

Academic preparation is still a core function of community colleges. But today their mission is more comprehensive, thanks to a gradual shift toward vocational education, job training, and programs catering to the community.

The changing role of community college

by Henry T. Kasper

During the past century, community colleges have grown tremendously in number and have changed with the times. No other segment of postsecondary education has been more responsive to its community's workforce needs. At community colleges, students can learn at any point in their lives while taking advantage of low tuition, convenient campus locations, open admissions, and comprehensive course offerings.

Community colleges have long granted associate degrees that typically take about 2 years of full-time study to complete. These programs offer students the traditional college-level courses that lead to an associate degree and prepare students for further study toward a bachelor's degree. Community colleges also offer vocationally oriented associate degrees that prepare students for careers.

Increasingly, however, community colleges provide another option: career training through vocationally oriented courses that leads to a certificate. This type of



career training previously was offered mainly by proprietary schools and vocational institutions, but community colleges now have similar programs to better serve the needs of local businesses and communities. This service has increased the importance of community colleges, especially in rural areas where career training is difficult to obtain. Offering vocational preparation and academically oriented education, community colleges have seen a surge in enrollments that outpaces the enrollment growth of educational institutions offering bachelor's degrees. Enrollment at public 4-year colleges and universities roughly doubled from 1965 to 1999, while enrollment at public community colleges increased about fivefold.

Today's comprehensive community college is both a principal provider of academic instruction and a major provider of vocational preparation and workforce development through

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stand-alone adult training programs. Using data from the U.S. Department of Education's National Center for Education Statistics, this article reviews the history of community colleges, highlights their continuing role in academic preparation, describes their partnerships with employers in support of vocationally oriented learning, reviews the types of certificates and degrees community colleges offer, and examines trends in enrollment and cost. A concluding section looks to the future.

Community college 101: An overview

During their early years, community colleges were an extension of high schools: in 1901, Joliet Community College in Illinois—the Nation's first junior college—added a fifth and sixth year of courses to a high school curriculum. In the 1920s, enrollments were low, and the few community colleges

in existence offered general liberal arts programs.

During the Great Depression of the 1930s, however, community colleges began to provide job training programs as a way to ease widespread unemployment. This trend toward job training continued through the 1940s and 1950s.

In the 1960s, baby boomers began reaching college age, and the number of community colleges and enrollments soared. Many new public community colleges were built during the decade. This growth coincided with a large increase in student enrollment—from about 1 million students in 1965 to about 2.2 million by 1970.

During the 1970s, community colleges became a major part of the American educational system, with enrollments almost doubling again from 2.2 million in 1970 to 4.3 million by 1980. The enrollment increase resulted from three factors: Baby boomers continued to come of age, more parents desired

a postsecondary education for their children, and students sought draft deferment during the Vietnam War.

The community college boom slowed in the latter part of the century, with enrollment growing only 23 percent between 1980 and 1999. Total enrollments were about 5.3 million in 1999. As of the 2000-01 academic year, there were 1,076 community colleges.

Gateway to a bachelor's degree

Historically, community colleges have provided a gateway to opportunity for many young people who otherwise would have been denied access to higher education. These community colleges offer associate degrees that may serve as a low-cost platform from which students might then pursue traditional academic programs in baccalaureate colleges and universities.

Baccalaureate colleges and universities, sometimes called 4-year colleges, offer bachelor's degrees that typically require about 4 years of full-time study to complete. Public community

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colleges, which serve most of the students attending so-called 2-year schools, confer most associate degrees. Private 2-year schools are not covered in this article because they educate a tiny fraction of all students attending 2-year schools.

Many community colleges have transfer agreements with 4-year baccalaureate colleges and universities. Under these agreements, the 4-year institutions accept community college credits toward bachelor's degree requirements. These transfer agreements allow students to complete the first 2 years of their coursework at a community college, thus reducing the cost of obtaining a 4-year bachelor's degree.

