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Changes in Postsecondary Awards Below the Bachelor's Degree: 1997 to 2007

Introduction

Postsecondary awards below the bachelor's degree constitute a large and growing segment of U.S. postsecondary credentials. In 2007, almost 40 percent of undergraduate credentials conferred in U.S. postsecondary institutions were below the bachelor's degree (Knapp, Kelly-Reid, and Ginder 2008).[1] In the following year, 47 percent of all undergraduates were enrolled in programs below the bachelor's degree.[2]

Often referred to as subbaccalaureate awards or credentials, awards below the bachelor's degree are associate's degrees and occupational certificates. Associate's degrees typically take 2 full-time years to complete, while occupational certificates can take anywhere from a few months to several years to finish (Grubb 2002).[3] The two institutional sectors that confer most subbaccalaureate awards are public

[1] The actual number is 39 percent, calculated from totals in table 7, in Knapp, Kelly-Reid, and Ginder (2008). Results from this publication and in the current report are based on U.S. postsecondary institutions participating in Title IV federal financial aid programs, which account for about 96 percent of postsecondary institutions that submit data to the Department of Education (see "Data and Definitions" for more detail).
[2] Includes undergraduates enrolled in associate's degree or certificate programs (U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08), computation by NCES QuickStats on 8/03/09).
[3] While this is the established length of time for these programs, the actual time students take will vary according to their attendance status (full time or part time) and continuity of enrollment.

2-year (community colleges) and private for-profit institutions.[4] As discussed in this Statistics in Brief and shown in previous research (U.S. Department of Education 2009),[5] community colleges confer a majority of the awards, but the rate of increase in the awards conferred by for-profit institutions has surpassed that of community colleges.

Research by leading economists such as Kane and Rouse (1995), has demonstrated consistent wage benefits for associate's degrees, but results have been mixed for the economic returns to certificates (reviewed in Grubb 2002). Mixed results are attributed in part to limited sample sizes and variations in the amount of coursework required. A national study based on a cohort of 1992 high school seniors as of 2000, found clear wage benefits for women who completed certificates when compared with high school graduates, but not for men (Marcotte et al. 2005).[6]

The labor market demand for jobs requiring a postsecondary education at the subbaccalaureate level is growing. Projections from the Bureau of Labor Statistics (BLS) indicate that six of the top 10 fastest growing occupations between 2004 and 2014 require a subbaccalaureate postsecondary education (BLS 2007). Five of the 6 occupations are in the health care industry, including home health aides, medical assistants, physical therapist assistants, dental hygienists, and dental assistants; the remaining occupation is personal and home care aides.

In light of the growing labor market demand for jobs requiring a minimum of subbaccalaureate credentials, this Statistics in Brief presents recent changes in subbaccalaureate awards in the decade between 1997 and 2007, using 2002 as a midpoint. It describes changes in the number and types of awards conferred, overall and within particular fields of study. The report also examines changes in the types of institutions conferring the awards and differences in awards by gender and race/ethnicity. These results can serve as a baseline against which to measure future changes.

Key findings include:

- The total number of subbaccalaureate awards conferred increased 28 percent between 1997 and 2007, to 1.5 million.
- While community colleges still confer the majority of subbaccalaureate credentials—58 percent in 2007—the rate of increase in the number of awards was less than half the rate observed for institutions in the for-profit sector, which increased its share of awards from 24 percent to 29 percent.
- Health care is the most common field of study in which subbaccalaureate credentials are awarded, accounting for 31 percent of all awards in 2007, and increasing 68 percent over the decade studied.
- Women earn a majority of subbaccalaureate awards (62 percent in 2007), and the increase in awards to women was larger than that found for men (31 percent vs. 24 percent increase between 1997 and 2007).

Data and Definitions

The source of data for this Statistics in Brief is the Integrated Postsecondary Education Data System (IPEDS) collected by the National Center for Education Statistics (NCES) at the U.S. Department of Education. IPEDS collects data from postsecondary institutions in the United States and other jurisdictions such as Puerto Ri-

[4] For associate's degree data, see U.S. Department of Education (2009), indicator 42; for certificates data, see U.S. Department of Education (2007), table P91.
[5] See U.S. Department of Education (2009), indicator 42.
[6] Data from the National Education Longitudinal Study (NELS) conducted by U.S Department of Education, National Center for Education Statistics.

co.[7] IPEDS has a number of components, including enrollments, faculty, staff, graduation rates, finances, and more. Data for this report come from the 1996–97, 2001–02, and 2006–07 Institutional Characteristics (IC) and Completions components.[8] The IC component collects and maintains information used to classify postsecondary institutions, while the Completions component collects data on program completions by level of degree (associate's, bachelor's, master's, doctor's, and first-professional) and on other formal awards (e.g., certificates) by length of program (Knapp, Kelly-Reid, and Ginder 2008). Completions data are reported by recipients' gender, race/ethnicity, and field of study.

In this analysis, only Title IV institutions located in the 50 states and District of Columbia reporting completions data are included. Title IV institutions are those eligible to participate in the Title IV federal student financial aid programs, such as Pell Grants or Stafford Loans, and are required by law to provide IPEDS data.[9] Others may participate on a voluntary basis. The institutions included in this analysis comprise about 95 percent of all IPEDS institutions in the Completions component. The number of institutions in each year totaled 6,082, 6,164, and 6,525 in 1997, 2002 and 2007, respectively. The net gain in institutions between 1997 and 2007 was almost entirely in the for-profit sector (see appendix table 1 for detail).

Types of Subbaccalaureate Awards

In this report, associate's degree is abbreviated as "AA," but refers to all types of associate's degrees including those awarded in science, applied science, teaching, technology, business, and others. AAs may have an occupational or academic focus; occupational AAs are awarded in fields such as nursing and business administration, while academic AAs are primarily awarded in liberal arts and humanities and are typically sought by students intending to transfer into a baccalaureate program (Berkner, Horn, and Clune 2000).[10]

In addition to AAs, IPEDS identifies three types of certificates based on the length of the program. These include awards requiring less than 1 academic year, at least 1 but less than 2 academic years, and 2 or more academic years to complete.[11] For simplicity, these are referred to as short-term, moderate-term, and long-term certificates. Subbaccalaureate certificates typically have an occupational focus and tend to be concentrated in the health care industry (as discussed later in this report).

Fields of Study

Fields of study were grouped empirically into several areas to reflect programs in which subbaccalaureate awards are concentrated. These include areas that encompass both occupational and academic fields, such as STEM fields (science, technology, engineering, and mathematics);[12] fields that are exclusively occupational, such as health care, business, consumer services, and manufacturing; and fields that are exclusively academic, such as liberal arts. Fields of study were grouped based on the 2000 edition of the Classification of Instruction Program (CIP) codes (U.S. Department of Education 2002). Appendix table 2 displays the fields and corresponding CIP codes.

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[7] The other jurisdictions are American Samoa, the Federated States of Micronesia, Guam, the Marshall Islands, the Northern Marianas, Palau, and the Virgin Islands.

[8] For ease of presentation, we refer only to the trailing years: 1997, 2002, and 2007.

[9] The Higher Education Act of 1992 mandated this participation.

[10] For example, in Berkner, Horn, and Clune (2000), 63 percent of transfer-bound students in less-than-4-year institutions majored in liberal arts fields (table 4).

[11] While this is the established length of time for these programs, the actual time students take will vary according to their attendance status (full time or part time) and continuity of enrollment.

[12] This STEM definition is more restrictive than that of the National Science Foundation (NSF), which includes social/behavioral sciences such as psychology, economics, sociology, and political science in STEM fields (Green 2007).

Postsecondary Institutions

The report presents changes in awards conferred in different types of postsecondary institutions. Institutions are identified by level (i.e., less-than-2-year, 2-year, and 4-year and above) and, within levels, by public and private (not-for-profit and for-profit institutions) control. The two largest sectors in which subbaccalaureate awards are conferred—public 2-year institutions (community colleges) and private for-profit institutions—are emphasized.

