.5	54.8	20.6	10.9	13.0	8.4	15.8	0.0	0.9	23.3
25-49%	5.6	49.9	9.7	22.5	25.5	27.6	11.5	0.0	0.0	15.4
50-75%	8.8	19.4	8.6	15.5	14.7	23.7	27.5	0.0	6.9	56.3
High	-	-	-	-	-	-	-	-	-	-
Parent's highest ed										
Lt HS	11.9	50.7	18.2	20.1	24.0	5.3	9.0	0.0	0.0	25.1
HS Only	1.3	57.1	12.4	17.7	21.3	26.4	16.4	0.0	0.8	18.6
Some College	12.3	21.8	13.0	5.6	9.4	18.1	29.9	0.0	4.3	45.0
College Grad	3.3	46.8	0.0	28.4	5.0	9.4	25.8	0.0	3.6	36.0
Postsecondary ed plans										
None	0.0	29.0	16.3	18.3	18.5	10.3	29.6	0.0	0.0	39.8
Vocational/Tech	12.2	44.9	11.2	9.7	12.7	19.2	23.2	0.0	3.5	35.1
Lt 4 yr	-	-	-	-	-	-	-	-	-	-
BA/BS	4.3	55.3	3.7	16.0	12.6	4.7	19.4	0.0	0.0	33.8
Adv Degree	-	-	-	-	-	-	-	-	-	-

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 7.2—Average number of courses taken by 1980 high school seniors attending public vocational-technical institutions in various vocational fields

	Average number of courses taken									
	Agric Courses	Busin Courses	Mkting Courses	Health Courses	Home Ec Courses	Computr Courses	Engin Courses	Prot Servc Courses	Commun-ication Courses	T&I Courses
TOTAL	0.9	3.6	0.4	1.4	0.6	0.4	1.0	0.0	0.1	2.0
Sex										
Male	1.6	2.0	0.3	0.1	0.2	0.2	1.8	0.0	0.2	3.5
Female	0.0	5.7	0.6	3.0	1.2	0.7	0.0	0.0	0.0	0.2
Race/ethnicity										
Hispanic	0.0	2.9	0.3	0.5	0.0	0.1	1.0	0.0	0.8	1.8
Native Am	-	-	-	-	-	-	-	-	-	-
Asian	-	-	-	-	-	-	-	-	-	-
Black	0.0	2.3	0.1	0.5	0.4	0.5	0.5	0.0	0.0	1.1
White	1.1	3.9	0.5	1.7	0.7	0.4	1.1	0.0	0.0	2.2
Socio-economic status										
Low	0.8	6.2	0.5	1.0	0.3	0.1	0.6	0.0	0.2	1.4
25-49%	1.1	4.0	0.1	3.1	1.7	1.0	0.3	0.0	0.0	1.3
50-75%	1.2	1.1	0.1	0.6	0.2	0.3	1.9	0.0	0.1	2.6
High	-	-	-	-	-	-	-	-	-	-
Parent's highest ed										
Lt HS	0.5	10.1	0.2	1.8	0.5	0.2	0.6	0.0	0.0	2.7
HS Only	0.2	4.0	0.4	2.3	1.3	0.8	0.6	0.0	0.2	1.1
Some College	1.7	1.1	0.6	0.5	0.1	0.2	1.5	0.0	0.0	2.4
College Grad	0.4	2.9	0.0	1.1	0.1	0.1	1.3	0.0	0.7	2.6
Postsecondary ed plans										
None	0.0	7.5	0.7	1.4	0.3	0.2	0.7	0.0	0.0	1.9
Vocational/Tech	1.4	3.2	0.1	1.5	0.2	0.6	1.3	0.0	0.2	2.4
Lt 4 yr	-	-	-	-	-	-	-	-	-	-
BA/BS	0.5	2.0	0.0	0.5	0.2	0.0	1.0	0.0	0.0	2.1
Adv Degree	-	-	-	-	-	-	-	-	-	-

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 8.1—Percent of 1980 high school seniors attending private less-than-four-year institutions taking courses in various vocational fields