As admittance to baccalaureate colleges and universities becomes more competitive, many high school students increasingly rely on educational supplements. An example of this practice is a new program called "dual enrollment." It allows high school students to take community college courses and improve their chances of admittance to a baccalaureate college or university. Currently, about 5 percent of the Nation's high-school students take community college courses, but the figure varies dramatically by community. For example, as many as 20 percent of high school students in

Utah take community college courses, mainly because of a State educational initiative.

Employer partnerships and vocational training

In 1988, the Nationwide Commission on the Future of Community Colleges recommended that these colleges help build communities by creating partnerships with employers and making facilities available for workforce training. Today, community colleges supply vocational training programs that terminate in certificates, coursework leading to associate degrees, remedial educational services, and customized, or "contract," courses designed to meet the needs of local employers. Customized courses provide job-specific skill training or remedial training and are delivered to employers onsite.



The role of community colleges in preparing students for occupational licensure and certification requires careful attention to the interests of the local public, the occupation, consumers, and employers. Many corporations, particularly in rural America, rely heavily on a locally trained workforce. Alliances between local companies and community colleges not only serve local businesses but also ease the financial burdens that community colleges may bear.

Community college workplace training programs often are designed to attract new employers to a location while retaining existing ones, making these programs important for local economic development. To achieve this goal, community colleges often design and implement critical training

programs for consortiums of small- and medium-sized employers. Typically, the firms are too small to be able to provide formal training on their own.

Examples of employer partnerships with community colleges are abundant. Lawson State Community College in Birmingham, Alabama, has forged alliances with Microsoft Corporation and Novell Incorporated, offering a host of information technology certificates accredited by the Association of Collegiate Business Schools and Programs. Likewise, the Virginia Community College System and Cisco Systems are working together on high-tech training centers at 27 campuses.

Another partnership is being created between the Maricopa Community College District in Arizona and the International Genomics Consortium, a nonprofit genetic research group in Maryland. Arizona colleges recently committed \$2.5 million to local community colleges, hoping to convince the nonprofit to relocate to Phoenix. The funds will be used to train students from the district's 10 community colleges. State and city officials, educational institutions, healthcare organizations, foundations, and businesses are putting forth a major effort to raise \$98 million to support the nonprofit's pending arrival.

Such partnerships play several roles: they allow community colleges to develop specific programs and career fields to introduce to high school students, offer a support system for the corporation involved in the partnership, provide workforce training for the local community, and enable companies to beef up employee skills through short-term training offered at the local community college. As a result of such partnerships, many community colleges have molded themselves into more comprehensive educational institutions as they increasingly cater to the workforce needs of local businesses and communities.

The development of partnerships involving online learning is opening another way for academic institutions to provide corporate training. Although both online and other linkages bring corporate and college partners closer, community colleges increasingly face competition from a growing number of organizations that provide "e-learning" services to meet corporate training needs. All types of postsecondary educational institutions are discovering that education is business, spurring them to think about entrepreneurship and to create more alliances with corporate clients.

