

What It's Worth: Field of Training and Economic Status in 2001

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Household Economic Studies

P70-98

Education often entails choices about field of study, alternative credentials, and the time to start and complete studies beyond high school. This report explores issues related to school completion and degrees, fields of training, occupations pursued, and earnings obtained. It also examines the education and earnings of people who obtain a General Educational Development (GED) certificate, the different educational results for women and men, and trends across generations. This report uses data

collected in the Survey of Income and Program Participation (SIPP) in June through September of 2001, representing the civilian noninstitutionalized population living in the United States.¹

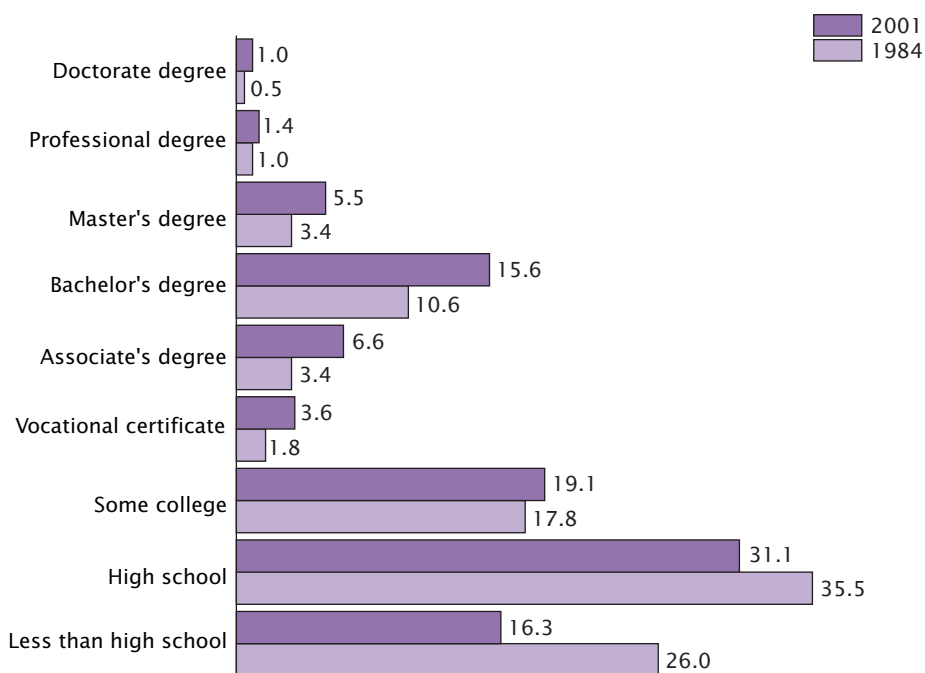
¹ The data in this report were collected from June through September 2001 in the second wave (interview) of the 2001 SIPP. The population represented (the population universe) is the civilian noninstitutionalized population living in the United States.

Current Population Reports

By
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Figure 1.
Educational Attainment in 1984 and 2001

(Percent of population 18 and older)



Source: U.S. Census Bureau, *What's It Worth? Educational Background and Economic Status: Spring 1984*, P70-11; Survey of Income and Program Participation, 2001 Panel.

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Table A.
Detailed Fields of Postsecondary Degrees of the Adult Population: 2001

(Population 18 and older with vocational certificate or higher. Numbers in thousands)

Detailed field of postsecondary degree	Vocational certificate		Associate's degree		Bachelor's degree		Advanced degree ¹	
	Number	90-percent confidence interval	Number	90-percent confidence interval	Number	90-percent confidence interval	Number	90-percent confidence interval
Total	7,434	7,095–7,773	13,694	13,240–14,148	32,355	31,690–33,020	16,180	15,690–16,670
Agriculture/forestry/horticulture . . .	68	35–101	197	141–253	361	285–437	173	120–226
Art/architecture	(X)	(X)	(X)	(X)	1,067	937–1,197	257	193–321
Auto mechanics	359	283–435	(X)	(X)	(X)	(X)	(X)	(X)
Business/management	1,309	1,165–1,453	3,153	2,930–3,376	7,189	6,855–7,523	2,078	1,896–2,260
Communications	(X)	(X)	314	243–385	898	778–1,018	168	116–220
Computer and information science	368	291–445	586	489–683	908	788–1,028	522	431–613
Construction trades	274	208–340	(X)	(X)	(X)	(X)	(X)	(X)
Cosmetology	693	588–798	(X)	(X)	(X)	(X)	(X)	(X)
Education	(X)	(X)	565	470–660	4,034	3,782–4,286	3,668	3,428–3,908
Electronics	406	325–487	(X)	(X)	(X)	(X)	(X)	(X)
Engineering/drafting	51	22–80	666	563–769	2,643	2,438–2,848	855	738–972
English/literature	(X)	(X)	(X)	(X)	965	841–1,089	244	181–307
Foreign languages	(X)	(X)	(X)	(X)	229	168–290	73	39–107
Health care/health sciences	1,491	1,337–1,645	2,025	1,846–2,204	1,699	1,535–1,863	(X)	(X)
Law	(X)	(X)	(X)	(X)	(X)	(X)	1,447	1,295–1,599
Liberal arts/humanities	(X)	(X)	1,180	1,043–1,317	1,800	1,631–1,969	267	202–332
Mathematics/statistics	(X)	(X)	(X)	(X)	467	381–553	203	146–260
Medicine/dentistry	(X)	(X)	(X)	(X)	(X)	(X)	1,186	1,049–1,323
Natural sciences	(X)	(X)	196	140–252	1,495	1,341–1,649	683	579–787
Nursing/pharmacy/public health	(X)	(X)	(X)	(X)	(X)	(X)	434	351–517
Philosophy/religion/theology	(X)	(X)	(X)	(X)	345	271–419	348	273–423
Police and protective services	67	34–100	263	198–328	(X)	(X)	(X)	(X)
Preprofessional	(X)	(X)	(X)	(X)	193	137–249	(X)	(X)
Psychology	(X)	(X)	(X)	(X)	1,160	1,024–1,296	610	511–709
Social sciences/history	(X)	(X)	212	154–270	1,511	1,356–1,666	516	425–607
Other vocational	623	523–723	1,307	1,163–1,451	(X)	(X)	(X)	(X)
Other	1,725	1,559–1,891	3,032	2,813–3,251	5,391	5,101–5,681	2,449	2,252–2,646

(X) Not applicable—category not in questionnaire for given education level.

¹ Advanced degrees include master's, professional, and doctorate degrees.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2001 Panel.

DEGREES HELD BY ADULTS IN THE UNITED STATES

In 2001, more people in the United States held postsecondary educational credentials than ever before.

Thirty-four percent of the adult population (18 and over) had degrees or certificates above the high school level in 2001, up from 21 percent in 1984, the first year covered by a report on this topic

(Figure 1).² Bachelor's and associate's degrees accounted for most of the increase. People with bachelor's degrees accounted for

16 percent of the adult population in 2001, compared with 11 percent in 1984, while associate's degree

² The proportion with postsecondary credentials did not exceed 25 percent before 1984, according to estimates that can be calculated from the report "Educational Attainment in the United States: March 1999."