Increase in Subbaccalaureate Awards

Between 1997 and 2007, the total number of subbaccalaureate awards conferred in postsecondary institutions increased by 28 percent, to a total of 1.5 million (table 1), with almost all of the change occurring in the second half of the decade (25 percent). In comparison, as displayed in figure 1, the number of bachelor's degrees (BAs) awarded increased at a more even pace over the decade—higher than subbaccalaureate awards in the first half and lower in the second half. In other words, the rate of increase in subbaccalaureate awards surpassed that of bachelor's degrees in the second half of the decade.

Table 1. Number, percent change over time in number, and percentage distribution of subbaccalaureate awards conferred in Title IV postsecondary institutions, by type of award: 1997, 2002, and 2007

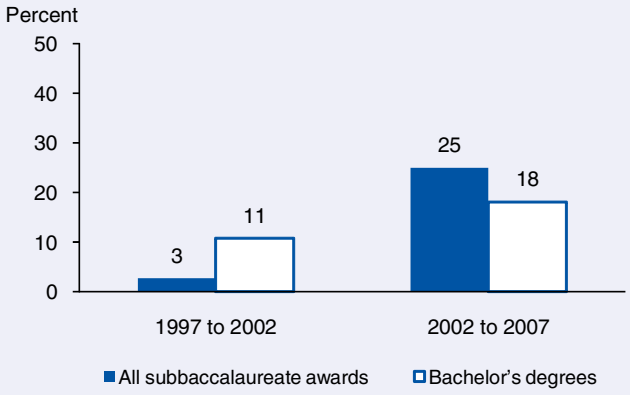
Subbaccalaureate awards	Total	Associate's degrees	Certificates[1]		
			Short-term	Moderate-term	Long-term
Number of awards					
1997	1,148,307	571,242	285,196	257,074	34,795
2002	1,179,551	595,328	303,833	253,083	27,307
2007	1,474,220	745,183	385,530	311,753	31,754
Percent change					
1997–2002	2.7	4.2	6.5	-1.6	-21.5
2002–2007	25.0	25.2	26.9	23.2	16.3
1997–2007	28.4	30.4	35.2	21.3	-8.7
Percentage distribution of awards					
1997	100.0	49.7	24.8	22.4	3.0
2002	100.0	50.5	25.8	21.5	2.3
2007	100.0	50.5	26.2	21.1	2.2

[1] Short-term is defined as less than 1 full-time academic year to complete; moderate-term is 1 to less than 2 years; and long-term is 2 or more years. The actual time students take will vary.

NOTE: Detail may not sum to totals because of rounding.

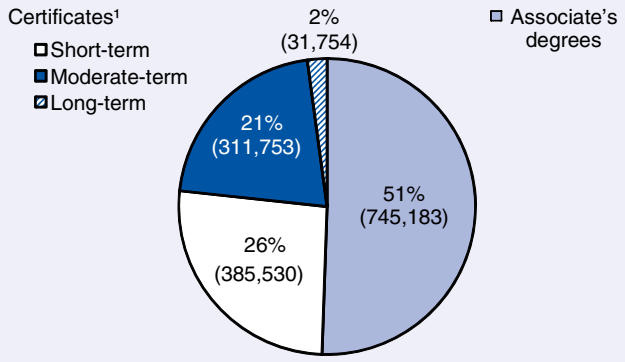
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 1997, 2002, and 2007.

Figure 1. Percent change in the total number of subbaccalaureate awards and bachelor's degrees conferred in Title IV postsecondary institutions: 1997 to 2002 and 2002 to 2007



NOTE: Subbaccalaureate awards are associate's degrees and certificates below the bachelor's degree.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 1997, 2002, and 2007.

Figure 2. Percentage distribution and number of subbaccalaureate awards conferred in Title IV U.S. postsecondary institutions, by type of award: 2007

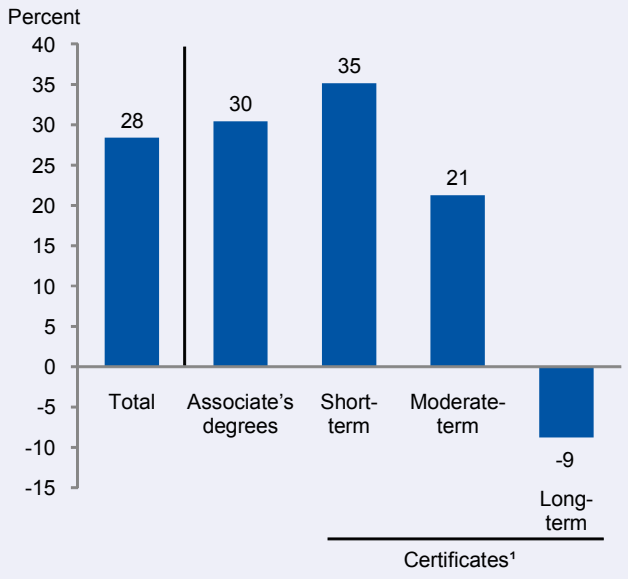


[1] Short-term is defined as less than 1 full-time academic year to complete; moderate-term is 1 to less than 2 years; and long-term is 2 or more years. The actual time students take will vary.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 2007.

Among the four types of subbaccalaureate awards, AAs were the most numerous in all 3 years under study. In 2007, for example, some 745,200 AAs were awarded, accounting for just over one-half of all awards conferred below the bachelor's degree (figure 2). Short-term certificates were the next most numerous (385,500), followed closely by moderate-term certificates (311,800). In contrast, the number of long-term certificates conferred was just 31,800 in 2007.

Over the decade studied, short-term certificates awarded increased the fastest, by 35 percent, followed by AAs (30 percent) and moderate-term certificates (21 percent). In contrast, awards of long-term certificates declined by 9 percent over the same period (figure 3).

Figure 3. Percent change in subbaccalaureate awards conferred in Title IV U.S. postsecondary institutions, by type of award: 1997 to 2007



[1] Short-term is defined as less than 1 full-time academic year to complete; moderate-term is 1 to less than 2 years; and long-term is 2 or more years. The actual time students take will vary.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 1997 and 2007.

Institutions Conferring Awards

Historically, subbaccalaureate awards, especially AAs, have been conferred primarily in community colleges (Cohen and Brawer 2003). In 2007, community colleges conferred 852,100 awards (table 2), accounting for 58 percent of all subbaccalaureate awards (table 3). While the number of subbaccalaureate awards increased over the decade by 26 percent, community colleges' share of awards declined slightly from 59 percent to 58 percent. In contrast, the share of awards conferred by private for-profit institutions increased from 24 percent to 29 percent and the percentage increase in awards was more than twice that in community colleges (54 percent vs. 26 percent). Of particular note was the increase in the number of awards conferred by 4-year for-profit institutions, which more than tripled. Even though the share of awards conferred by these institutions is still relatively small, it increased from 1 to 5 percent between 1997 and 2007. The number of AAs conferred by 4-year for-profit institutions far outnumbered certificates (e.g., 58,400 AAs were awarded in 2007 compared with 6,200 short-term and 8,900 moderate-term certificates; table 2), but the percentage increase in moderate-term certificates more than doubled that of AAs (733 percent vs. 333 percent).

Community colleges and private for-profit institutions offer students very different options with respect to cost and attendance flexibility. In 2007–08, the average tuition and fees charged to full-time, full-year students enrolled in for-profit institutions was $11,900, and $2,400 for those enrolled in community colleges.[13] A majority of community college students attend exclusively part time (59 percent), while an even larger majority of for-profit students attend exclusively full time (69 percent).[14] Despite the low-cost and program flexibility of community colleges, findings from this study suggest that students are increasingly turning to for-profit institutions to obtain subbaccalaureate credentials.

[13] U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08), computation by NCES QuickStats on 10/9/2009.
[14] U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08), computation by NCES QuickStats on 10/9/2009.