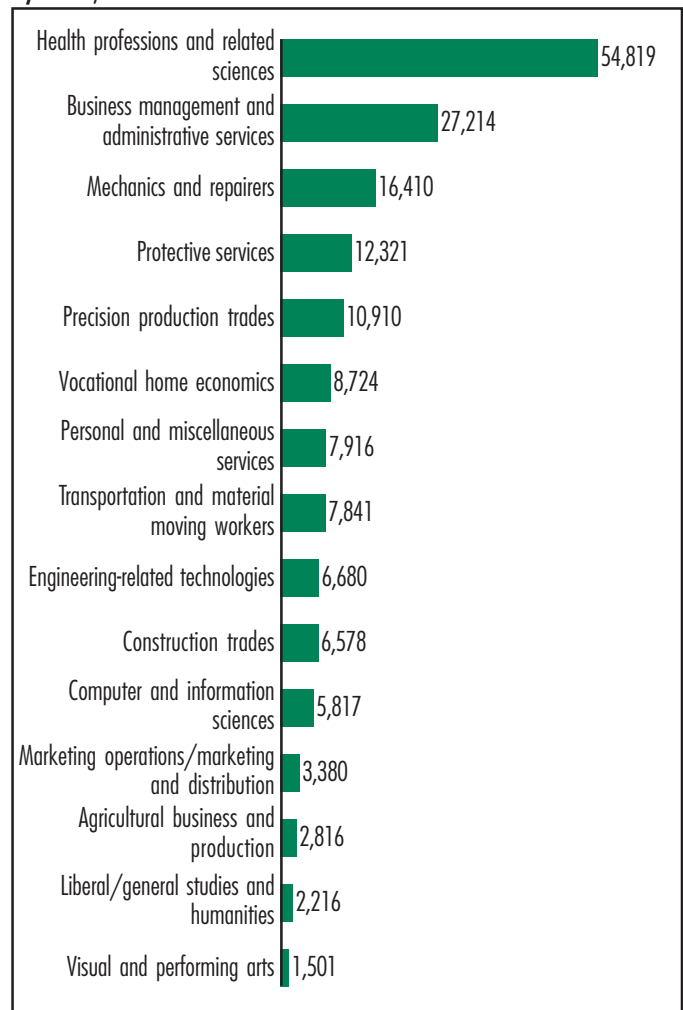
Certificates and degrees awarded

The variety of certificates and degrees now granted by community colleges is evidence of the comprehensive role these schools have assumed. Certificates requiring varying durations of study have added options for vocational training. Chart 1, which combines information on short-term and longer term certificates, shows the 15 most popular fields of study for all certificates awarded by community colleges in

1999-2000. Associate degrees prepare students on both vocational and academic tracks; chart 2 shows the 15 most popular fields of study for which community colleges conferred associate degrees in 1999-2000.

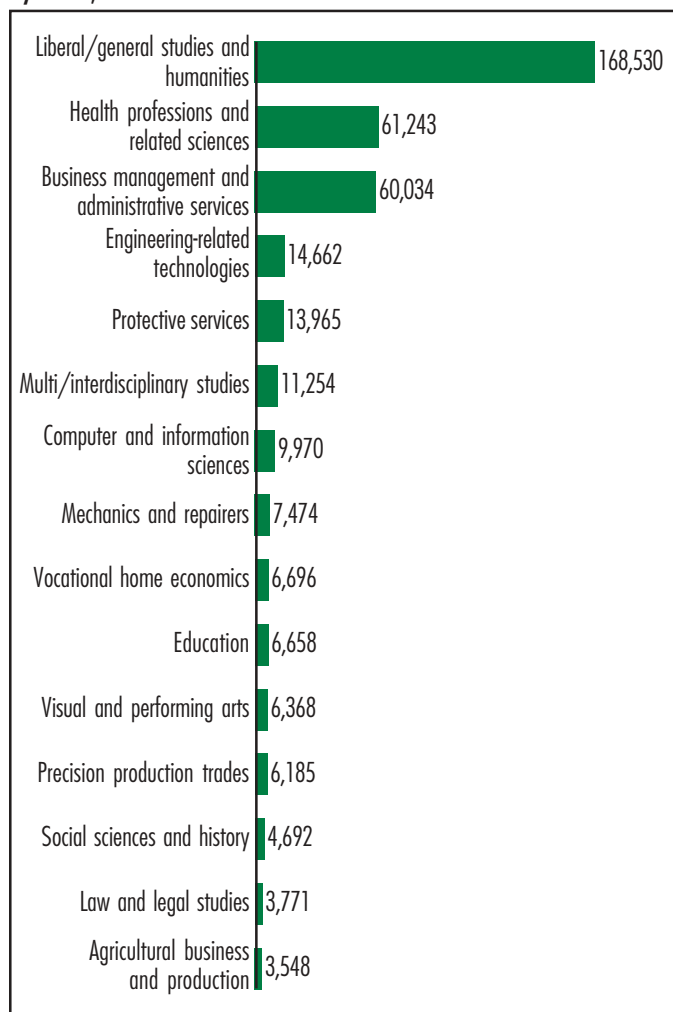
The growth of certificate programs is an important trend, even though the number of certificates earned remains smaller than the number of associate degrees conferred. Most certificates involve specific, work-related training. Many community college students—especially older and part-time students who hold full-time jobs—neither want nor need to pursue lengthy educational programs. A growing number of experienced workers who have a bachelor's degree attend community colleges for computer classes and other instruction to keep current with new workplace technologies. The certificate programs appeal to those who want to upgrade their current

Chart 1
Certificates conferred by public 2-year community colleges by field, 1999-2000



Source: National Center for Education Statistics

Chart 2
Associate degrees conferred by public 2-year community colleges by field, 1999-2000



Source: National Center for Education Statistics

skills or acquire new ones, increasing their job opportunities in the marketplace.