	Percent of private lt-4-yr school students taking									
	Agric Courses	Busin Courses	Mkting Courses	Health Courses	Home Ec Courses	Computr Courses	Engin Courses	Prot Servc Courses	Commun-ication Courses	T&I Courses
TOTAL	2.5	48.1	8.4	26.6	29.7	22.2	8.7	2.1	0.2	6.2
Sex										
Male	6.5	39.7	13.1	3.2	16.5	29.8	27.1	7.4	0.8	8.4
Female	0.9	51.5	6.5	35.9	35.0	19.2	1.3	0.0	0.0	5.3
Race/ethnicity										
Hispanic	-	-	-	-	-	-	-	-	-	-
Native Am	-	-	-	-	-	-	-	-	-	-
Asian	-	-	-	-	-	-	-	-	-	-
Black	0.0	40.9	6.4	5.6	26.1	15.0	5.9	3.1	1.9	6.5
White	3.0	49.0	8.7	29.4	31.0	23.2	8.5	2.1	0.0	6.0
Socio-economic status										
Low	1.8	47.2	3.7	22.2	31.2	24.1	11.9	0.0	1.1	3.7
25-49%	0.0	50.1	11.0	20.7	22.7	14.2	2.5	0.0	0.0	19.8
50-75%	0.9	48.4	13.9	34.7	21.0	25.6	7.4	1.2	0.0	7.1
High	5.9	50.3	5.5	27.1	42.9	23.5	6.2	5.6	0.0	0.0
Parent's highest ed										
Lt HS	-	-	-	-	-	-	-	-	-	-
HS Only	1.8	59.0	13.7	22.2	19.8	33.2	16.4	0.0	1.1	2.5
Some College	1.9	41.4	4.8	30.3	25.3	10.4	6.2	0.7	0.0	14.2
College Grad	4.2	48.6	11.3	18.8	41.5	31.1	5.1	5.5	0.0	0.0
Postsecondary ed plans										
None	-	-	-	-	-	-	-	-	-	-
Vocational/Tech	0.0	59.2	17.1	24.0	7.9	13.6	16.3	0.0	0.0	9.4
Lt 4 yr	5	71.4	15.0	30.8	45.1	34.8	3.5	0.0	0.9	0.9
BA/BS	2.0	26.8	1.3	17.9	28.1	21.9	4.0	7.9	0.0	14.4
Adv Degree	8.3	43.7	1.4	36.0	36.1	19.5	7.0	1.3	0.0	1.4

- Sample size too small for reliabie estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 8.2—Average number of courses taken by 1980 high school seniors attending private less-than-four-year institutions in various vocational fields

	Average number of courses taken									
	Agric Courses	Busin Courses	Mkting Courses	Health Courses	Home Ec Courses	Computr Courses	Engin Courses	Prot Servc Courses	Commun-ication Courses	T&I Courses
TOTAL	0.2	1.9	0.2	3.2	0.8	0.3	0.4	0.1	0.0	0.2
Sex										
Male	0.7	1.2	0.2	0.2	1.3	0.3	1.0	0.2	0.0	0.4
Female	0.0	2.2	0.2	4.4	0.6	0.3	0.1	0.0	0.0	0.1
Race/ethnicity										
Hispanic	-	-	-	-	-	-	-	-	-	-
Native Am	-	-	-	-	-	-	-	-	-	-
Asian	-	-	-	-	-	-	-	-	-	-
Black	0.0	1.7	0.1	0.1	0.4	0.2	0.1	0.0	0.1	0.2
White	0.2	2.0	0.2	3.7	0.8	0.4	0.3	0.1	0.0	0.2
Socio-economic status										
Low	0.0	1.2	0.1	2.3	0.5	0.6	0.7	0.0	0.0	0.1
25-49%	0.0	2.4	0.7	2.2	0.3	0.2	0.3	0.0	0.0	0.7
50-75%	0.0	2.1	0.2	5.3	0.3	0.4	0.1	0.0	0.0	0.1
High	0.6	1.9	0.1	2.6	1.6	0.3	0.1	0.2	0.0	0.0
Parent's highest ed										
Lt HS	-	-	-	-	-	-	-	-	-	-
HS Only	0.0	2.8	0.7	1.4	0.3	0.7	0.7	0.0	0.0	0.1
Some College	0.0	1.5	0.1	4.9	0.4	0.2	0.3	0.0	0.0	0.4
College Grad	0.5	1.5	0.2	1.8	1.5	0.4	0.1	0.2	0.0	0.0
Postsecondary ed plans										
None	-	-	-	-	-	-	-	-	-	-
Vocational/Tech	0.0	2.7	0.3	4.8	1.1	0.2	0.6	0.0	0.0	0.1
Lt 4 yr	0.0	3.4	0.5	2.5	1.0	0.4	0.3	0.0	0.0	0.0
BA/BS	0.1	0.7	0.0	2.1	0.5	0.2	0.1	0.3	0.0	0.6
Adv Degree	0.9	1.0	0.0	3.5	0.4	0.3	0.1	0.0	0.0	0.0