Table 2. Number of subbaccalaureate awards conferred in Title IV postsecondary institutions in 2007 and percent change in number between 1997 and 2007, by type of award and institution

Institution characteristics	Total		Associate's degrees		Certificates[1]					
					Short-term		Moderate-term		Long-term	
	Awards conferred in 2007	Percent change between 1997–2007	Awards conferred in 2007	Percent change between 1997–2007	Awards conferred in 2007	Percent change between 1997–2007	Awards conferred in 2007	Percent change between 1997–2007	Awards conferred in 2007	Percent change between 1997–2007
Total	**1,474,220**	**28.4**	**745,183**	**30.4**	**385,530**	**35.2**	**311,753**	**21.3**	**31,754**	**-8.7**
Level of institution										
4-year or above	217,047	104.9	164,251	100.5	29,202	147.2	21,137	119.4	2,457	-4.2
2-year	1,032,367	26.6	580,929	18.7	235,466	58.4	186,989	28.5	28,983	-9.8
Less-than-2-year	224,806	-0.9	3	†	120,862	-3.1	103,627	1.7	314	180.4
Sector of institution										
Public	973,244	23.0	583,604	25.4	224,927	37.4	152,941	6.3	11,772	-34.9
4-year or above	89,460	83.4	68,370	84.6	12,806	69.0	6,909	98.6	1,375	103.1
2-year	852,133	25.5	515,231	20.2	196,687	57.5	129,818	20.1	10,397	-40.2
Less-than-2-year	31,651	-50.2	3	†	15,434	-50.6	16,214	-49.8	0	-100.0
Private not-for-profit	78,024	-6.0	43,829	-10.9	17,317	32.7	11,653	-14.2	5,225	-27.2
4-year or above	53,834	32.4	37,503	19.5	10,215	316.8	5,316	4.5	800	-54.1
2-year	14,586	-49.3	6,326	-64.4	2,231	49.2	1,604	-60.3	4,425	-18.5
Less-than-2-year	9,604	-29.1	0	†	4,871	-46.5	4,733	6.4	0	†
Private for-profit	422,952	54.3	117,750	108.2	143,286	32.1	147,159	47.7	14,757	54.9
4-year or above	73,753	347.2	58,378	332.7	6,181	246.3	8,912	732.9	282	97.2
2-year	165,648	53.5	59,372	37.8	36,548	64.5	55,567	66.8	14,161	52.4
Less-than-2-year	183,551	22.6	0	†	100,557	19.1	82,680	26.8	314	241.3

† Not applicable (due to zero recipients in 1997).

[1] Short-term is defined as less than 1 full-time academic year to complete; moderate-term is 1 to less than 2 years; and long-term is 2 or more years. The actual time students take will vary.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 1997 and 2007.

Table 3. Percentage distribution of subbaccalaureate awards by level and type of Title IV institution: 1997, 2002, and 2007

Institution characteristics	Percent change between 1997–2007	Percentage distribution of awards		
		1997	2002	2007
Total	**28.4**	**100.0**	**100.0**	**100.0**
Level of institution				
4-year or above	104.9	9.2	10.9	14.7
2-year	26.6	71.0	70.3	70.0
Less-than-2-year	-0.9	19.8	18.8	15.2
Type of institution				
Public	23.0	68.9	67.1	66.0
4-year or above	83.4	4.2	4.3	6.1
2-year	25.5	59.1	58.7	57.8
Less-than-2-year	-50.2	5.5	4.1	2.1
Private not-for-profit	-6.0	7.2	6.7	5.3
4-year or above	32.4	3.5	3.7	3.7
2-year	-49.3	2.5	1.9	1.0
Less-than-2-year	-29.1	1.2	1.1	0.7
Private for-profit	54.3	23.9	26.3	28.7
4-year or above	347.2	1.4	2.9	5.0
2-year	53.5	9.4	9.7	11.2
Less-than-2-year	22.6	13.0	13.6	12.5

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 1997, 1992, and 2007.

Changes Within Fields of Study

Health Care

Health care is the predominant field in which subbaccalaureate awards are conferred, accounting for 31 percent of all subbaccalaureate awards in 2007 (table 4). Moreover, the increase in the number of health care awards conferred between 1997 and 2007 was more than double that of all subbaccalaureate awards combined (68 percent vs. 28 percent).

Changes in health care awards varied according to the type of award, with short-term certificates nearly doubling in number (97 percent increase) and moderate-term certificates increasing by more than two-thirds (71 percent). Health care AAs increased roughly 45 percent, while long-term certificates increased by about 14 percent.

Examining specific fields within health care revealed a steep rise in the number of medical assisting credentials, which increased 87 percent between 1997 and 2007 for short-term certificates and more than doubled (131 percent) for moderate-term certificates. Though the number of long-term certificates awarded is low relative to short- and moderate-term certificates (as discussed earlier), it is notable that long-term certificates in medical technology/technician programs increased by 87 percent, while the number of long-term awards conferred in all other health care programs declined.

Business

Business accounted for about 12 percent of all subbaccalaureate awards in 2007 (table 4). The number of business awards conferred between 1997 and 2007 declined 10 percent overall. This change, however, was due largely to a drop in the number of awards in secretarial

Table 4. Percentage distribution of subbaccalaureate awards conferred in Title IV postsecondary institutions in 2007 and percent change in number between 1997 and 2007, by type of award and field of study

Recipient and institution characteristics	Total		Associate's degrees		Certificates[1]					
					Short-term		Moderate-term		Long-term	
	Percentage distribution in 2007	Percent change between 1997–2007	Percentage distribution in 2007	Percent change between 1997–2007	Percentage distribution in 2007	Percent change between 1997–2007	Percentage distribution in 2007	Percent change between 1997–2007	Percentage distribution in 2007	Percent change between 1997–2007
Total	**100.0**	**28.4**	**100.0**	**30.4**	**100.0**	**35.2**	**100.0**	**21.3**	**100.0**	**-8.7**
Field of study for award										
STEM total[1]	8.6	-10.4	11.2	10.6	6.5	-32.0	5.3	-35.3	6.1	-49.2
Computer and information sciences	3.2	-2.4	3.9	97.6	3.0	-54.7	2.0	-23.0	2.4	86.5
Engineering, engineering technology	3.5	-24.4	4.5	-22.7	2.5	20.8	2.7	-43.3	2.7	-72.0
Mathematics and science	0.5	11.5	0.9	19.4	0.1	8.1	0.1	-48.0	0.0	-47.4
Other STEM fields	1.4	14.0	2.0	20.4	1.0	13.5	0.5	-21.1	1.0	-6.6
Non-STEM academic fields total	23.9	40.1	40.9	39.5	6.8	41.5	6.2	58.3	5.5	-10.4
Liberal arts and sciences	13.2	37.9	25.7	35.9	0.1	153.9	0.9	3355.3	0.0	-100.0
General studies and humanities	4.1	42.3	7.8	44.9	0.0	-93.5	0.4	365.3	0.0	-52.9
Family, economy, consumer sciences	1.7	46.4	1.2	24.1	3.0	141.0	1.2	-14.6	0.4	-56.6
Other academic	4.9	42.4	6.2	52.6	3.7	16.5	3.6	52.5	5.1	-0.2
Health care	30.8	67.9	19.2	45.5	43.4	96.9	42.4	71.0	34.3	14.5
Nursing/nursing assistant	10.9	40.3	9.1	27.6	10.1	77.0	15.4	44.7	20.1	-1.3
Medical assisting	7.5	92.3	3.2	62.3	13.2	86.8	11.7	131.2	0.4	-34.4
Medical technology/technician	4.5	59.4	3.4	66.9	6.0	78.3	4.2	20.9	12.5	87.3
Dental technology/technician	1.5	50.2	0.9	32.2	2.0	72.1	2.6	55.3	0.6	-46.8
Other health	6.3	125.6	2.6	89.7	12.1	155.6	8.5	115.2	0.7	-37.9
Business total	12.1	-10.4	15.2	9.6	10.9	-19.6	7.1	-44.8	3.1	-70.1
Administration and management	4.0	44.8	6.6	64.9	1.8	3.2	1.1	-22.6	0.3	-61.8
Secretarial services	3.0	-35.3	2.6	-26.1	3.6	-23.1	3.3	-54.1	1.7	-61.9
Other business	5.1	-16.8	6.0	-5.7	5.5	-22.9	2.7	-36.3	1.2	-78.1
Consumer services	7.3	32.8	2.4	79.3	7.4	26.9	17.3	24.5	20.6	38.7
Cosmetology	5.3	27.8	0.1	194.1	5.6	18.8	15.8	29.1	19.8	46.8
Other consumer services	2.0	48.5	2.3	76.9	1.8	61.8	1.5	-9.0	0.7	-43.7
Other										
Manufacturing, construction, repair, and transportation	10.6	34.3	3.6	55.0	17.0	44.7	17.9	26.3	27.2	-13.6
Protective services	4.0	45.4	3.9	47.8	6.1	52.2	1.9	22.7	0.4	-66.9
Education	1.4	70.0	2.0	39.1	1.0	286.5	0.8	227.4	0.2	-41.9
Other occupational	1.3	6.3	1.6	15.8	1.0	-3.7	1.1	-10.9	2.5	20.5

[1] Science, technology, engineering, and mathematics.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 1996, 2001, and 2006.

services (35 percent). This decline occurred for all types of awards. In contrast, awards in business administration and management, most of which are AAs, increased 45 percent overall.