The estimates in this report (which may be shown in text, figures, and tables) are based on responses from a sample of the population

and may differ from the actual values because of sampling variability or other factors. As a result, apparent differences between the estimates for two or more groups may not be statistically significant. All comparative statements have undergone statistical testing and are significant at the 90-percent confidence level unless otherwise noted.

Table B.
Detailed Fields of Bachelor's Degrees of People Who Went on to Get an Advanced Degree: 2001

(Population 18 and older with bachelor's or higher degree. Numbers in thousands)

Detailed field of bachelor's degree	Number	Percent of all people with a bachelor's degree	Percent distribution by advanced degree field ¹				
			Total	Same field	Law	Medicine	Other
Total	16,180	33.4	100.0	39.4	8.9	7.3	44.4
Agriculture/forestry/horticulture	173	32.5	100.0	51.5	4.9	-	43.7
Art/architecture	367	25.6	100.0	44.0	5.5	6.3	44.3
Business/management	1,686	19.0	100.0	60.0	9.8	1.0	29.2
Communications	257	22.3	100.0	24.5	10.3	7.5	57.7
Computer and information science	332	26.8	100.0	62.0	-	2.1	35.9
Education	2,946	42.2	100.0	78.8	2.0	0.3	18.9
Engineering/drafting	1,282	32.7	100.0	54.4	3.1	2.3	40.2
English/literature	544	36.1	100.0	26.0	14.2	2.3	57.6
Foreign languages	213	48.2	100.0	20.3	7.3	4.4	68.0
Health care/health sciences	563	24.9	100.0	31.1	3.7	29.6	35.6
Liberal arts/humanities	1,012	36.0	100.0	11.0	27.0	6.9	55.1
Mathematics/statistics	389	45.4	100.0	39.2	1.0	4.2	55.6
Natural sciences	1,378	48.0	100.0	35.7	2.9	29.2	32.2
Philosophy/religion/theology	277	44.5	100.0	43.3	12.7	1.4	42.6
Preprofessional	394	67.1	100.0	(X)	24.3	49.7	26.1
Psychology	722	38.3	100.0	44.5	5.8	3.5	46.3
Social sciences/history	889	37.0	100.0	29.4	17.3	1.6	51.6
Other ²	2,754	33.8	100.0	(X)	13.6	6.0	80.5

- Represents or rounds to zero.

(X) Not applicable.

¹ Advanced degrees include master's, professional, and doctorate degrees.

² The category "Other" in this table refers to an actual response choice rather than a combination of specific fields.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2001 Panel.

holders doubled from 3 percent to 7 percent.

Advanced degree holders accounted for a smaller part of the increase. The percentage of adults with master's degrees increased from 3 percent to about 6 percent, while the percentage of adults with professional or doctorate degrees increased by less than 1 percentage point.

From 1984 to 2001, the percentage of adults reporting a high school diploma as their highest education fell from 35 percent to 31 percent. The percentage of adults with less than a high school diploma fell from 26 percent to 16 percent.

FIELDS OF TRAINING

Business was the most popular major of those with bachelor's degrees and was one of the most common among people with vocational certificates, associate's, or advanced degrees (Table A).³ In 2001, 7.2 million people had bachelor's degrees in business, 3.2 million had associate's degrees, and

2.1 million had M.B.A.s or other advanced degrees in business. Other common fields of training for degree and certificate holders were education, engineering, and health care. Few people had degrees in computer science and computer-related subjects.

Students in some fields tend to join the labor force with lower levels of education, while students in other fields are more likely to pursue higher degrees. This phenomenon is clearest among those with a bachelor's degree who reported their college major as preprofessional (for example, pre-medicine or pre-law), two-thirds (67 percent) of whom went on to earn an advanced degree (Table B). At the

opposite end of the spectrum were college graduates who majored in art/architecture, business, communications, health care, or computer science: 25 percent or less of these people completed studies beyond the bachelor's degree. Between 30 percent and 50 percent of people in other fields of training, such as agriculture, completed advanced degrees.

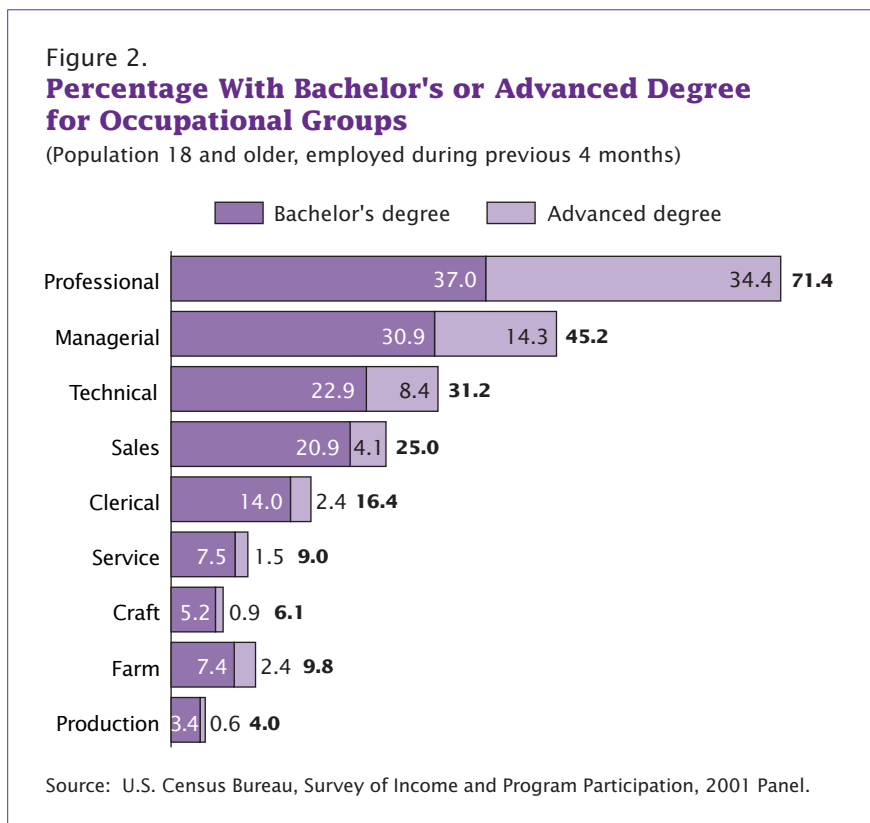
People who had preprofessional college majors and earned advanced degrees usually received them in law or medicine (74 percent), while the majority of education majors who earned advanced degrees did so in education (79 percent).⁴ Overall, the transition from undergraduate major to advanced degree studies followed diverse pathways. People with college majors in communications, English, foreign languages, health care, liberal arts, math, or natural science obtained advanced degrees in the same or related fields less than half the time.⁵

OCCUPATION

One reason that people pursue higher education is to enter professional and managerial occupations. Bachelor's or higher degrees were held by 45 percent of people with managerial jobs and 71 percent of people with professional occupations. By comparison, 10 percent or less of those in craft, service, farm, and production occupations

⁴ The percentage of people with preprofessional majors who earned advanced degrees in law or medicine was not statistically different from the percentage of education majors who earned advanced degrees in education.