- Sample size too small for reliable estimate.
SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 9.1—Percent of 1980 high school seniors attending public two-year institutions earning credits in various fields of study

	Percent of public 2-yr school students earning		
	Academic Credits	Vocational Credits	Personal Skills Credits
TOTAL	85.2	71.3	50.0
Sex			
Male	84.7	74.3	53.1
Female	85.5	68.7	47.3
Race/ethnicity			
Hispanic	82.4	72.3	61.7
Native Am	92.4	68.5	75.6
Asian	90.1	72.8	64.0
Black	85.2	61.9	48.0
White	85.3	72.3	48.7
Socio-economic status			
Low	83.8	72.5	54.7
25-49%	84.3	73.0	53.2
50-75%	86.3	72.8	48.0
High	87.9	67.3	47.7
Parent's highest ed			
Lt HS	83.0	67.2	54.1
HS Only	84.4	74.7	51.2
Some College	84.7	72.2	48.7
College Grad	88.2	68.9	49.0
Postsecondary ed plans			
None	75.6	70.4	36.0
Vocational/Tech	75.8	78.8	43.5
Lt 4 yr	86.8	76.3	57.9
BA/BS	91.0	67.3	51.7
Adv Degree	88.7	64.1	51.8

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 9.2—Average number of credits earned by 1980 high school seniors attending public two-year institutions in various fields of study

	Average number of credits earned		
	Academic Credits	Vocational Credits	Personal Skills Credits
TOTAL	19.9	10.9	2.1
Sex			
Male	20.0	12.2	2.3
Female	19.8	9.7	1.9
Race/ethnicity			
Hispanic	20.0	10.4	2.9
Native Am	22.8	8.9	3.7
Asian	28.7	9.4	3.6
Black	14.9	8.0	2.5
White	20.3	11.3	1.9
Socio-economic status			
Low	16.8	11.8	2.4
25-49%	18.8	13.5	2.3
50-75%	20.5	11.6	1.9
High	22.9	8.7	1.9
Parent's highest ed			
Lt HS	20.2	12.5	2.5
HS Only	19.1	13.0	2.1
Some College	19.7	11.2	2.0
College Grad	21.1	8.4	2.1
Postsecondary ed plans			
None	8.7	10.5	1.5
Vocational/Tech	12.8	16.0	1.5
Lt 4 yr	20.8	14.4	2.4
BA/BS	23.5	8.3	2.4
Adv Degree	24.1	7.4	2.2

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 10.1—Percent of 1980 high school seniors attending public two-year intitutions earning credits in various academic fields