Other Fields

The type of subbaccalaureate awards conferred in fields of study other than business and health care vary by field. For example, academic fields are almost exclusively AA programs, while manufacturing and consumer service fields are predominantly certificate programs. Therefore, changes in the remaining fields of study are discussed separately for AAs and certificates.

Associate's Degree Fields of Study

Non-STEM academic fields are primarily liberal arts and humanities and are typically pursued by students intending to transfer to 4-year programs (Berkner, Horn, and Clune 2000). About 41 percent of all AAs awarded in 2007 were in non-STEM academic fields, an increase of 39 percent between 1997 and 2007 (table 4).

AAs in STEM fields, accounting for about 11 percent of all AAs, rose at a slower rate, increasing 11 percent over the decade. Computer and information technology (IT) accounted for almost all the change, nearly doubling (98 percent). In contrast, AAs awarded in engineering and technology declined by 23 percent, while AAs awarded in mathematics and science increased about 19 percent.

Certificate Fields of Study

After health care, the predominant area in which certificates are awarded is manufacturing, construction, repair, and transportation trades (table 4). These are occupations such as plumbing, auto repair, and truck driving. The number of short-term and moderate-term certificates awarded in this area increased 45 percent and 26 percent, respectively, while the number of long-term certificates declined by 14 percent.

Consumer services, which consist primarily of cosmetology programs, increased by 33 percent overall. The number of short-term and moderate-term certificates in consumer services increased 27 percent and 25 percent, respectively, while long-term certificates increased 39 percent.

The number of STEM field certificates awarded at all levels declined between 1997 and 2007—by about 32 percent for short-term, 35 percent for moderate-term, and 49 percent for long-term certificates. This decline may be attributed to a parallel decline in the number of jobs in data entry and computer operation. For example, in 1999, BLS reported more than a half a million "Data Entry Keyer" jobs (520,000), but, by 2007, the number had dropped to 287,000 (BLS 2001, 2008).

Changes by Gender and Race/Ethnicity

A majority of subbaccalaureate credentials are awarded to women—in 2007, women earned 62 percent of all subbaccalaureate awards (table 5).[15] As shown in figure 4, the gender difference was largest for Black students, among whom women earned 68 percent of subbaccalaureate awards, followed by Hispanics (65 percent) and American Indians (63 percent). Women accounted for 60 percent of subbaccalaureate awards to both White and Asian students in 2007.

[15] Women also earn a majority of bachelor's and graduate degrees, though the gender difference is somewhat smaller. In 2006, for example, 58 percent of bachelor's degrees and 59 percent of graduate degrees were earned by women (U.S. Department of Education 2008, tables 274, 277, and 280).

Table 5. Percentage distribution of subbaccalaureate awards conferred in Title IV postsecondary institutions by gender, award type, race/ethnicity, and field of study: 1997, 2002, and 2007

Recipient and institution characteristics	1997		2002		2007	
	Male	Female	Male	Female	Male	Female
Total	**39.2**	**60.8**	**40.1**	**59.9**	**37.8**	**62.2**
Award type						
Associate's degree	39.2	60.8	40.0	60.0	38.6	61.4
Certificates[1]						
Short-term	40.6	59.4	42.3	57.7	38.8	61.2
Moderate-term	36.4	63.6	37.4	62.6	34.1	65.9
Long-term	48.7	51.3	45.2	54.8	42.8	57.2
Race/ethnicity[2]						
White	40.0	60.0	41.7	58.3	39.5	60.5
Black	32.4	67.6	34.0	66.0	31.9	68.1
Hispanic	38.2	61.8	37.1	62.9	35.3	64.7
Asian	42.2	57.8	41.2	58.8	40.1	59.9
American Indian	39.6	60.4	38.7	61.3	37.0	63.0
Unknown	43.4	56.6	43.7	56.3	39.0	61.0
Nonresident alien	44.6	55.4	42.3	57.7	38.1	61.9
Field of study for award						
STEM total[3]	66.2	33.8	69.5	30.5	72.5	27.5
Computer and information sciences	43.8	56.2	61.4	38.6	69.3	30.7
Engineering, engineering technology	85.2	14.8	84.0	16.0	85.9	14.1
Mathematics and science	46.9	53.1	48.0	52.0	50.3	49.7
Other STEM	61.0	39.0	58.9	41.1	53.7	46.3
Non-STEM academic fields total	37.2	62.8	35.7	64.3	36.1	63.9
Liberal arts and sciences	38.2	61.8	36.3	63.7	37.5	62.5
General studies and humanities	38.5	61.5	38.3	61.7	37.7	62.3
Family, economic, consumer studies	8.4	91.6	14.6	85.4	11.7	88.3
Other academic	42.4	57.6	40.9	59.1	39.0	61.0
Health care	15.8	84.2	13.7	86.3	14.6	85.4
Nursing/nursing assistant	11.3	88.7	9.3	90.7	11.2	88.8
Medical assisting	10.4	89.6	8.4	91.6	9.9	90.1
Medical technology/technician	39.8	60.2	36.0	64.0	38.4	61.6
Dental technology/technician	5.6	94.4	5.4	94.6	5.8	94.2
Other health	15.8	84.2	13.4	86.6	11.3	88.7
Business total	24.7	75.3	27.5	72.5	30.0	70.0
Administration and management	34.2	65.8	35.8	64.2	38.3	61.7
Secretarial services	9.9	90.1	12.9	87.1	12.5	87.5
Other business	31.6	68.4	32.1	67.9	33.6	66.4
Consumer services	19.3	80.7	19.9	80.1	18.9	81.1
Cosmetology	7.7	92.3	8.7	91.3	7.1	92.9
Other consumer services	55.2	44.8	49.3	50.7	50.5	49.5
Other						
Manufacturing, construction, repair, and transportation	91.5	8.5	92.0	8.0	93.7	6.3
Protective services	73.0	27.0	70.4	29.6	65.8	34.2
Education	29.7	70.3	21.0	79.0	18.5	81.5
Other occupational	45.1	54.9	46.5	53.5	45.5	54.5

[1] Short-term is defined as less than 1 full-time academic year to complete; moderate-term is 1 to less than 2 years; and long-term is 2 or more years. The actual time students take will vary.

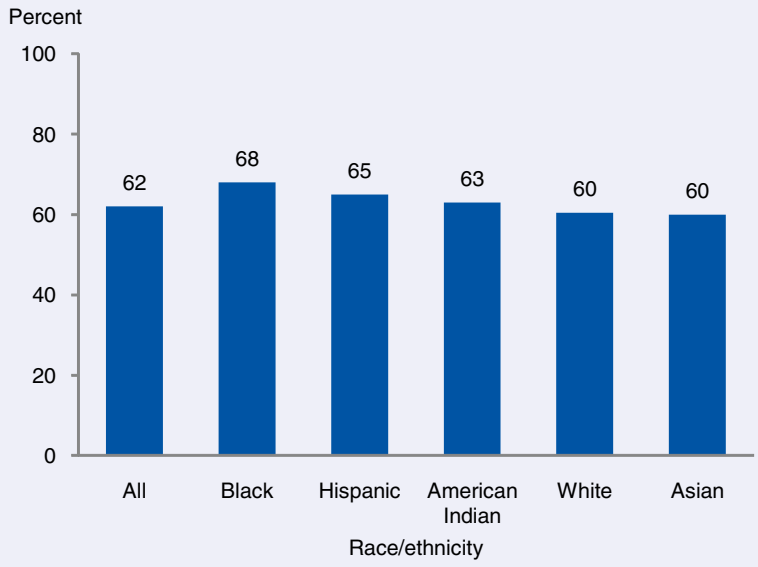
[2] Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or Other Pacific Islander, and American Indian includes Alaska Native. A nonresident alien is a person who is not a citizen or national of the United States and who is in this country on a visa or temporary basis and does not have the right to remain indefinitely.