⁵ The percentage of college graduates earning advanced degrees in the same field depends in part on how narrowly the field is defined. If respondents were asked to pick from a different list of fields, a somewhat different rate of continuation might be apparent.



had bachelor's or higher degrees (Figure 2).⁶

At nearly every level of education, certain fields of training were strongly associated with professional and managerial occupations. Business majors were more likely than others with the same level of education to be in managerial occupations—including those with vocational certificates and associate's degrees (Table C).⁷ People who majored in other subjects were increasingly likely to be in professional occupations as their

⁶ The percentage of people in farm occupations with bachelor's degrees or higher is not statistically different from the percentage of people in service occupations with bachelor's degrees or higher.

⁷ The percentage of people in managerial occupations with vocational certificates who majored in business is not statistically different from the percentage of people in managerial occupations with associate's degrees who majored in business.

educational level increased.⁸ At the associate's degree level or higher, a person with a degree in engineering or in arts/sciences was more likely to have a professional occupation than a management occupation.

EARNINGS

In 2001, the average monthly earnings of full-time workers with a professional degree were approximately \$8,000 (Table D). By contrast, full-time workers who did

⁸ The difference in the percentage of people in professional occupations who received vocational certificates in vocational subjects and those who received associate's degrees in these subjects was not statistically significant. In addition, among business majors, an increase in education to the bachelor's and advanced degree levels was accompanied by a larger portion in professional occupations. At the advanced level, 22 percent of business degree holders had professional occupations, compared with 57 percent or more of other degree holders.

Table C.
Occupation by Educational Attainment and Field of Training: 2001

(Employed population 18 and older. Numbers in thousands)

Degree and field of training	Total	Occupation								
		Profes- sional	Mana- gerial	Tech- nical	Sales	Clerical	Service	Craft	Farm	Pro- duction
TOTAL										
Number	143,925	23,259	22,025	4,681	15,973	19,741	20,559	14,679	3,452	19,556
Percent	100.0	16.2	15.3	3.3	11.1	13.7	14.3	10.2	2.4	13.6
Advanced Degree										
Number	13,332	8,011	3,139	393	656	481	312	137	84	118
Percent	100.0	60.1	23.6	3.0	4.9	3.6	2.3	1.0	0.6	0.9
Business	100.0	21.5	56.4	1.9	10.4	5.2	1.4	1.6	0.6	1.0
Engineering/computers	100.0	60.0	18.4	7.2	6.3	2.5	1.3	2.0	0.3	1.9
Arts, sciences	100.0	70.8	14.6	3.3	3.3	3.2	2.5	0.8	0.8	0.8
Education	100.0	69.7	18.0	0.7	3.6	4.6	2.3	0.4	0.4	0.4
Other fields	100.0	56.6	26.1	3.2	4.8	2.6	3.6	1.4	0.6	1.2
Bachelor's Degree										
Number	25,807	8,599	6,810	1,073	3,345	2,760	1,541	761	255	663
Percent	100.0	33.3	26.4	4.2	13.0	10.7	6.0	3.0	1.0	2.6
Business	100.0	13.1	42.1	1.9	21.3	11.8	3.2	2.8	0.4	3.4
Engineering/computers	100.0	48.6	20.9	8.3	7.2	4.6	2.8	4.4	0.6	2.6
Arts, sciences	100.0	36.5	19.6	5.0	11.7	12.6	8.1	3.0	1.2	2.2
Education	100.0	61.7	11.3	1.3	5.4	9.7	5.5	1.9	1.7	1.7
Other fields	100.0	27.3	29.7	4.9	12.1	10.8	8.8	2.6	1.3	2.5
Associate's Degree										
Number	11,085	2,103	1,738	885	1,064	1,796	1,394	1,137	133	834
Percent	100.0	1.5	1.2	8.0	9.6	16.2	12.6	10.3	1.2	7.5
Business	100.0	8.7	24.8	2.1	15.4	28.3	9.2	5.1	1.3	5.2
Engineering/computers	100.0	25.7	10.6	9.9	6.5	14.2	6.2	17.8	0.0	9.2
Arts, sciences	100.0	28.4	12.2	12.8	6.9	12.7	15.5	4.7	1.7	5.1
Education	100.0	23.7	15.2	0.0	15.4	17.4	13.5	5.5	3.6	5.8
Vocational	100.0	11.2	8.4	8.3	5.8	6.9	11.3	28.6	0.7	18.7
Other fields	100.0	16.3	16.5	7.5	9.6	13.4	15.1	12.7	0.8	8.0
Vocational Certificate										
Number	5,473	532	632	405	349	846	1,044	951	56	658
Percent	100.0	9.7	11.6	7.4	6.4	15.5	19.1	17.4	1.0	12.0
Business	100.0	5.7	20.6	3.8	14.3	32.8	9.6	6.0	2.1	5.2
Drafting/computers	100.0	9.7	12.5	6.9	4.0	14.3	11.7	26.8	0.0	14.0
Vocational	100.0	10.2	8.3	8.9	3.6	11.3	25.9	17.5	1.1	13.3
Other fields	100.0	11.3	11.7	7.1	8.0	13.5	15.8	19.1	0.8	12.7
Some College										
Number	29,218	2,243	4,638	1,044	4,149	6,090	4,419	2,900	582	3,153
Percent	100.0	7.7	15.9	3.6	14.2	20.8	15.1	9.9	2.0	10.8
High School										
Number	43,076	1,546	4,347	806	4,989	6,919	7,645	6,170	1,200	9,454
Percent	100.0	3.6	10.1	1.9	11.6	16.1	17.7	14.3	2.8	21.9
Less Than High School Graduate										
Number	15,931	225	721	75	1,420	848	4,203	2,623	1,141	4,675
Percent	100.0	1.4	4.5	0.5	8.9	5.3	26.4	16.5	7.2	29.3

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2001 Panel.