	Percent of public 2-yr school students earning								
	Math Credits	Science Credits	Letter Credits	Humanit Credits	Commun Credits	Soc Sci Credits	Art/ Design Credits	Educ Credits	Other Acad Credits
TOTAL	52.1	38.8	59.3	20.2	18.1	62.9	27.6	5.1	14.0
Sex									
Male	57.5	41.1	57.2	21.3	15.7	61.1	25.1	3.3	14.4
Female	47.4	36.8	61.1	19.3	20.1	64.5	29.8	6.6	13.6
Race/ethnicity									
Hispanic	52.9	38.5	61.9	31.5	14.0	64.0	23.9	7.2	17.4
Native Am	54.1	47.0	66.8	20.8	22.3	72.3	17.8	4.0	21.4
Asian	69.3	52.2	68.1	40.8	10.9	71.8	35.8	8.9	15.2
Black	45.3	30.2	56.6	14.8	14.7	59.5	20.7	4.4	12.2
White	52.4	39.5	59.2	19.4	19.1	63.1	28.5	5.0	13.8
Socio-economic status									
Low	53.6	32.4	56.8	17.1	17.9	53.8	21.4	8.7	12.1
25-49%	51.5	38.1	59.6	17.5	17.6	63.5	24.5	5.0	16.3
50-75%	50.8	39.5	60.0	23.0	16.2	65.2	29.0	5.8	13.7
High	54.8	45.5	61.5	23.5	19.6	67.3	33.7	4.0	14.6
Parent's highes ed									
Lt HS	56.6	34.4	63.2	19.7	17.6	61.0	24.3	8.4	16.1
HS Only	54.0	35.6	59.1	18.1	20.5	61.7	24.3	5.6	16.5
Some College	49.9	39.1	60.2	20.6	16.7	64.2	24.0	5.0	12.0
College Grad	52.6	42.8	59.1	22.4	18.3	64.2	35.3	4.4	14.2
Postsecondary ed plans									
None	46.0	15.5	33.4	6.6	16.7	43.8	11.4	2.5	6.5
Vocational/Tech	48.5	24.1	47.5	9.0	17.8	48.0	13.5	4.2	13.1
Lt 4 yr	53.3	41.8	69.1	17.8	19.8	63.8	31.4	7.8	16.6
BA/BS	55.9	45.9	66.8	26.1	18.1	72.0	33.7	5.6	13.7
Adv Degree	52.7	47.8	59.4	31.6	17.3	69.2	33.8	5.7	14.6

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 10.2—Average number of credits earned by 1980 high school seniors attending public two-year institutions in various academic fields

	Average number of credits earned								
	Math Credits	Science Credits	Letter Credits	Humanit Credits	Commun Credits	Soc Sci Credits	Art/ Design Credits	Educ Credits	Other Acad Credits
TOTAL	3.0	3.2	3.8	1.0	0.7	5.8	1.4	0.3	0.6
Sex									
Male	3.7	3.3	3.7	1.0	0.6	5.8	1.4	0.1	0.5
Female	2.4	3.2	3.9	1.0	0.9	5.8	1.5	0.5	0.7
Race/ethnicity									
Hispanic	3.1	2.5	4.1	2.0	0.6	5.5	1.3	0.3	0.6
Native Am	3.2	3.6	5.1	1.1	0.7	6.6	1.5	0.1	0.9
Asian	4.7	5.4	4.0	2.7	0.5	8.1	2.4	0.3	0.5
Black	2.3	1.8	3.4	0.7	0.6	4.5	1.0	0.1	0.5
White	3.0	3.4	3.8	0.9	0.8	5.9	1.5	0.3	0.6
Socio-economic status									
Low	2.7	2.4	3.3	1.1	0.6	4.5	1.1	0.7	0.5
25-49%	2.7	3.0	3.9	0.9	0.6	5.3	1.5	0.1	0.9
50-75%	2.9	3.3	4.0	1.0	0.7	6.2	1.5	0.3	0.5
High	3.5	3.9	4.2	1.2	0.8	6.7	1.6	0.3	0.6
Parent's highest ed									
Lt HS	3.7	2.7	3.9	1.3	0.7	5.0	1.4	0.9	0.6
HS Only	2.9	3.0	3.7	0.9	0.9	5.6	1.0	0.2	1.0
Some College	2.9	3.3	3.8	1.0	0.7	5.9	1.4	0.3	0.5
College Grad	3.1	3.5	3.9	1.1	0.8	6.0	1.8	0.3	0.5
Postsecondary ed plans									
None	1.7	1.3	1.5	0.3	0.5	2.5	0.6	0.1	0.2
Vocational/Tech	2.4	1.6	2.8	0.4	0.7	3.4	0.6	0.2	0.8
Lt 4 yr	2.8	3.1	4.5	0.9	0.8	5.6	1.7	0.6	0.8
BA/BS	3.2	4.0	4.6	1.3	0.7	7.2	1.8	0.2	0.5
Adv Degree	3.6	4.5	4.0	1.8	0.8	7.0	1.7	0.2	0.6

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 11.1—Percent of 1980 high school seniors attending public two-year institutions earning credits in various vocational fields