[3] Science, technology, engineering, and mathematics.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 1997, 2002, and 2007.

Figure 4. Percentage of subbaccalaureate awards conferred to women, by race/ethnicity: 2007



NOTE: Black includes African American, Hispanic includes Latino, and Asian includes Native Hawaiian or Other Pacific Islander.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 2007.

Not only do women earn a majority of subbaccalaureate awards, but the increase in the number of awards conferred to women also outpaced that for men between 1997 and 2007 (table 6)—31 percent versus 24 percent. This finding held for each racial/ethnic group.

Men earn nearly all subbaccalaureate awards in manufacturing, construction, repair, and transportation (e.g., 94 percent in 2007; table 5). The gender difference in this area changed little over time. Further, men account for about two-thirds or more of awards in computer and information sciences (IT), engineering and engineering technology, and protective services. However, between 1997 and 2007, a reversal in the gender distribution occurred in computer and IT majors, from a majority of women (56 percent) in 1997 to a majority of men (69 percent) in 2007. As noted in the previous section, this may be attributed to a general decline in the number of data entry jobs, which tend to be filled by women (BLS 2001, 2008).

Subbaccalaureate awards increased for all racial/ethnic groups between 1997 and 2007. In 2007, Hispanic students earned 74 percent more subbaccalaureate awards overall and 88 percent more AAs than they did in 1997 (table 6). Black students experienced the next highest increase in awards (54 percent), followed by Asians (37 percent) and American Indians (27 percent). Awards to White students increased 11 percent over the decade.

The racial/ethnic distribution of subbaccalaureate awards in 2007 is displayed in figure 5. The percentage of awards to underrepresented racial/ethnic groups in 2007 approached their percentage of the U.S. population.[16] For example, the percentage of subbaccalaureate awards earned by Black students was slightly higher than the percentage of Blacks in the U.S. population (15 percent vs. 13 percent); for Hispanics, the percentage was slightly lower (13 percent vs. 15 percent); and the percentage of American Indians matched their percentage of the U.S. representation (1 percent).

[16] Calculated from table 3 of *Annual Estimates of the Population by Sex, Race and Hispanic or Latino Origin for the United States: April 1, 2000 to July 1, 2007* (NC-EST2007-03). Population Division, U.S. Census Bureau (2008).

Table 6. Percentage distribution of subbaccalaureate awards conferred in Title IV postsecondary institutions in 2007 and percent change in number between 1997 and 2007, by type of award, gender, and race/ethnicity

Recipient and institution characteristics	Total		Associate's degrees		Certificates[1]					
					Short-term		Moderate-term		Long-term	
	Percentage distribution in 2007	Percent change between 1997–2007	Percentage distribution in 2007	Percent change between 1997–2007	Percentage distribution in 2007	Percent change between 1997–2007	Percentage distribution in 2007	Percent change between 1997–2007	Percentage distribution in 2007	Percent change between 1997–2007
Total	**100.0**	**28.4**	**100.0**	**30.4**	**100.0**	**35.2**	**100.0**	**21.3**	**100.0**	**-8.7**
Gender										
Male	37.8	23.9	38.6	28.5	38.8	29.4	34.1	13.7	42.8	-19.8
Female	62.2	31.3	61.4	31.7	61.2	39.1	65.9	25.6	57.2	1.8
Race/ethnicity[2]										
White	58.6	11.3	63.6	12.9	51.0	14.1	55.2	7.6	67.6	-11.6
Black	14.8	53.5	11.9	61.1	18.7	61.2	17.5	38.7	10.2	-1.5
Hispanic	13.0	74.4	10.8	88.4	15.5	65.2	15.2	64.3	11.3	89.3
Asian	4.5	37.1	4.8	44.7	4.5	55.1	3.8	11.5	4.2	-26.0
American Indian	1.1	27.1	1.1	40.8	1.0	-3.2	1.3	44.4	1.0	-7.1
Unknown	6.6	129.4	6.0	259.2	8.3	121.0	6.0	46.7	4.7	-42.0
Nonresident alien	1.4	27.1	1.8	27.8	1.0	58.8	0.9	12.3	1.1	-45.7
Men										
White	23.2	9.9	25.3	14.5	21.7	9.5	19.5	3.8	27.4	-21.8
Black	4.7	51.3	3.8	48.6	6.4	69.9	5.0	38.7	4.3	-4.0
Hispanic	4.6	61.2	4.0	68.4	5.3	68.3	5.1	40.9	5.4	75.8
Asian	1.8	30.5	2.0	39.6	1.7	52.4	1.4	0.2	1.9	-31.5
American Indian	0.4	18.6	0.4	38.4	0.4	-18.4	0.5	47.2	0.5	-12.2
Unknown	2.6	106.2	2.5	247.8	3.0	111.6	2.2	22.8	2.7	-55.9
Nonresident alien	0.5	8.8	0.7	13.7	0.4	34.0	0.3	-15.0	0.5	-58.4
Women										
White	35.4	12.2	38.3	11.9	29.3	17.8	35.7	9.8	40.2	-2.9
Black	10.1	54.6	8.1	67.6	12.2	57.0	12.5	38.8	5.8	0.4
Hispanic	8.4	82.6	6.8	102.4	10.2	63.6	10.1	79.2	5.8	104.0
Asian	2.7	42.0	2.8	48.6	2.8	56.7	2.4	19.9	2.3	-20.6
American Indian	0.7	32.7	0.7	42.1	0.6	10.0	0.8	42.6	0.5	-1.9
Unknown	4.0	147.2	3.5	267.8	5.4	126.6	3.7	65.9	2.0	1.1
Nonresident alien	0.9	41.9	1.1	38.6	0.6	81.3	0.6	31.9	0.6	-24.7

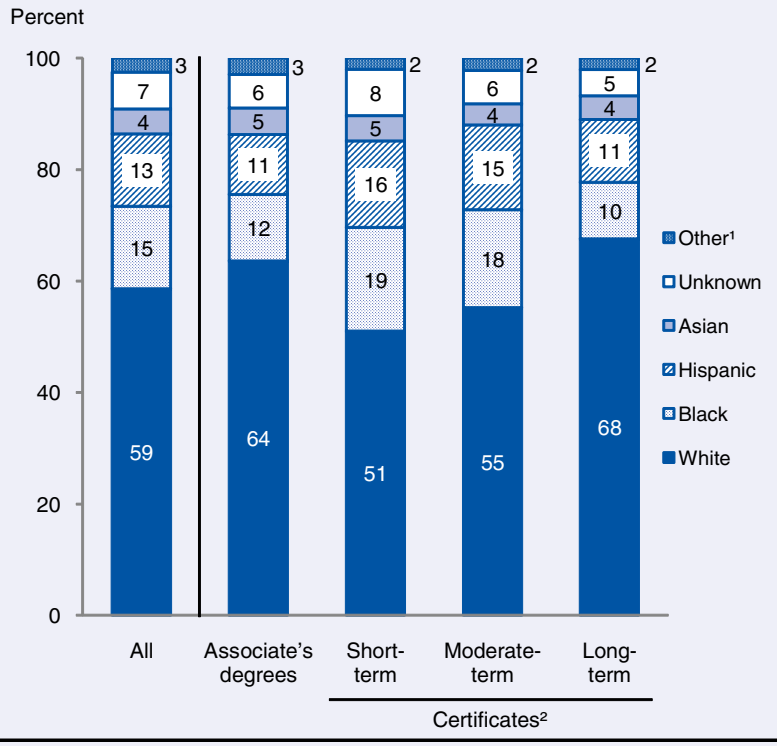
[1] Short-term is defined as less than 1 full-time academic year to complete; moderate-term is 1 to less than 2 years; and long-term is 2 or more years. The actual time students take will vary.