Table D.
Monthly Earnings by Educational Attainment: 2001

(Population 18 and older with earnings, employed full-time for previous 4 months. Earnings in dollars)

Earnings category, characteristic, and field of training	Total	Educational attainment								
		Less than high school graduate	High school diploma	Some college	Voca- tional certifi- cate	Associ- ate's degree	Bach- elor's degree	Master's degree	Profes- sional degree	Doctorate degree
Measures of Earnings										
Average	3,319	1,963	2,532	3,058	2,912	3,171	4,281	5,207	7,941	6,953
25th percentile	1,700	1,200	1,500	1,700	1,755	1,920	2,400	3,000	3,294	3,825
Median	2,576	1,632	2,120	2,475	2,550	2,800	3,500	4,200	5,875	5,352
75th percentile	4,000	2,325	3,060	3,600	3,600	3,938	5,211	6,057	9,952	8,100
Average Earnings by Race and Hispanic Origin										
White	3,410	2,013	2,600	3,178	2,952	3,231	4,384	5,241	8,082	7,216
White, non-Hispanic	3,579	2,281	2,678	3,265	2,983	3,256	4,435	5,249	8,233	7,257
Black	2,560	1,673	2,106	2,425	2,675	2,717	3,673	4,268	(B)	(B)
Hispanic (any race)	2,309	1,759	2,052	2,471	2,503	3,028	3,549	(B)	(B)	(B)
Average Earnings by Age										
18 to 29 years	2,379	1,679	2,045	2,220	2,442	2,318	3,181	3,804	(B)	(B)
30 to 49 years	3,506	1,993	2,650	3,234	2,997	3,378	4,569	5,203	7,910	6,759
50 years or older	3,664	2,152	2,708	3,565	3,017	3,257	4,469	5,590	8,419	7,510
Average Earnings by Field of Training										
Business	4,729	(X)	(X)	(X)	2,538	3,353	4,815	6,751	(B)	(B)
Computers	4,526	(X)	(X)	(X)	2,630	3,407	5,051	6,054	(B)	(B)
Engineering	5,263	(X)	(X)	(X)	3,368	3,578	5,296	6,471	(B)	(B)
Liberal arts	3,716	(X)	(X)	(X)	(B)	3,087	3,443	5,043	(B)	(B)
Social science, law	4,968	(X)	(X)	(X)	(B)	3,288	3,656	4,388	8,414	6,861
Science, medicine	4,254	(X)	(X)	(X)	2,593	2,993	3,693	4,448	9,405	6,261
Education	3,766	(X)	(X)	(X)	(B)	(B)	3,433	4,123	(B)	(B)
Vocational	3,015	(X)	(X)	(X)	3,044	2,979	(X)	(X)	(X)	(X)
Other	3,983	(X)	(X)	(X)	3,068	3,143	4,253	4,641	(B)	(B)

(B) Base for the derived figure is less than 200,000.

(X) Not applicable—category not in questionnaire for given education level.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2001 Panel.

not complete high school earned about \$2,000 per month. Other degree levels ranged in between these levels.⁹

Small amounts of postsecondary education were associated with higher earnings. People who had “some college but no degree” had

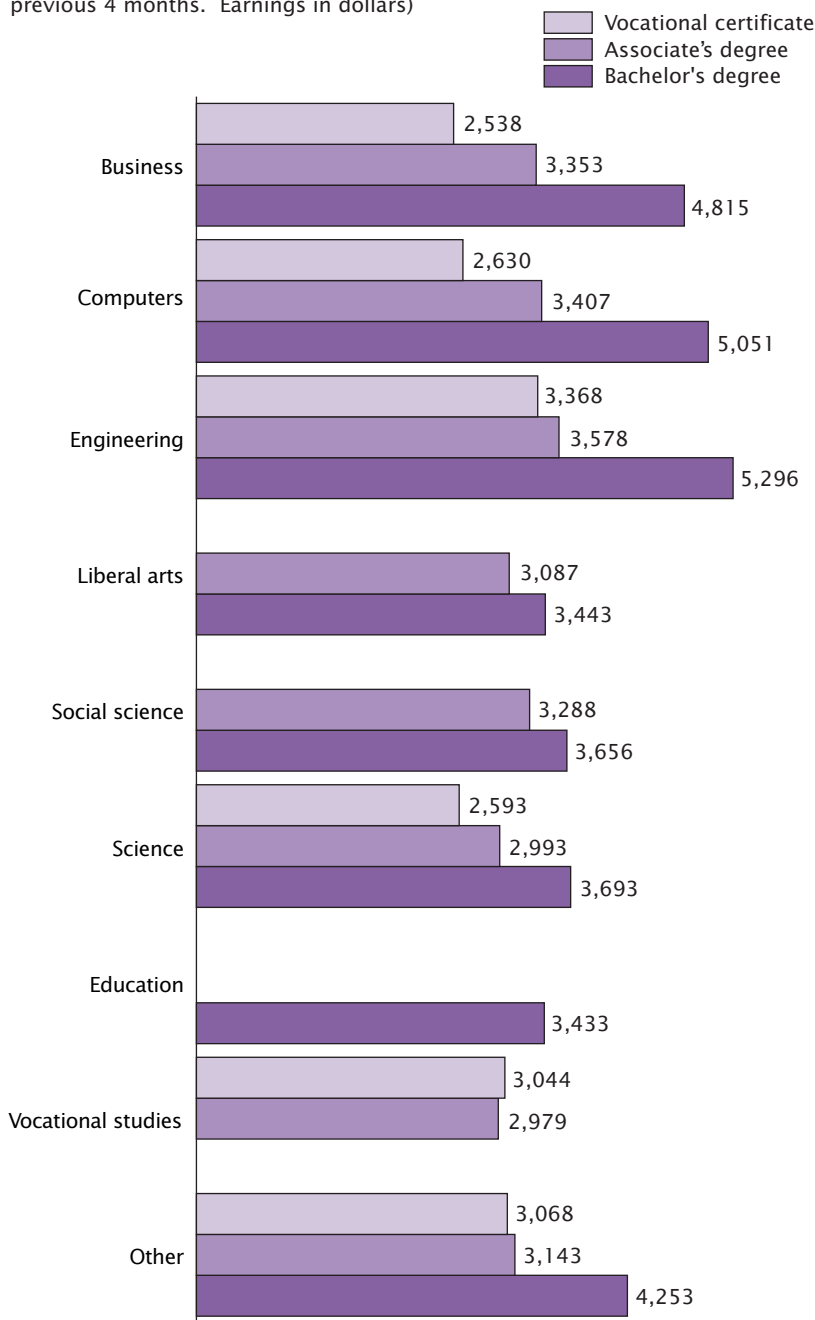
studied 1 year past high school or less, on average, and doing so increased earnings by about \$500 per month.¹⁰ High school completion provided benefit as well. The average earnings of people whose highest degree was a high school diploma were \$600 per month higher than those of people who did not complete high school.

Earnings also varied by race and Hispanic origin. In 2001, Blacks and Hispanics earned less than non-Hispanic Whites at almost every educational level (Table D).¹¹ If Black and non-Hispanic White educational levels were equal, 71 percent of the earnings gap would remain. If the educational levels of

⁹ The earnings of people with some college, no degree were not statistically different from the earnings of people with a vocational certificate or an associate's degree. The earnings of people with a vocational certificate were not statistically different from the earnings of people with an associate's degree. The earnings of people with a professional degree were not statistically different from those with a doctorate.

Figure 3.
Average Monthly Earnings by Field of Training for Selected Education Levels: 2001

(Population 18 and older with earnings, employed full-time for previous 4 months. Earnings in dollars)



Source: U.S. Census Bureau, Survey of Income and Program Participation, 2001 Panel.