Short-term certificates. These certificates require less than 1 year to complete. From academic year 1989-90 to academic year 1999-2000, the number of short-term certificates awarded by community colleges rose from 46,447 to 85,941, an increase of 85 percent. This increase over a decade reflects a trend toward programs that offer specific information or skills in a shorter time. Short-term certificate programs allow students to train quickly to enter the workforce or to pursue career advancement.

Within the category of short-term certificate programs,

growing fields greatly outnumbered declining fields. During the decade from 1989-90 to 1999-2000, certificates awarded in computer-related fields were among those that had the largest percentage growth. For example, certificates granted in computer and information sciences grew 631 percent, increasing from 435 to 3,180.

Other fields that saw major gains in certificates conferred during the same period were vocational home economics (179 percent), precision production (152 percent), construction

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trades (142 percent), mechanics and repairers (121 percent), business management and administrative services (118 percent), and protective services (101 percent). Although awards of certificates in health professions and related sciences increased a comparatively small 62 percent, the healthcare field accounted for 23,818 short-term certificates in 1999-2000—more than any other.

Longer term certificates. Longer term certificates take at least 1 year but less than 4 years to complete. Just as awards of short-term certificates grew significantly between 1989-90 and 1999-2000, the number of longer term certificates awarded also grew. But awards of longer term certificates increased at a more modest pace of 22 percent, from 78,327 to 95,463. The number of certificates conferred grew in more than half the fields of study.

During the same decade, awards of certificates in computer and information sciences grew from 1,128 to 2,637, a 134-percent increase. Other fields experiencing gains in certificates granted were construction trades, increasing from 2,942 to 4,216 (43 percent), and precision production trades, growing from 6,000 to 7,029 (17 percent).

In addition, certificates conferred under health professions and related services grew 37 percent. Within this category, medical assisting increased 79 percent, from 1,158 to 2,071. Among the largest numeric gains were those for certificates awarded in health professions and related services: the increase of 8,378 certificates gave this field 31,001 longer term certificates in 1999-2000. Of these, slightly more than half were for licensed practical nurses.

There were decreases during the decade in awards of longer term certificates in engineering-related technologies, which



administrative services declined by 11 percent. One fast growing field of study for associate degrees was computer and information science: it increased 93 percent—from 5,169 to 9,970—over the decade.

Enrollment trends

In 1965, 74 percent of all students in public, degree-granting institutions attended 4-year schools, while 26 percent attended 2-year community colleges. By 1992, however, the percentage of all public college students enrolled in community colleges had nearly doubled, to 48 percent.

Enrollments at community colleges leaped 413 percent from 1965 to 1999, increasing from about 1 million to about 5.3 million, while those at public 4-year institutions increased 104 percent, from about 2.9 million to about 6 million during the same period. Much of the increase in community college enrollment occurred between 1965 and 1975. (See chart 3.)

The growth of community college enrollments is expected to continue outpacing increases in enrollments at public 4-year baccalaureate colleges and universities. This is because

fell from 4,995 to 3,996 (20 percent), and in marketing and distribution, which declined from 1,216 to 746 (39 percent).

Associate degrees. Between 1989-1990 and 1999-2000, the number of associate degrees awarded by community colleges increased 21 percent, rising from 340,091 to 411,633. This compares with a total of 181,404 short-term and longer term certificates awarded in 1999-2000—less than half the number of associate degrees.