	Percent of public 2-yr school students earning									
	Agric Credits	Busin Credits	Mktng Credits	Health Credits	Home Ec Credits	Computr Credits	Engin Credits	Prot Servc Credits	Commun-ication Credits	T&I Credits
TOTAL	3.2	41.2	6.8	10.3	16.5	19.7	9.7	4.8	0.6	11.5
Sex										
Male	4.3	35.8	6.9	5.7	12.5	24.1	18.9	6.2	0.8	21.2
Female	2.2	45.9	6.7	14.3	19.9	15.8	1.8	3.6	0.5	3.1
Race/ethnicity										
Hispanic	3.0	42.1	7.8	14.4	17.2	17.6	8.8	4.4	0.4	13.4
Native Am	5.1	36.3	2.9	7.5	15.8	9.4	15.1	9.5	0.0	10.4
Asian	5.5	34.3	6.9	10.9	23.0	25.6	8.9	6.4	0.0	14.6
Black	0.4	39.7	6.2	8.1	11.2	15.5	6.3	2.8	0.5	6.3
White	3.3	41.7	6.9	10.3	17.0	20.2	10.3	5.1	0.7	11.7
Socio-economic status										
Low	4.2	46.0	7.5	11.7	15.2	18.5	9.8	3.6	1.2	11.7
25-49%	5.4	40.6	6.2	13.6	17.9	16.5	10.1	5.1	0.2	14.5
50-75%	2.3	41.7	5.4	10.5	17.2	19.4	8.5	6.0	0.3	10.6
High	2.0	41.4	8.0	8.4	16.3	22.0	11.4	5.1	1.3	9.0
Parent's highest ed										
Lt HS	3.9	39.4	8.3	8.9	9.9	24.2	11.0	3.9	1.5	15.3
HS Only	2.3	46.5	8.7	11.3	17.2	19.5	10.6	4.1	0.6	12.9
Some College	4.3	39.3	5.1	12.0	16.2	18.6	9.3	5.7	0.2	11.7
College Grad	2.0	39.9	7.3	8.2	18.0	20.3	9.6	4.9	1.1	9.1
Postsecondary ed plans										
None	4.4	41.0	4.8	7.4	10.6	14.9	12.8	6.5	0.1	17.6
Vocational/Tech	2.4	47.7	7.4	7.2	9.9	17.9	14.1	5.3	1.2	20.6
Lt 4 yr	5.6	48.0	9.0	14.7	22.9	19.8	8.9	5.8	0.3	10.1
BA/BS	2.4	39.0	5.2	12.5	16.4	20.2	8.8	4.7	0.3	8.9
Adv Degree	2.2	34.5	6.6	9.3	17.6	19.4	7.9	3.8	1.7	6.8

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 11.2—Average number of credits earned by 1980 high school seniors attending public two-year institutions in various vocational fields