Hispanics and non-Hispanic Whites were equal, the earnings gap would be 53 percent of its current value.¹²

People 18 to 29 years old earned less than older people in almost all educational categories except vocational.¹³ Earnings were low for people under age 30 with less than a bachelor's degree. In that age group, people with some college but no degree, vocational certificates, or associate's degrees had about the same earnings as those with only a high school diploma. At 50 and older, people with some college but no degree earned as much as those with a high school diploma or a vocational certificate or associate's degree.¹⁴

Field of training sometimes affects earnings as much as the level of education. In 2001, people with

¹² The comparisons of differences in earnings by race and Hispanic origin were based on standardization, using all levels of education (including those with a small number of sample cases). In Table D, the differences in earnings between Blacks and non-Hispanic Whites at the vocational, associate's, and master's levels are not statistically significant. The differences in earnings between Hispanics and non-Hispanic Whites at the vocational and associate's levels are also not statistically significant. Some comparisons at the master's, professional, and doctorate levels were not possible, due to the small number of sample cases. Earnings differences between Hispanics and Blacks were not statistically significant at the educational levels that could be tested.

¹³ Earnings for people 18 to 29 years old with vocational certificates were not statistically different from earnings for people 30 to 49 years old or 50 and older with vocational certificates. Professional degree recipients and doctorate degree recipients could not be compared because the sample of people 18 to 29 years old was too small. Earnings for people 30 to 49 years old were not statistically different from earnings for people 50 and older for any educational level.

¹⁴ Earnings for people 50 and older with a vocational certificate were not statistically different from those of people with an associate's degree.

Table E.
Broad Field of Training by Sex for Selected Years: 1984–2001

(Population 18 and older for 1984–1993; 15 and older for 1996 and 2001. Highest degree was bachelor's. Numbers in thousands)

Broad field of training	1984				1987			
	Male		Female		Male		Female	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	9,581	100	8,489	100	10,909	100	10,110	100
Business	2,553	27	922	11	2,975	27	1,229	12
Engineering	1,886	20	277	3	2,245	21	300	3
Liberal arts	1,479	15	2,045	24	1,876	17	2,217	22
Social science, law	1,074	11	1,092	13	1,214	11	1,184	12
Natural science, medicine	1,127	12	1,240	15	1,253	11	1,759	17
Education	716	7	2,554	30	653	6	2,756	27
Other	746	8	359	4	693	6	665	7
	1990				1993			
	Male		Female		Male		Female	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	11,758	100	11,076	100	12,554	100	12,389	100
Business	3,301	28	1,570	14	3,427	27	1,855	15
Engineering	2,556	22	368	3	2,585	21	558	5
Liberal arts	1,635	14	2,869	26	1,890	15	2,569	21
Social science, law	1,233	10	1,177	11	1,370	11	1,676	14
Natural science, medicine	1,267	11	1,723	16	1,426	11	1,976	16
Education	749	6	2,707	24	764	6	2,850	23
Other	1,017	9	662	6	1,092	9	905	7
	1996				2001			
	Male		Female		Male		Female	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	13,536	100	13,840	100	15,994	100	16,361	100
Business	4,206	31	2,670	19	4,966	31	3,122	19
Engineering	2,681	20	579	4	3,248	20	770	5
Liberal arts	1,634	12	2,297	17	1,766	11	2,638	16
Social science, law	1,005	7	1,393	10	1,059	7	1,805	11
Natural science, medicine	1,389	10	2,072	15	1,371	9	2,184	13
Education	744	5	3,097	22	864	5	3,170	19
Other	1,877	14	1,732	13	2,719	17	2,672	16

Source: U.S. Census Bureau, Survey of Income and Program Participation, 1984, 1987, 1990, 1993, 1996, and 2001 Panels.

bachelor's degrees in engineering earned 54 percent more than people with bachelor's degrees in education. Vocational certificate and associate's degree holders who studied technical fields such as computers and engineering earned as much as people who held bachelor's degrees in liberal arts, education, or social science. People with associate's degrees in computers or

engineering had similarly high earnings (Figure 3).

Variation in earnings occurred at each level of education. One-quarter of all bachelor's degree recipients earned \$2,400 per month or less, which is less than the average of people with some college but no degree. The highest-paid one-quarter of bachelor's degree recipients earned \$5,200 or more per

month, approximately the average of people with master's degrees.

DIFFERENCES BETWEEN WOMEN AND MEN

Over time, women and men have had different patterns in their fields of training. From 1984 to 2001, business was one of the most popular fields of training for men whose highest degree was a bachelor's

Table G.
Average Monthly Earnings by Educational Attainment, Sex, and Field of Training: 2001

(Population 18 and older with earnings, employed full-time for previous 4 months. Earnings in dollars)

Educational attainment and field of training	Average monthly earnings		Ratio of women's earnings to men's
	Men	Women	
Vocational certificate	3,309	2,432	0.73
Business	(B)	2,365	(B)
Computers	(B)	(B)	(B)
Engineering	3,308	(B)	(B)
Social science, law	(B)	(B)	(B)
Science, medicine	(B)	2,526	(B)
Education	(B)	(B)	(B)
Vocational	3,271	2,287	0.70
Other	3,497	2,413	0.69
Associate's degree	3,617	2,701	0.75
Business	4,212	2,739	0.65
Computers	3,865	(B)	(B)
Engineering	3,665	(B)	(B)
Liberal arts	3,393	2,800	0.83
Social science, law	3,550	(B)	(B)
Science, medicine	3,074	2,966	0.96
Education	(B)	(B)	(B)
Vocational	3,194	(B)	(B)
Other	3,670	2,442	0.67
Bachelor's degree	4,812	3,527	0.73
Business	5,287	3,816	0.72
Computers	4,917	(B)	(B)
Engineering	5,491	4,060	0.74
Liberal arts	3,852	3,064	0.80
Social science, law	4,224	3,180	0.75
Science, medicine	4,030	3,420	0.85
Education	4,030	3,185	0.79
Other	4,514	3,862	0.86
Advanced degree¹	6,828	4,537	0.66
Business	7,421	5,174	0.70
Computers	6,488	(B)	(B)
Engineering	7,171	(B)	(B)
Liberal arts	6,055	3,595	0.59
Social science, law	7,473	5,384	0.72
Science, medicine	7,539	5,230	0.69
Education	5,051	3,905	0.77
Other	5,885	4,155	0.71

(B) Base for the derived figure is less than 200,000.

¹ Advanced degrees include master's, professional, and doctorate degrees.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2001 Panel.