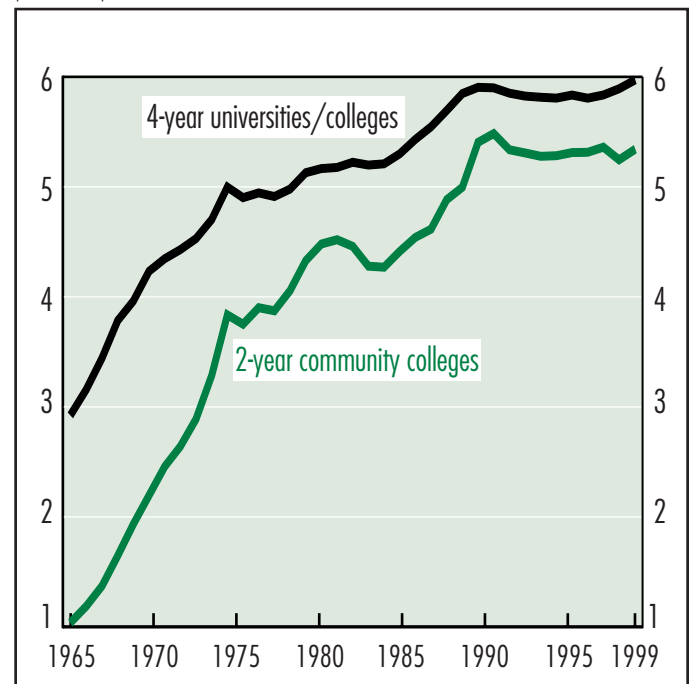
About 41 percent of the associate degrees granted in 1999-2000 were in liberal/general studies and humanities, accounting for a larger share of associate degrees than any other field. The academically oriented associate degrees in liberal/general studies and humanities were intended mainly as a foundation for further study toward bachelor's degrees. Of all the associate degrees conferred, many in other fields may have been vocationally oriented and prepared students for specific careers, although some of those also may have served as a first step toward a bachelor's degree.

After liberal/general studies and humanities, the next two largest fields for awards of associate degrees were health professions and related sciences and business management and administrative services. However, during the decade from 1989-90 to 1999-2000, the number of associate degrees conferred in health professions and related sciences increased by 22 percent, while degrees in business management and

Chart 3

Total fall enrollment in public degree-granting institutions by type, 1965-99

(millions)



Source: National Center for Education Statistics

many 4-year colleges are becoming increasingly selective in an effort to improve the academic quality of their incoming students. Furthermore, growth in certification programs and workforce training classes will continue to boost enrollments in community colleges. The data reveal enrollment trends by gender, part-time versus full-time attendance, age, and race, ethnicity, and national origin.

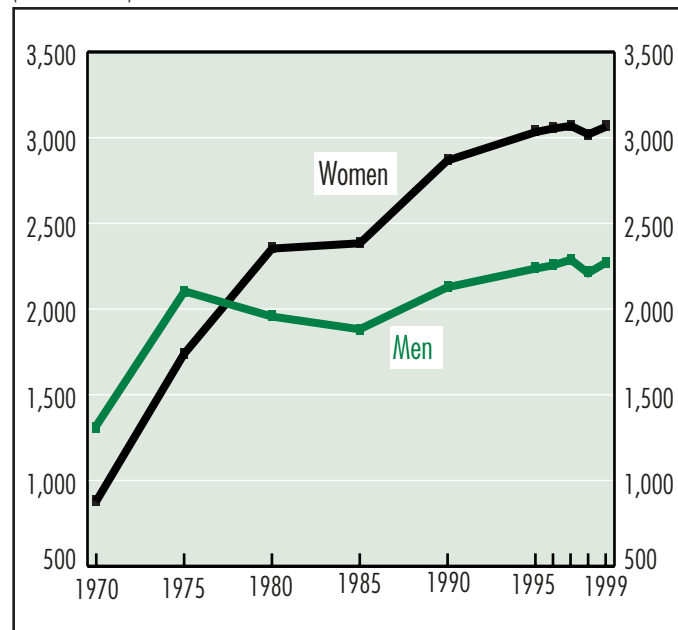
Gender. A reversal of the gender gap among community college students emerged in the late 1970s. (See chart 4.) In 1970, 60 percent of all community college students were men. By 1980, the enrollment of women had overtaken that of men, with women accounting for 55 percent of community college students. Women's enrollment has exceeded that of men ever since. During the 1990s, the share of women held steady at about 57 percent.