[2] Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or Other Pacific Islander, and American Indian includes Alaska Native. A nonresident alien is a person who is not a citizen or national of the United States and who is in this country on a visa or temporary basis and does not have the right to remain indefinitely.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 1997 and 2007.

Figure 5. Percentage distribution of subbaccalaureate awards conferred, by type of award and race/ethnicity: 2007

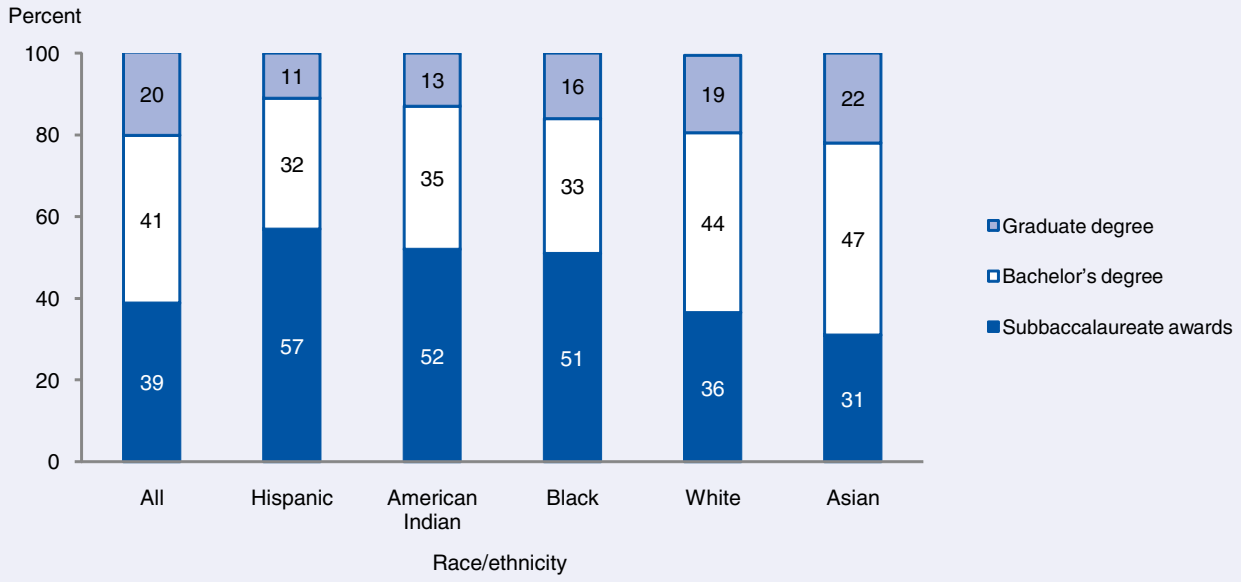


[1] American Indian (1 percent) and nonresident alien (1–2 percent).
[2] Short-term is defined as less than 1 full-time academic year to complete; moderate-term is 1 to less than 2 years; and long-term is 2 or more years. The actual time students take will vary.
NOTE: Asian includes Native Hawaiian or Other Pacific Islander, Hispanic includes Latino, and Black includes African American. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 2007.

The racial/ethnic distribution for each type of award reveals that Black and Hispanic students account for a higher percentage of short-term certificates (19 percent and 16 percent) and moderate-term certificates (18 percent and 15 percent) than they do for AAs (12 percent and 11 percent) and long-term certificates (10 percent and 11 percent). The opposite is true for White students. In other words, while Hispanic and Black students have experienced significant gains in the number of subbaccalaureate awards earned over the decade studied, they earn the most awards in programs requiring the shortest amount of time to complete.

This pattern is also reflected in the distribution of all postsecondary awards, including BAs and graduate degrees (figure 6). Hispanic and Black students earn proportionally more subbaccalaureate awards and proportionally fewer BAs and graduate degrees than their White and Asian counterparts. For example, 57 percent of postsecondary awards earned by Hispanic students are subbaccalaureate, a higher percentage than any other racial/ethnic group. The overall pattern is evident for both men and women, though the share of subbaccalaureate awards earned by women is higher than for men (table 7).

Figure 6. Percentage distribution of postsecondary degrees and awards, by race/ethnicity: 2007



NOTE: Hispanic includes Latino, Black includes African American, and Asian includes Native Hawaiian or Other Pacific Islander. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 2007.

Figure 7 displays the distribution of all subbaccalaureate awards by gender and race/ethnicity for each type of award conferred in 2007. After White women and White men, the highest percentage of awards was conferred on Black women, followed by Hispanic women.[17] For example, 10 percent of all subbaccalaureate awards and 12 percent of short-term certificates were awarded to Black women; similarly, 8 percent of all awards and 10 percent of short-term certificates were awarded to Hispanic women. In contrast, 5 percent to 6 percent of all awards and short-term certificates were awarded to either Black or Hispanic men. In other words, based on an even gender distribution in the U.S. population,[18] the percentage of awards to Black and Hispanic women is higher than their percentage of the U.S. population, while the percentage of awards to their male counterparts is comparable to or lower than their percentage of the U.S. population.

[17] With the exception of long-term certificates, which 6 percent of both Black and Hispanic women earned in 2007.

[18] In 2000, Black males, Black females, Hispanic males, and Hispanic females each represented about 6 percent of the total population (calculated from tables 1, 2, and 3 from U.S. Census Bureau, Census 2000 Summary File 1; http://www.census.gov/population/www/cen2000/briefs/phc-t9/index.html).

Table 7. Percentage distribution of postsecondary awards conferred in Title IV postsecondary institutions, by type of award, gender, and race/ethnicity: 1997 and 2007