HIGH SCHOOL EQUIVALENCY

People can complete their high school education in a variety of ways. The General Educational Development (GED) test was created around the time of World War II as a new pathway to high school completion, in part for the benefit of veterans who had interrupted their schooling to serve in the

military. The GED tests provide a way for many adults to gain a high school credential. To pass the tests, individuals must achieve scores equivalent to those attained by the top 70 percent of graduating high school seniors. Passing the GED test is considered by most states and many federal programs as formally equivalent to high school graduation. In recent years, approximately 700,000 people

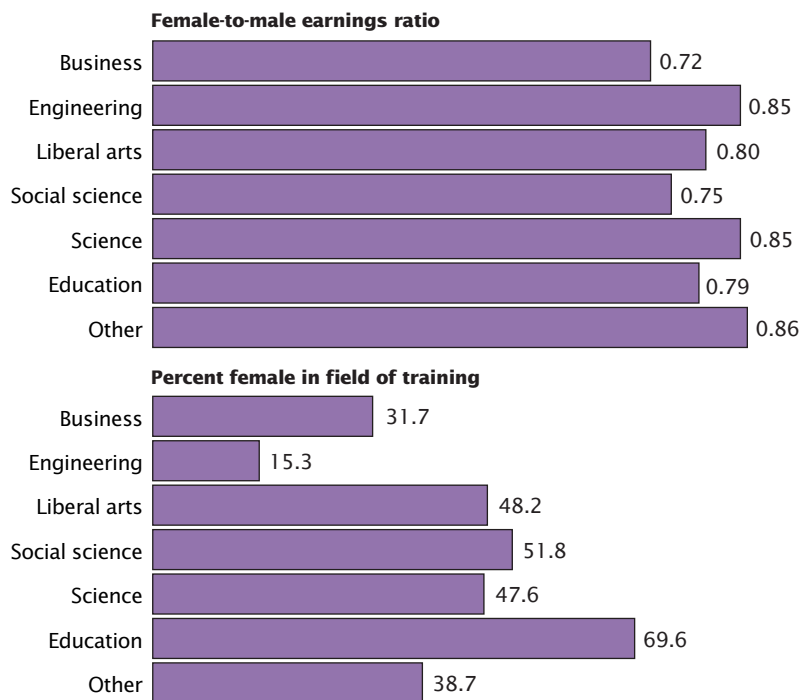
have taken the GED exam each year, with the majority passing and receiving certification.¹⁷

In 2001, 19.3 million adults reported they had received their high

¹⁷ For a description of GED history and trends and a general evaluation of the GED program, see: David Boesel, Nabeel Alsalam, and Thomas M. Smith, "Educational and Labor Market Performance of GED Recipients," National Library of Education, U.S. Department of Education, February 1998.

Figure 4.
Relative Earnings and Percentage of Bachelor's Degree Holders Who Are Women by Field of Training: 2001

(Based on women and men whose highest degree is bachelor's degree, 18 and older, with earnings, employed full-time for previous 4 months)



Source: U.S. Census Bureau, Survey of Income and Program Participation, 2001 Panel.

school certification by means of a GED exam. As shown in Table H, GED recipients were less likely to go on to higher education than those who earned a regular diploma. For most GED recipients, high school certification represented the highest level of school they completed, while 30 percent completed at least some postsecondary education, and 12 percent earned a bachelor's degree or higher.

GED holders were generally older than high school diploma holders (a greater portion were 50 or older and a smaller portion were 18 to 29). While the GED exam has grown more popular in recent years, and the relative number of young people earning a GED has

increased, on average, GED holders remained older than high school diploma holders.¹⁸

GED holders earned less than people who graduated from high school through traditional means. The earnings gap is evident across all sex, age, and race and Hispanic-origin groups examined here except for Blacks. Earnings differed by age: people 18 to 29 years old with a GED earned around \$500 per month less than people with a regular high school diploma. In the 30- to 49-year-old group, the difference was \$700.

¹⁸ See GED Testing Service, "Who took the GED? GED 2001 statistical report," Washington, DC: American Council on Education, 2002.

One factor in these earnings differences was subsequent education. Comparing GED holders and diploma holders who completed no further education beyond high school reveals a smaller earnings gap than the overall gap. Some of the difference between a high school diploma and a GED results because diploma holders were more likely to pursue higher education.

TIME SPENT COMPLETING DEGREES

On average, people who pursued higher degrees spent more than the minimum number of years to complete a degree or certificate. For example, people averaged more than 2 years to complete vocational programs that were designed to take 1 year or less (Table I). Similarly, people who earned associate's degrees, which generally require a 2-year course of study, took an average of over 4 years to complete them. Bachelor's and higher degrees took an average of 5 or more years to complete. One reason may be that people pursued their studies part-time or intermittently. Some people drop out of school and return a number of years later. Others take courses part-time while working or change majors.

People who completed a bachelor's or higher degree tended to start their postsecondary education almost immediately after high school (an average delay of around 1 year). People earning associate's degrees or vocational certificates on average started their postsecondary education a little later (an average delay of 3 years or more). Many students may have used these degrees to switch careers or to improve skills.

Women took an average of 3.3 years longer than men to complete

Table H.
Pathways to High School Completion and Characteristics of GED and High School Diploma Holders: 2001

(Population 18 and older. Numbers in thousands, earnings in dollars)

Characteristic	GED holders ¹			High school diploma holders		
	Number	Percent	Monthly earnings ²	Number	Percent	Monthly earnings ²
Total	19,274	100.0	2,842	154,385	100.0	3,529
Highest Degree Level						
High school graduate	11,263	58.4	2,387	53,163	34.4	2,560
Some postsecondary education	5,722	29.7	2,871	54,976	35.6	3,087
Bachelor's degree or higher	2,289	11.9	4,459	46,246	30.0	4,852
Sex						
Men	9,621	49.9	3,144	73,526	47.6	4,016
Women	9,653	50.1	2,419	80,859	52.4	2,861
Race and Hispanic Origin						
White	15,627	81.1	2,886	130,529	84.5	3,627
White, non-Hispanic	13,919	72.2	2,988	120,152	77.8	3,718
Black	2,576	13.4	2,438	15,818	10.2	2,691
Hispanic (any race)	1,892	9.8	2,192	11,507	7.5	2,688
Age						
18 to 29 years	3,902	20.2	2,037	33,805	21.9	2,507
30 to 49 years	8,252	42.8	2,986	67,019	43.4	3,726
50 years and older	7,119	36.9	3,126	53,561	34.7	3,911

¹ People who have received a GED are considered high school graduates.

² Earnings are for population 18 and older with earnings, employed full-time for previous 4 months.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2001 Panel.

Table I.
Average Number of Years to Start and Complete Postsecondary Certification and Degrees: 2001

(Population 18 and older)

Characteristic	Vocational		Associate's		Bachelor's		Master's	Profes- sional	Doctorate
	Years to start of program	Years to complete program	Years to start of program	Years to complete program	Years to start of program	Years to complete program	Years to complete program	Years to complete program	Years to complete program
Total	3.5	2.6	3.3	4.6	0.9	5.6	7.1	5.6	9.3
Sex									
Men	3.6	2.6	3.2	4.6	0.9	5.4	6.8	5.9	8.3
Women	3.5	2.7	3.3	4.6	0.9	5.7	7.5	5.0	11.6
Race and Hispanic Origin									
White	3.5	2.6	3.2	4.6	0.9	5.6	7.2	5.5	9.3
White, non-Hispanic	3.5	2.6	3.2	4.7	0.9	5.6	7.3	5.6	9.3
Black	3.3	2.8	4.2	4.3	1.7	5.9	8.2	(B)	(B)
Hispanic (any race)	3.6	2.4	3.1	4.2	1.2	5.5	5.9	(B)	(B)

(B) Base for the derived figure is less than 200,000.