Part-time versus full-time attendance and age. From 1970 to 1999, the percentage of all students attending community college part time rose from 49 percent to 64 percent. Part-time enrollments in community college rose from about 1.1 million in 1970 to more than 3.4 million in 1999, an increase of more than 200 percent. The growth in full-time enrollment over the same period was not as dramatic: from more than 1.1 million in 1970 to more than 1.9 million in 1999, an increase of over 70 percent.

Part-time students at community colleges typically are

Chart 4
Total fall enrollment in public 2-year community colleges by gender, selected years, 1970-99

(thousands)



Source: National Center for Education Statistics

older than their full-time counterparts. Community colleges have tried to accommodate the needs of older, part-time students who work full time by offering courses at night and on weekends. In recent years, however, a new trend in the enrollment of students of traditional college age has emerged: both part-time and full-time community college students aged 18 to 21 have increased their share of total enrollments between 1993 and 1999. Among full timers, students aged 18 to 21 increased their share from 56 percent to 61 percent of the total. Among part timers, the share of 18- to 21-year-olds rose from 20 percent to 23 percent.

Race, ethnicity, and national origin. Community colleges emphasize access through open admissions, affordable cost, and delivery of programs designed to meet the needs of local

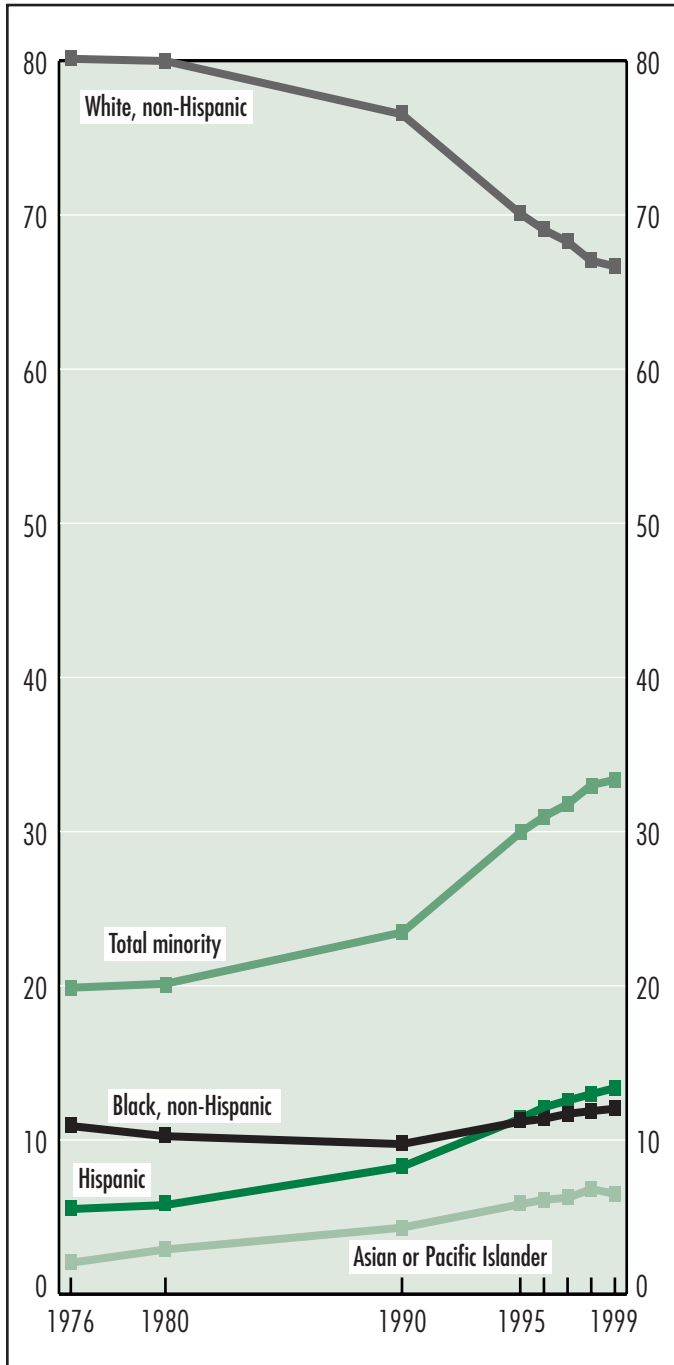
From 1976 to 1999, minorities made up an increasing proportion of students enrolled in community college.