	Average number of credits earned									
	Agric Credits	Busin Credits	Mkting Credits	Health Credits	Home Ec Credits	Computr Credits	Engin Credits	Prot Servc Credits	Commun-ication Credits	T&I Credits
TOTAL	0.3	3.8	0.3	1.3	0.8	1.2	1.3	0.4	0.0	1.6
Sex										
Male	0.5	2.7	0.3	0.5	0.5	1.5	2.7	0.5	0.0	3.0
Female	0.1	4.7	0.4	1.9	1.0	0.9	0.1	0.3	0.0	0.3
Race/ethnicity										
Hispanic	0.2	4.0	0.5	0.9	0.7	0.8	0.9	0.3	0.1	1.9
Native Am	0.4	3.2	0.1	0.6	0.5	0.4	1.8	0.4	0.0	1.4
As. n	0.2	3.0	0.2	0.5	1.2	1.0	1.0	0.5	0.0	1.9
Black	0.0	3.9	0.3	0.6	0.5	0.7	1.0	0.2	0.1	0.6
White	0.3	3.7	0.3	1.4	0.8	1.3	1.4	0.4	0.0	1.6
Socio-economic status										
Low	0.7	4.0	0.3	1.3	0.7	0.9	1.3	0.3	0.0	2.3
25-49%	0.6	5.0	0.3	1.5	0.8	1.4	1.2	0.3	0.0	2.3
50-75%	0.1	3.7	0.3	1.7	0.8	1.4	1.8	0.7	0.0	1.1
High	0.1	3.2	0.4	0.8	0.8	0.9	1.3	0.2	0.1	0.9
Parent's highest ed										
Lt HS	0.3	4.4	0.4	0.7	0.4	1.1	1.3	0.3	0.0	3.6
HS Only	0.3	4.9	0.5	1.6	0.7	1.1	1.4	0.4	0.0	2.1
Some College	0.4	3.6	0.3	1.6	0.7	1.5	1.5	0.4	0.0	1.2
College Grad	0.1	2.9	0.3	0.7	0.9	0.9	1.0	0.4	0.1	0.9
Postsecondary ed plans										
None	0.3	2.0	0.3	1.1	0.6	0.7	2.4	0.7	0.0	2.3
Vocational/Tech	0.5	5.1	0.4	1.1	0.7	1.6	1.9	0.4	0.0	4.2
Lt 4 yr	0.5	5.4	0.5	2.2	1.0	1.1	1.7	0.6	0.0	1.2
BA/BS	0.2	3.1	0.2	1.1	0.7	1.2	0.9	0.3	0.0	0.7
Adv Degree	0.2	2.7	0.2	1.0	0.7	1.0	0.8	0.2	0.1	0.5

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 12—Percent of 1980 high school seniors attending public two-year institutions earning various amounts of credits in vocational fields

	Percent of public 2-yr school students earning						
	No voc credits	>1-5 credits	>5-10 credits	>10-15 credits	>15-25 credits	>25-35 credits	>35 voc credits
TOTAL	28.7	22.4	15.5	8.8	10.4	5.4	8.9
Sex							
Male	25.7	21.0	15.6	10.3	11.5	5.6	10.4
Female	31.3	23.6	15.4	7.5	9.4	5.2	7.6
Race/ethnicity							
Hispanic	27.7	19.3	18.3	11.0	12.0	4.8	6.9
Native Am	31.5	24.6	19.5	5.5	8.6	2.2	8.1
Asian	27.2	19.1	20.4	13.9	10.9	4.3	4.4
Black	38.1	20.3	18.2	5.2	7.3	4.7	6.1
White	27.7	23.1	14.7	8.9	10.7	5.5	9.4
Socio-economic status							
Low	27.5	20.8	15.3	8.6	12.2	6.6	9.0
25-49%	27.0	20.9	16.0	5.6	8.4	7.2	14.9
50-75%	27.2	24.8	13.0	8.7	9.6	6.4	10.3
High	32.7	19.8	17.4	11.6	10.9	3.0	4.7
Parent's highest ed							
Lt HS	32.8	14.5	15.3	6.9	15.5	4.6	10.4
HS Only	25.3	20.5	14.1	7.2	14.0	7.1	11.7
Some College	27.8	25.1	14.9	8.0	7.7	6.1	10.4
College Grad	31.1	22.6	17.6	11.2	9.6	3.5	4.4
Postsecondary ed plans							
None	29.6	26.4	11.1	7.7	13.1	2.7	9.4
Vocational/Tech	21.2	20.7	16.3	7.7	9.2	7.8	17.1
Lt 4 yr	23.7	17.1	17.3	7.9	10.6	8.1	15.3
BA/BS	32.7	24.7	14.8	8.4	10.6	4.9	4.0
Adv Degree	35.9	23.6	13.6	11.7	8.4	2.9	3.9

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 13.1—Percent of 1980 high school seniors attending public two-year institutions earning credits in various vocational fields

	Percent of public 2-yr school students earning									
	Agric Credits	Busin Credits	Mkting Credits	Health Credits	Home Ec Credits	Computr Credits	Engin Credits	Prot Servc Credits	Commun-ication Credits	T&I Credits
TOTAL	3.2	41.2	6.8	10.3	16.5	19.7	9.7	4.8	0.6	11.5
Vocational credits										
No voc credits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>0-5 credits	2.4	44.8	0.8	7.7	17.9	13.1	6.5	4.7	0.7	7.2
>5-10 credits	2.9	62.0	8.5	11.7	19.4	24.7	10.3	9.7	1.2	13.5
>10-15 credits	5.3	62.0	11.5	21.2	34.9	36.1	13.3	8.8	1.3	14.2
>15-25 credits	6.8	67.2	17.0	19.4	24.8	40.8	16.7	8.6	1.2	21.5
>25-35 credits	5.8	69.5	15.0	16.8	30.4	40.7	23.3	4.1	0.3	24.3
>35 credits	7.6	60.4	19.5	22.5	24.2	37.2	28.4	4.5	0.2	33.6