Note: Average number of years to start of program measured from high school completion. Completion measured from first enrollment in postsecondary education or, in the case of advanced degrees, from completion of bachelor's degree.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2001 Panel.

a doctorate degree and about the same length of time to complete a vocational certificate, associate's, bachelor's, master's, or professional degree.¹⁹ No statistical differences existed by race and Hispanic origin in time to complete bachelor's degrees.

AGE AND EDUCATION TRENDS

In 2001, twice as many people 25 to 34 years old had bachelor's degrees as those 65 and older (Table J). The population 65 and older would have been teenagers and young adults in the 1930s through the 1950s. During those decades, high school education was not as common as it is today and college education was relatively rare. For example, in 1940, 25 percent of the population 25 and older had completed 4 years of high school or more education.²⁰

Women's educational attainment relative to men has also increased. In 2001, men held a higher percentage of bachelor's or higher degrees among those 55 and older, while women had a higher percentage among those 25 to 34 years old. An opposite trend is apparent in associate's degrees and vocational certificates: women held 63 percent of these degrees among those 65 and older and 56 percent among those 25 to 34 years old.

In the 25-to-34 age group, 25 percent of bachelor's degree holders had majored in business, compared with 20 percent of those in the 65-and-older age group. The rise in

bachelor's degrees in business was accompanied by a decline in bachelor's degrees in education for these two age groups. At the associate's and vocational levels, business degrees declined as a share of all degrees and certificates, with most of the offsetting growth occurring in liberal arts, engineering, and computer-related credentials. This shift from business to engineering and computer-related degrees across age groups occurred as the proportion of men among the youngest holders of associate's degrees and vocational certificates was increasing.

Among those whose highest degree was a bachelor's degree, 83 percent of the 25-to-34 age group started college the same year they completed high school, compared with 64 percent of the 65-and-older age group. It is not clear whether the younger group was more likely than the older group to finish within 5 years, since many members of the younger age group had probably not yet completed their schooling—particularly those who delayed their postsecondary education or who were taking extra years to complete their degrees. The longer delays in completing education among the older group may relate to wartime interruptions of schooling.

SOURCE OF THE DATA

The population represented (the population universe) in the 2001 Survey of Income and Program Participation (SIPP) is the civilian noninstitutionalized population living in the United States. The SIPP is a longitudinal survey conducted at 4-month intervals. The data in this report are from the Education and Training topical module collected from June through September 2001 in the second

wave (interview) of the 2001 SIPP. The data presented in this report reflect the experiences of respondents during the 4 months preceding the interview. Since the interviews are spread out over 4 months (June through September), the actual months represented by the data vary from February to August 2001.

For the 2001 SIPP Panel, approximately 50,500 housing units were in sample for Wave 1. Of the 40,500 eligible units, 35,100 were interviewed. In Wave 2, a 13-percent sample cut was implemented. In the second wave, about 28,100 interviews were obtained from the 30,500 eligible units. The institutionalized population, which is excluded from the population universe, is composed primarily of the population in correctional institutions and nursing homes (91 percent of the 4.1 million institutionalized population in Census 2000).

Although the main focus of the SIPP is information on labor force participation, jobs, income, and participation in federal assistance programs, information on other topics is also collected in topical modules on a rotation basis. The Education and Training History topical module includes questions on degrees earned, the year in which they were received, and the major field of training. Questions about the type of high school attended, high school course work, and adult work training were not analyzed in this report. Degree status has been defined in this report to include mutually exclusive categories. Those without postsecondary degrees fall into three categories: people who have not completed high school, those completing high school only (high school diploma or equivalent, including GED), and people who have attended postsecondary

¹⁹ The estimates for master's and professional degrees by sex are based on smaller samples and the apparent differences are not statistically significant.

²⁰ U.S. Census Bureau, "Table A-2. Percent of People 25 Years and Over Who Have Completed High School or College, by Race, Hispanic Origin and Sex: Selected Years 1940 to 2003," Internet release date June 29, 2004, <www.census.gov/population/socdemo/education/tabA-2.pdf>.

Table J.
Educational Characteristics by Age: 2001

(Population 25 and older. Numbers in thousands)

Sex, field, and education timing	Less than high school graduate, high school graduate, or some college						Associate's degree or vocational certificate					
	Total	Age					Total	Age				
		25-34	35-44	45-54	55-64	65+		25-34	35-44	45-54	55-64	65+
Total	114,706	22,962	26,524	22,813	16,600	25,807	19,550	4,447	5,633	4,862	2,397	2,211
Percent of age group at this education level.....	63.5	59.3	59.7	58.6	66.3	76.8	10.8	11.5	12.7	12.5	9.6	6.6
PERCENT OF TOTAL												
Sex												
Men	46.9	52.2	50.1	47.6	45.8	39.1	43.3	43.7	43.7	46.1	41.8	36.9
Women	53.1	47.8	49.9	52.4	54.2	60.9	56.7	56.3	56.3	53.9	58.2	63.1
Field of Training												
Business	(X)	(X)	(X)	(X)	(X)	(X)	22.1	19.0	19.4	20.6	25.5	35.1
Engineering, computers	(X)	(X)	(X)	(X)	(X)	(X)	9.7	10.1	11.2	10.4	6.8	6.3
Liberal arts	(X)	(X)	(X)	(X)	(X)	(X)	5.9	9.1	4.9	5.8	5.5	3.1
Social science, law	(X)	(X)	(X)	(X)	(X)	(X)	2.5	2.5	2.7	3.1	2.3	1.2
Science, medicine	(X)	(X)	(X)	(X)	(X)	(X)	19.3	18.3	19.7	18.3	20.0	21.5
Education	(X)	(X)	(X)	(X)	(X)	(X)	2.8	3.6	2.4	1.4	3.5	4.7
Vocational studies	(X)	(X)	(X)	(X)	(X)	(X)	15.3	13.8	17.3	16.1	13.9	12.5
Other	(X)	(X)	(X)	(X)	(X)	(X)	22.4	23.6	22.4	24.2	22.7	15.7
Start of Postsecondary Education After High School												
Same year	(X)	(X)	(X)	(X)	(X)	(X)	47.9	52.7	47.2	46.8	46.4	44.4
Next 2 years	(X)	(X)	(X)	(X)	(X)	(X)	20.7	24.7	21.3	16.9	17.6	22.6
More than 2 years	(X)	(X)	(X)	(X)	(X)	(X)	31.4	22.6	31.5	36.3	36.0	33.0
Completion of Postsecondary Education												
In scheduled time or less ¹	(X)	(X)	(X)	(X)	(X)	(X)	68.7	67.4	68.5	66.4	67.3	78.8
Longer than ¹	(X)	(X)	(X)	(X)	(X)	(X)	31.3	32.6	31.5	33.6	32.7	21.2
Continuously enrolled												
Continuously enrolled	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)