communities. As a result, community colleges have made education more available to students from varied backgrounds, including immigrants. Community college also may appeal to students who seek remedial education and to students whose primary language is not English.

During the period from 1976 to 1999, racial and ethnic minorities made up an increasing proportion of all students enrolled at community colleges. (See chart 5.) Minorities made up 20 percent of community college enrollments nationally in 1976. By 1999, total minority enrollment reached 33 percent. Within this group, enrollment of Asians and Pacific Islanders increased the fastest, growing 340 percent—despite being only about 6 percent of total community college enrollments in 1999. Hispanics were the second fastest-growing group during the same period, but they composed a larger share of enrollments. Hispanic enrollment increased 240 percent from 1976 to 1999, and Hispanic students accounted for 13 percent of total community college enrollments in 1999.

In the 1989-90 academic year, community colleges conferred 340,091 associate degrees. Of these, 283,651 were awarded to whites, 23,108 to blacks, 16,341 to Hispanics, and 10,502 to Asians and Pacific Islanders. By the 1999-2000 academic year, however, of the total degrees conferred, the greatest proportional growth was in those awarded to Hispanics: a 130-percent increase, to 37,548. Over the same period, awards to Asian and Pacific Islanders grew 104 percent, to 21,413, and those to blacks rose 73 percent, to 39,872. Although whites experienced the slowest growth rate (6 percent), they continued to account for the largest proportion (73 percent) of associate degrees conferred.

Chart 5
Fall enrollment in public 2-year community colleges
by race/ethnicity, selected years, 1976-99
 (Percent)



Source: National Center for Education Statistics

Cost of community college

The cost of education at a community college has risen over the years, but the average cost per year is still lower than that of public 4-year baccalaureate colleges and universities. Community colleges are a cost-effective alternative for many students, especially for those living in rural areas that do not have access to a 4-year institution.

Although average community college tuition and fees have increased faster than inflation, they have increased at a slower pace than have tuition and fees at public 4-year colleges. Average annual tuition and fees at community colleges for students living in State during the academic year of 1976-77 totaled \$283 in current dollars. By 2000-01, that total was \$1,359, an increase of 380 percent. During the same period, however, average annual tuition and fees at public 4-year colleges for students living in State rose from \$617 to \$3,506, an increase of 468 percent.

Keeping community college affordable has been a challenge. From the 1970s through the mid-1990s, budgetary pressures at the Federal, State, and local levels often made it difficult for community colleges to keep up with rapidly changing and expensive technology. Community colleges sometimes were forced to slash programs and services. However, a stronger economy in the 1990s, an increase in government funding, the hiring of more part-time faculty, the growth of private funding, and the proliferation of partnerships between local corporations and community colleges have helped ease some of the financial burden.

Some community colleges have resorted to fundraising, especially for scholarships, to preserve access to postsecondary education. The Federal Government also has helped, becoming the primary source of financial aid for community college students in the past 20 years.

Future challenges

A constant for community colleges has been their ability to quickly adapt to demands of the times. Today, technology is a factor affecting most of the demographic, economic, and academic challenges that community colleges face. Innovations in the workplace have forced employees to upgrade their skills or seek advanced training. New entrants to the labor force also have an increasing need to add to their skills through postsecondary instruction.

As higher education evolves, it increasingly emphasizes the value of credentialed and noncredentialed knowledge and skill. Community colleges have taken note. Reacting to technological and other changes, community colleges continue to test their flexibility as they strive to address changing educational and training needs.