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 13.2—Average number of credits earned by 1980 high school seniors attending public two-year institutions in various vocational fields

	Average number of credits earned									
	Agric Credits	Busin Credits	Mkting Credits	Health Credits	Home Ec Credits	Computr Credits	Engin Credits	Prot Servc Credits	Commun-ication Credits	T&I Credits
TOTAL	0.3	3.8	0.3	1.3	0.8	1.2	1.3	0.4	0.0	1.6
Vocational credits										
No voc credits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>0-5 credits	0.1	1.3	0.0	0.2	0.5	0.4	0.2	0.1	0.0	0.2
>5-10 credits	0.1	3.1	0.3	0.6	0.8	1.0	0.5	0.4	0.0	0.7
>10-15 credits	0.5	4.6	0.5	1.3	1.7	1.5	0.8	0.8	0.1	1.0
>15-25 credits	0.5	7.8	0.7	1.7	1.9	2.2	1.7	0.9	0.1	2.2
>25-35 credits	1.5	11.3	1.0	3.4	1.1	3.3	4.0	0.9	0.0	4.3
>35 credits	1.1	13.1	1.3	7.3	1.3	4.5	8.4	0.7	0.0	9.6

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 14.1--Percent of 1980 high school seniors attending public two-year institutions earning credits in various academic fields

	Percent of public 2-yr school students earning								
	Math Credits	Science Credits	Letter Credits	Humanit Credits	Commun Credits	Soc Sci Credits	Art/ Design Credits	Educ Credits	Other Acad Credits
TOTAL	52.1	38.8	59.3	20.2	18.1	62.9	27.6	5.1	14.0
Vocational credits									
No voc credits	36.3	27.9	45.2	14.7	7.2	50.8	21.7	4.0	2.7
>0-5 credits	39.4	36.5	51.2	19.8	11.9	55.9	27.7	4.3	6.6
>5-10 credits	55.0	35.6	61.1	25.7	17.1	62.0	31.1	6.5	16.0
>10-15 credits	64.9	53.6	73.5	32.3	28.1	73.1	41.4	7.0	22.2
>15-25 credits	73.7	48.8	73.5	27.1	30.1	82.1	32.2	7.4	34.9
>25-35 credits	74.8	52.3	80.3	14.9	33.3	82.8	28.1	4.5	30.1
>35 credits	77.8	51.1	78.6	12.8	36.8	76.7	20.7	4.3	23.2

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.

Table 14.2—Average number of credits earned by 1980 high school seniors attending public two-year institutions in various academic fields

	Average number of credits earned								
	Math Credits	Science Credits	Letter Credits	Humanit Credits	Commun Credits	Soc Sci Credits	Art/ Design Credits	Educ Credits	Other Acad Credits
TOTAL	3.0	3.2	3.8	1.0	0.7	5.8	1.4	0.3	0.6
Vocational credits									
No voc credits	1.7	2.1	2.6	0.8	0.3	3.8	1.3	0.2	0.1
>0-5 credits	2.2	3.6	3.4	1.0	0.5	5.3	1.6	0.1	0.3
>5-10 credits	3.3	2.9	3.9	1.3	0.8	6.0	1.5	0.4	0.5
>10-15 credits	4.0	4.1	4.9	1.5	1.1	7.9	2.0	0.7	1.1
>15-25 credits	4.8	3.9	5.0	1.5	1.1	9.0	1.5	0.7	1.5
>25-35 credits	4.6	4.2	5.5	0.8	1.4	6.9	1.3	0.2	1.2
>35 credits	4.4	4.3	5.1	0.5	1.3	6.1	0.8	0.1	1.3

SOURCE: NCES HS&B 1980 Senior Postsecondary Education Transcript Study.