See footnotes at end of table.

school but did not receive a degree. Higher degree levels were determined by the highest degree received: diplomas or certificates from a vocational, technical, trade, or business school beyond the high school level; associate's degrees; bachelor's degrees (for example, B.A., A.B., B.S.); master's degrees (for example, M.A., M.S., M.Eng., M.Ed., M.S.W., M.B.A.); professional degrees (for example, M.D., D.D.S., D.V.M., L.L.B., J.D.); and doctorate degrees (for example, Ph.D., Ed.D.). Individuals were asked to identify their highest degree, and their implicit ordering

of degrees was not examined. Whether one degree actually represents more education than another degree is not at issue. While data may show the highest value on some scale (for example, income) for one degree, the same degree could result in less than the highest score on another scale (for example, years to complete the degree).

Because the SIPP is a sample survey, there are not always enough sample cases to provide statistically reliable estimates of every field and degree combination. Cells show estimated earnings and other characteristics

when they have an estimated base of at least 200,000 people.

Average monthly earnings are computed as the total of all earnings over the 4-month period, divided by the number of months in which earnings were received. Earnings refer to wages and/or salary from one or more jobs (including self-employment). Average monthly earnings are calculated this way because some jobs are seasonal or may not pay on a regular monthly basis, or because people may have only recently begun or ended a job.

Table J.
Educational Characteristics by Age: 2001—Con.

(Population 25 and older. Numbers in thousands)

Sex, field, and education timing	Bachelor's degree						Advanced degree					
	Total	Age					Total	Age				
		25–34	35–44	45–54	55–64	65+		25–34	35–44	45–54	55–64	65+
Total	30,403	8,391	8,228	6,842	3,468	3,473	16,035	2,896	4,036	4,410	2,559	2,134
Percent of age group at this education level	16.8	21.7	18.5	17.6	13.9	10.3	8.9	7.5	9.1	11.3	10.2	6.4
PERCENT OF TOTAL												
Sex												
Men	49.9	47.0	48.7	51.1	53.2	54.5	54.3	47.1	51.4	54.8	59.2	62.7
Women	50.1	53.0	51.3	48.9	46.8	45.5	45.7	52.9	48.6	45.2	40.8	37.3
Field of Training												
Business	25.2	25.4	30.5	21.9	23.4	20.1	13.7	16.8	18.8	12.5	11.4	5.3
Engineering, computers	12.6	12.3	14.7	10.9	11.4	12.5	9.8	13.3	11.7	7.7	9.1	6.4
Liberal arts	13.5	13.6	10.8	14.1	14.7	16.8	7.3	6.1	6.6	6.9	8.0	10.5
Social science, law	8.6	10.2	7.6	9.2	7.6	6.9	16.0	17.1	16.1	15.7	14.6	16.7
Science, medicine	11.1	11.1	10.9	11.6	10.7	10.7	15.2	16.5	16.2	15.2	13.2	14.2
Education	12.7	9.7	9.1	15.7	17.6	17.6	22.7	16.7	14.4	26.9	28.1	31.8
Vocational studies	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
Other	16.5	17.7	16.4	16.7	14.6	15.5	15.2	13.5	16.2	15.2	15.5	15.1
Start of Postsecondary Education After High School												
Same year	76.3	83.3	74.8	76.8	74.2	63.8	81.0	87.3	85.2	81.4	79.0	66.5
Next 2 years	13.4	12.1	14.6	12.5	11.5	16.8	10.9	9.7	8.7	10.4	11.1	16.9
More than 2 years	10.4	4.6	10.6	10.7	14.3	19.4	8.1	3.0	6.1	8.2	9.9	16.6
Completion of Postsecondary Education												
In scheduled time or less ¹	71.8	76.2	71.4	68.1	70.4	71.3	55.0	76.3	53.7	50.5	47.0	47.0
Longer than ¹	28.2	23.8	28.6	31.9	29.6	28.7	45.0	23.7	46.3	49.5	53.0	53.0
Continuously enrolled												
Continuously enrolled	75.0	80.3	75.8	69.1	73.7	73.0	80.7	89.1	83.7	78.1	77.8	72.3

(X) Not applicable—category not in questionnaire for given education level.

¹ “In scheduled time or less” refers to those who completed associate’s degree or vocational certificate training no more than 3 years after entering postsecondary education or who completed bachelor’s degree training no more than 5 years after entering postsecondary education or completed their advanced degree no more than 5 years after receiving their bachelor’s degree. “Longer than” refers to those who did not complete their training within this time.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2001 Panel.

ACCURACY OF THE DATA

Statistics from surveys are subject to sampling and nonsampling error. All comparisons presented in this report have taken sampling error into account and are statistically significant at the 90-percent confidence level unless otherwise noted. This means the 90-percent confidence interval for the difference between the estimates being compared does not include zero.

Nonsampling errors in surveys may be attributed to a variety of sources, such as how the survey is designed, how respondents interpret questions, how able and willing respondents are to provide correct answers, and how accurately the answers are coded and classified. The U.S. Census Bureau employs quality control procedures throughout the production process, including the overall design of sur-

veys, the wording of questions, the review of the work of interviewers and coders, and the statistical review of reports to minimize these errors.

The SIPP weighting procedure uses ratio estimation, whereby sample estimates are adjusted to independent estimates of the national population by age, race, sex, and Hispanic origin. This weighting partially corrects for bias due to

undercoverage, but biases may still be present when people who are missed by the survey differ from those interviewed in ways other than age, race, sex, and Hispanic origin. How this weighting procedure affects other variables in the survey is not precisely known. All of these considerations affect comparisons across different surveys or data sources.

For further information on statistical standards and the computation and use of standard errors, go to <www.sipp.census.gov/sipp/sourceac/S&A2_SIPP2001_w1tow9_20050214.pdf> or contact David Hall of the Census Bureau's Demographic Statistical Methods Division via e-mail at <david.warren.hall@census.gov>.

MORE INFORMATION

A detailed set of tables has been prepared showing income, earnings, occupation, and time to degree by highest degree, field of training, and various social and demographic characteristics. The table package is available on the Internet at <www.census.gov>; in the "Subjects A-Z" area, click on "E;" under "Education," click on "General Information" and then on "Field of Training." Alternatively, go directly to the site: <www.census.gov/population/www/socdemo/fld-of-trn.html>.

See also these SIPP Web sites for additional information:

SIPP Home Page:
www.sipp.census.gov/sipp

SIPP Quality Profile:
www.sipp.census.gov/sipp/workpapr/wp230.pdf

SIPP User's Guide:
www.sipp.census.gov/sipp/usrguide/sipp2001.pdf

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