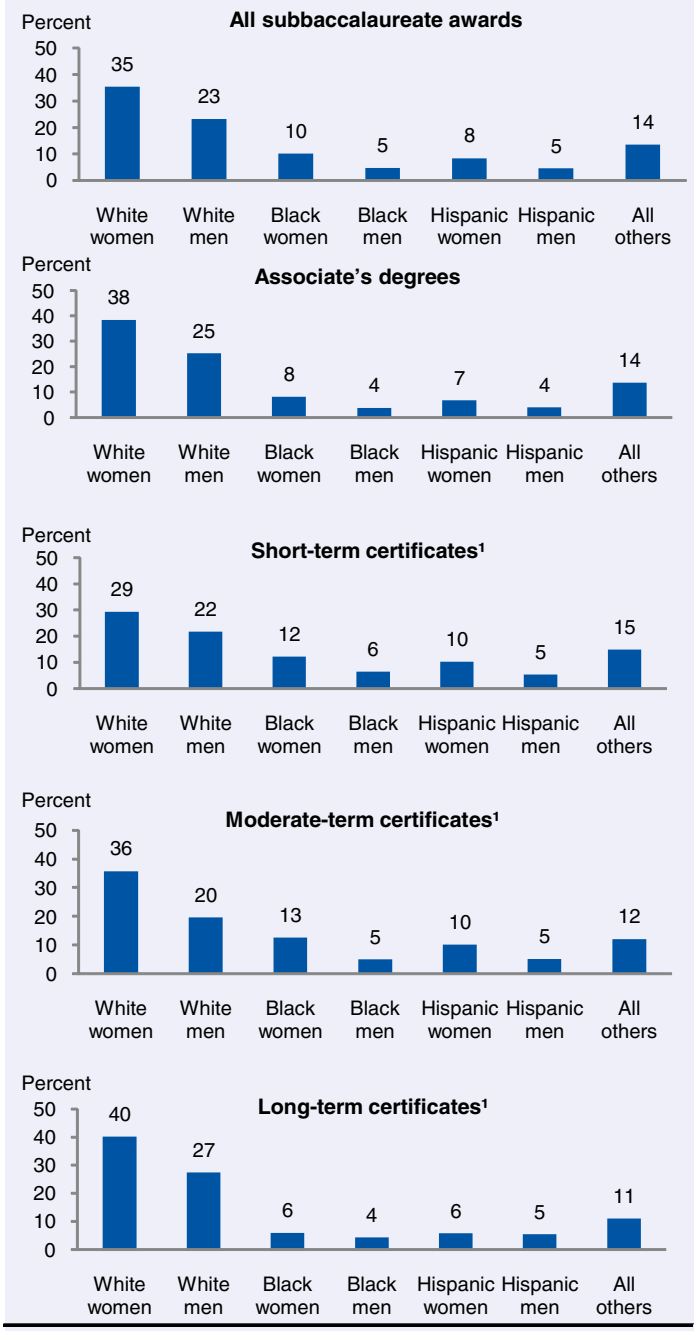
Recipient and institution characteristics	1997						2007					
	All subbaccalaureate			BA and higher			All subbaccalaureate			BA and higher		
	Total	Certif-icates	AAs	Total	BAs	Graduate/ professional degrees	Total	Certif-icates	AAs	Total	BAs	Graduate/ professional degrees
Total	**39.8**	20.0	19.8	**60.2**	41.0	19.2	**38.9**	19.2	19.6	**61.1**	40.8	20.4
Gender												
Male	36.6	18.4	18.2	63.4	42.5	20.9	36.3	17.6	18.8	63.7	42.8	20.8
Female	42.3	21.2	21.0	57.7	39.8	17.9	40.6	20.3	20.2	59.4	39.3	20.1
Race/ethnicity[1]												
White	38.0	17.5	20.6	62.0	43.3	18.7	36.5	16.5	20.0	63.5	44.2	19.3
Black	52.9	32.4	20.4	47.1	34.3	12.9	51.4	30.6	20.9	48.6	32.7	15.9
Hispanic	57.6	35.2	22.4	42.4	32.2	10.2	56.6	32.8	23.7	43.4	32.3	11.2
Asian	33.6	16.5	17.1	66.4	47.0	19.4	31.1	14.4	16.7	68.9	46.9	22.0
American Indian	56.7	31.0	25.7	43.3	32.1	11.2	52.2	26.0	26.3	47.8	34.6	13.1
Unknown	44.3	31.3	13.0	55.7	30.5	25.2	37.1	20.0	17.1	62.9	35.7	27.2
Nonresident alien	13.8	4.8	9.0	86.2	33.0	53.2	13.4	4.6	8.8	86.6	30.1	56.5
Men												
White	35.5	16.7	18.8	64.5	45.1	19.4	34.9	15.7	19.3	65.1	46.5	18.6
Black	51.0	30.1	20.9	49.0	36.3	12.7	51.2	30.6	20.6	48.8	34.4	14.4
Hispanic	55.1	32.0	23.1	44.9	33.8	11.1	54.6	30.7	23.9	45.4	34.2	11.3
Asian	30.7	14.6	16.1	69.3	47.9	21.4	28.7	12.6	16.1	71.3	48.6	22.7
American Indian	56.1	34.0	22.1	43.9	32.1	11.8	51.2	27.6	23.6	48.8	35.9	12.9
Unknown	42.6	30.2	12.4	57.4	31.2	26.2	34.6	17.6	17.0	65.4	37.7	27.6
Nonresident alien	10.5	3.8	6.7	89.5	31.4	58.0	9.7	3.2	6.4	90.3	27.8	62.5
Women												
White	39.9	18.0	21.9	60.1	42.0	18.1	37.6	17.0	20.5	62.4	42.6	19.8
Black	53.8	33.6	20.2	46.2	33.3	12.9	51.5	30.5	21.0	48.5	31.9	16.6
Hispanic	59.3	37.4	21.9	40.7	31.1	9.6	57.7	34.0	23.7	42.3	31.2	11.1
Asian	36.0	18.0	18.0	64.0	46.2	17.8	32.9	15.7	17.2	67.1	45.6	21.4
American Indian	57.2	29.0	28.1	42.8	32.0	10.8	52.9	25.0	27.9	47.1	33.8	13.3
Unknown	45.8	32.2	13.5	54.2	30.0	24.3	38.8	21.7	17.1	61.2	34.2	26.9
Nonresident alien	18.4	6.1	12.2	81.6	35.1	46.5	17.5	6.1	11.4	82.5	32.6	49.9

[1] Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or Other Pacific Islander, and American Indian includes Alaska Native. A nonresident alien is a person who is not a citizen or national of the United States and who is in this country on a visa or temporary basis and does not have the right to remain indefinitely.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 1997 and 2007.

Figure 7. Percentage distribution of subbaccalaureate awards conferred by gender and race/ethnicity, and type of award: 2007



[1] Short-term is defined as less than 1 full-time academic year to complete; moderate-term is 1 to less than 2 years; and long-term is 2 or more years. The actual time students take will vary.
NOTE: Black includes African American, Hispanic includes Latino, and All others include Asian (with Native Hawaiian or Other Pacific Islander), American Indian, nonresident alien, and unknown race/ethnicity. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 2007.

Summary

About 47 percent of all undergraduates were enrolled in subbaccalaureate programs in 2007–08, and in the previous year, subbaccalaureate awards accounted for almost 40 percent of all undergraduate credentials awarded. Between 1997 and 2007, the total number of subbaccalaureate awards conferred increased by 28 percent to a total of 1.5 million.

While community colleges still confer the largest number of subbaccalaureate awards, the rate of increase in awards conferred by private for-profit institutions was greater, especially in 4-year for-profit institutions, which more than tripled the number of awards conferred between 1997 and 2007.

All types of subbaccalaureate credentials increased in number over the decade, except for long-term certificates, which declined by 9 percent. In contrast, short-term certificates increased by 35 percent, AAs by 30 percent, and moderate-term certificates by 21 percent.

Health care is the predominant field in subbaccalaureate postsecondary education. It accounted for 31 percent of all awards in 2007 and increased by 63 percent between 1997 and 2007.

Women earn a majority of all subbaccalaureate awards; they earned 62 percent of all awards in 2007. Moreover, the increase in awards to women outpaced that for men over the decade studied. The gender difference in the number of subbaccalaureate credentials awarded was greatest among Black students, among whom women earned 68 percent of awards, followed by Hispanics (65 percent), American Indians (63 percent), Whites (60 percent), and Asians (60 percent).

Among racial/ethnic groups, the increase in subbaccalaureate awards conferred to Hispanic students was highest, increasing by 74 percent overall. Awards conferred to Black students increased 54 percent, while

awards conferred to White students increased at a much slower pace, rising by 11 percent overall.

References

Berkner, L., Horn, L., and Clune, M. (2000). *Descriptive Summary of 1995–96 Beginning Postsecondary Students: Three Years Later* (NCES 2000-154). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Bureau of Labor Statistics. (2001). *Occupational Employment Statistics*. Retrieved February 9, 2009, from http://www.bls.gov/oes/current/oes_stru.htm#15-0000.

Bureau of Labor Statistics. (2007). *Statistical Abstract of the United States, 2007: Table 604: Employment Projections by Occupation: 2004 and 2014*. U.S. Department of Labor. Washington, DC. Retrieved December 20, 2007, from http://www.census.gov/prod/2006pubs/07statab/labor.pdf.

Bureau of Labor Statistics. (2008). *Occupational Employment Statistics*. Retrieved February 9, 2009, from http://www.bls.gov/oes/current/oes_stru.htm#15-0000.

Cohen, A.M., and Brawer, F.B. (2003). *The American Community College* (Jossey-Bass Higher and Adult Education Series). San Francisco: Jossey-Bass.

Green, M. (2007). *Science and Engineering Degrees: 1966–2004* (NSF 07-307). Arlington, VA: National Science Foundation.

Grubb, W.N. (2002). Learning and Earning in the Middle, Part I: National Studies of Pre-baccalaureate Education. *Economics of Education Review, 21*: 299–321.

Kane, T.J., and Rouse, C.E. (1995). Labor-Market Returns to Two- and Four-Year Colleges. *The American Economic Review*, *85*(3): 600–614.

Knapp, L., Kelly-Reid, J., and Ginder, S. (2008). *Postsecondary Institutions in the United States: Fall 2007, Degrees and Other Awards Conferred: 2006–07, and 12-Month Enrollment: 2006–07* (NCES 2008-159Rev). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Knapp, L., Kelly, J., Whitmore, R., Wu, S., and Gallego, L. (2004). *Postsecondary Institutions in the United States: Fall 2002 and Degrees and Other Awards Conferred: 2001–02* (NCES 2004-154). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Marcotte, D.E., Bailey, T., Borkoski, C., and Kienzl, G.S. (2005). The Returns of a Community College Education: Evidence From the National Education Longitudinal Study. *Education Evaluation and Policy Analysis, 27*(2): 157–175.

Morgan, F. (1999). *Degrees and Other Awards Conferred by Title IV eligible, Degree-granting Institutions: 1996–97* (NCES 2000-174). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

U.S. Department of Education, National Center for Education Statistics. (2002). *Classification of Instructional Programs: 2000 Edition* (NCES 2002-165). Washington, DC.

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2007). Career/Technical Education Statistics (CTES), table P91. Washington, DC. Retrieved October 21, 2009, from http://nces.ed.gov/surveys/ctes/tables/P91.asp.

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2008). *Digest of Education Statistics, 2007* (NCES 2008-022). Washington, DC.

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2009). *The Condition of Education 2009* (NCES 2009-083). Washington, DC.

Methodology and Technical Notes

This section provides a brief description of the methodology for the IPEDS data collection and the specific data used for this analysis. More detailed information is available at http://nces.ed.gov/ipeds/ and in the methodology reports for the 1997, 2002, and 2007 data collections: Morgan (1999), Knapp et al. (2004), and Knapp, Kelly-Reid, and Ginder (2008).

IPEDS is the core postsecondary education data collection program for NCES. Data are collected from all primary providers of postsecondary education in the United States and include enrollments, program completions, graduation rates, faculty, staff, finances, institutional prices, and student financial aid. IPEDS began collecting data from all postsecondary institutions in 1986, when it superseded the Higher Education General Information Survey (HEGIS), which collected data from institutions of higher education only from 1966 until 1985.

The 1992 Higher Education Amendments made reporting to IPEDS mandatory for institutions participating in Title IV programs such as the Pell Grant and Stafford Loan programs. Institutions participating in Title IV programs are accredited by an agency or organization recognized by the Secretary of the U.S. Department of Education, have a program of more than 300 clock hours or 8 credit hours, have been in business for at least 2 years, and have a signed Program Participation Agreement (PPA) with the Office of Postsecondary Education (OPE), U.S. Department of Education. Title IV institutions include traditional colleges and universities, 2-year institutions, and for-profit degree- and non-degree-granting institutions, among others. Other postsecondary institutions may participate on a voluntary basis, and information on those that do participate is included in NCES websites developed for parents and students to help them make informed decisions about postsecondary education.

The data for this Statistics in Brief come from the 1996–97, 2001–02, and 2006–07 Institutional Characteristics (IC) and Completions components. All institutions in IPEDS are in the IC component, but not all institutions report completions data. For this analysis, the data include all Title IV institutions located in the United States and District of Columbia reporting completions data.[19] The Completions component response rates for these institutions ranged from 94 to 100 percent depending on the year.

Between 1996–97 and 2006–07, the number of institutions increased from 6,082 to 6,529. Appendix table 1 shows the net change over time, including the number of institutions lost (those in 1997 only) and the number gained (those in 2007 only). The net gain in institutions occurred almost entirely in the for-profit sector across all levels: less-than-2-year, 2-year, and 4-year.

Fields of study were grouped based on the 2000 edition of the Classification of Instruction Program (CIP) codes (U.S. Department of Education 2002). Appendix table 2 displays the fields and corresponding CIP codes.

[19] The only exception to the Title IV criterion is the inclusion of the Community College of the Air Force. While not a Title IV institution, it is a U.S. Military Service Institution. U.S. Military Service Institutions are included in key NCES reports describing IPEDS institutions and degree awards (e.g., Knapp, Kelly-Reid, and Ginder 2008).

Appendix table 1. Net change in the number of Title IV institutions located in the United States and District of Columbia reporting completions data, by institution type: 1997 and 2007

Control and level	Institutions in 1997 only[1] (loss)	Institutions in 2007 only[2] (gain)	Institutions in both 1997 and 2007	Net change in the number of institutions between 1997 and 2007[3]
Public total	130	134	1,860	4
4-year or above	15	17	633	2
2-year	67	57	1,069	-10
Less-than-2-year	48	60	158	12
Private not-for-profit total	261	220	1,594	-41
4-year or above	111	150	1,396	39
2-year	116	34	147	-82
Less-than-2-year	34	36	51	2
Private for-profit total	563	1,047	1,674	484
4-year or above	26	223	267	197
2-year	148	259	591	111
Less-than-2-year	389	565	816	176

[1] Title IV institutions located in the United States and District of Columbia that appeared in IPEDS 1997 but not in 2007. These institutions either closed, lost Title IV eligibility, or lost accreditation as of 2007.

[2] Title IV institutions located in the United States and District of Columbia that appeared in IPEDS 2007 but not 1997. These institutions are either new, or became newly accredited or eligible for Title IV funding.

[3] This number is the difference between the number of institutions in 2007 only and 1997 only; it represents the net gain or loss of IPEDS institutions between the two years.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" and "Institutional Characteristics Survey," 1997 and 2007.

Appendix table 2. Fields of study used in this study with 2000 classification of instructional program (CIP) codes

Fields of study	2000 CIP codes
Science, technology, engineering, and mathematics (STEM fields)	
Computer and information sciences	11
Engineering and engineering technology	14, 15
Mathematics and science	
(Biological science)	26
(Mathematics)	27
(Physical science)	40
(Science technology)	41
Other (agricultural sciences, natural resources, and inter-disciplinary sciences)	01, 03, and 30[1]
Non-STEM academic fields	
Liberal arts and sciences	24.0101
General studies and humanities	other 24
Family, economic, consumer studies	19 (except: 19.02, 19.09)[2]
Other academic fields	
(Architecture)	04
(Area, ethnic, cultural, and gender studies)	05
(English language and literature/letters)	23
(Foreign languages, literatures, and linguistics)	16
(History)	54
(Military technologies)	29
(Multi/interdisciplinary studies)	30[3]
(Philosophy and religious studies)	38
(Psychology)	42
(Social sciences)	45
(Visual and performing arts	50
(Health-related science)	51.14, 51.15, 51.22
Health care fields	
Nursing/nursing assistant	51.16
Medical assisting	51.08, 51.26
Medical technology/technician	51.09 (except: 51.0913),[4] 51.10
Dental technology/technician	51.06
Other health	other 51 (except: 51.14, 51.15, 51.22)[5]
Business total	
Administration and management	52.02
Secretarial services	52.04, 22.03
Other business	other 52,[6] 19.02
Consumer services	
Cosmetology	12.04
Other consumer services	other 12,[7] 19.09, 31
Manufacturing, construction, repair, and transportation	46, 47, 48, 49
Protective services	43
Education	13
Other occupational	
(Legal professions)	22 (except: 22.03)[8]
(Public, legal, and social services)	25, 39, 44
(Communications)	09, 10

[1] Includes the following eight categories of CIP 30 programs: 30.0101 (Biological and physical sciences), 30.0601 (Systems science and theory), 30.0801 (Mathematics and computer science), 30.1001 (Biopsychology), 30.1501 (Science, technology and society), 30.1601 (Accounting and computer science), 30.1901 (Nutrition sciences), and 30.2501 (Cognitive science).

[2] 19.02 is "Human sciences business services" placed in "Other business." 19.09 is "Apparel and textiles" placed in "Other consumer services."

[3] All CIP 30 programs other than those specified above under "STEM."

[4] "Athletic trainer" placed in "Other health."

[5] Including, among others, 51.31 (Dietetics and clinical nutrition services) and 51.35 (Somatic bodywork and related therapeutic services). 51.14 is "Medical clinical sciences/Graduate medical studies" and 51.22 is "Public health," both placed in "Other academic fields."

[6] Including, among others, 52.03 (Accounting and related services) and 52.09 (Hospitality administration/management).

[7] Including, among others, 12.03 (Funeral service and mortuary science) and 12.05 (Culinary arts and related services).

[8] 22.03 is "Legal support services" placed in "Secretarial services."

NOTE: All CIP codes were converted to the 2000 classification using the crosswalk provided at NCES available at: http://nces.ed.gov/pubs2002/cip2000/crosswalk.asp.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey" 1997, 2002, and 2007.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