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ABSTRACT

This paper examines the impact American community colleges have on the nation's economic development. The profile of the community college offered here indicates that there are 1,236 public and private non-profit community colleges in the United States, with an additional 300 to 400 for-profit institutions sometimes included in the category. The colleges enroll 5.5 million students, or 45% of the 12.2 million students enrolled in undergraduate education in the United States. More than 37% of these students are age 25 or older. The associate's degrees offered by community colleges in 1993-1994 totaled 32% of all undergraduate degrees, including the bachelor's. By 1992, 96% of community colleges provided workforce training programs for employers in their communities. Between 1991-1992, the top 5 subject areas in which employees received workplace training were: (1) job-specific technical training (20%); (2) computer-related (18.6%); (3) supervision/management (14.9%); (4) workplace literacy (9.8%); and (5) communication/interpersonal skills (8.6%). The authors offer a breakdown of some specific program outcomes. The paper also examines the ways in which a community college education benefits individual income and employment, and the ways in which non-students utilize community college facilities and services. Finally, the paper discusses community college links with businesses. (Contains 26 references.) (Author/NB)

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Introduction

American community colleges have been in existence for almost a hundred years in the United States. From the start, this segment of postsecondary education has been labeled as the institution which provides educational equality because of its open access philosophy. Because an individual's academic ability is not important for student participation, these colleges' historical claim to fame has been in their role in society as a vehicle for citizens to take advantage of the diverse programs offered. As a result, the fundamental tasks of two-year colleges have been to democratize higher education by not only expanding opportunity, but also by promoting social equality in providing access to higher education. Known for providing low-cost, high quality educational opportunity for a diversified clientele, community colleges serve students from every walk of life.

American Community Colleges: Profile of the System

Today, there are over 1,236 community colleges in the United States, including 1,028 public colleges and 154 private, non-profit colleges. An additional 300 to 400 for-profit institutions are sometimes included in this category. They enroll 5.5 million students, or 45 percent of the 12.2 million students enrolled in undergraduate education in the United States. Part-time students account for 64 percent of the total credit enrollment in community colleges. Over 37 percent of the students are 25 years or older. The community colleges award as their highest degree the associate of arts or science (AA or AS). In 1993-94, the number of associate

degrees awarded totaled 542,449, or 32 percent of all undergraduate degrees, including the bachelor's.

The curricular functions of American community colleges, which include academic transfer preparation, vocational-technical education, remedial education, and community service have all been present from the start. More recently, the community colleges have become responsive to businesses and government in educating and retraining the nation's workforce (Laanan, 1995). Questions of the contributions that the colleges make to individual progress and to the communities they serve are asked continually. The worth of completing an associate's degree has been quantified in terms of income enhancement; according to the U.S. Department of Commerce (1992), the median income of males with an associate degree is 26 percent higher than for those with a high school diploma, and 21 percent less than for those with a bachelor's degree. For women, the comparable figures are 33 percent and 16 percent. This chapter discusses the research on workforce development and economic benefit.

Workforce Training and Economic Benefit

Workforce Training. Historically, community colleges have been recognized as the segment in America's higher education that provided the flexible and diverse curricula that the traditional universities ignored. Two-year colleges from the very start have continued to develop, collaborate, and offer numerous programs to prepare individuals for the middle-level or semi-technical occupations. Referred to by many names, workforce training has historically been called career education (also known as vocational-education or occupational studies). However, according to Cohen & Brawer (1996), the terminology of career education has never been exact: the words terminal, vocational, technical, semiprofessional, occupational and career have all been

used interchangeably or in combination, as in vocational-technical (p. 216). Courses under this rubric prepare students for immediate employment. Many of the programs center on the skills that can be learned in a short time, such as record keeping, and on the semi-professions or support occupations such as engineering technology and laboratory assistantships. Today, with the expanding need for health professionals, colleges have established high-quality programs to educate and prepare not only nurses, but therapists and technicians to assist in the medical industry. The colleges have maintained programs in agriculture and in business services ranging from bookkeeping, mechanics, and computer programming, to name a few.

Today, many colleges offer more than 100 different career education or occupational programs. In fact, by 1992, 96 percent of community colleges provided workforce training programs for employers in their communities, including programs in workplace literacy and English as a Second Language (American Association of Community Colleges, 1995, p. 35). Between 1991-1992 the top five subject areas in which employees received workforce training from the nation's community colleges were: 1) 20.2% for job-specific technical training; 2) 18.6% for computer related; 3) 14.9% for supervision/management; 4) 9.8% for workplace literacy; and 5) 8.6% for communication/interpersonal skills (Doucette, 1993).

Program outcomes include:

- A truck-driving program developed by West Hills Community College (CA) trained 80 students but few of them were the women and minorities for whom the program was developed (1990).
- A construction-skills program that Cecil Community College (MD) developed in association with several corporate partners prepared 82 percent of the 99 enrollees, most of whom obtained jobs in the locality (1990).

- Over 92 percent of the respondents to a survey of 2,500 occupational-program graduates in Illinois indicated they were either employed or were continuing their education; 77 percent of the employed graduates were working in positions related to their training (Illinois Community College Board, 1995).
- A Washington program trained 2,147 dislocated timber industry workers who had lower unemployment rates and higher income than the state norm for comparable groups (Washington State Board for Community and Technical Colleges, 1995).

Economic Benefit. Evidence that community college attendance enhances individual income and employment is available:

- Of the 1,569 students graduating from the New Hampshire Technical Colleges in 1994, 63 percent were working full-time, 15 percent part-time, while 13 percent were continuing their education; average salaries were considerably higher than the norm (New Hampshire State Department of Postsecondary Technical Education, 1995).
- Between 1988 and 1993 enrollment in Johnson County Community College (KS) programs in civil engineering, biomedical equipment technology, office automation technology, and chief apprentice more than doubled; 80 percent of the career program completers were working in fields related to their training (1994).
- A study of 3,171 individuals 13 to 14 years after high school graduation found that when educational attainment is held constant, students initially enrolling in community versus four-year colleges are not significantly disadvantaged in occupational and economic attainments (Whitaker and Pascarella, 1994).

- Community college graduates of allied health fields command relatively good incomes upon graduation, up to $60,000 annually (American Association of Community Colleges, 1995); Table 1 describes the top ten highest average salary by degree programs.
- In Arizona the mean income for an individual with an associate's degree is about five percent more than a person with some college, and 40 percent more than a person with only a high school diploma or equivalent; the cost of obtaining an associate degree is $3,267 and the degree increases a person's 40-year worklife income by $242,000 (Rubi, 1995).
- The 10,893 graduates of vocational programs in Washington revealed an overall job placement rate of 85 percent (Seppanen, 1994).
- A study investigating 4-year outcomes for 173,535 students at 18 California Community Colleges who either completed in 1992 or 1993 or stopped attending in 1991 or 1992 found that the wages of students who received a certificate or degree from an occupational program were higher than both those who left occupational programs without degree or certificate and those who completed non-occupational programs (Friedlander, 1996). Occupational students who received a degree or certificate made a 47 percent gain in wages between their last year of college and the third year after college.

Community Benefit and Business Links

Community Benefit. The colleges benefit their communities in other ways as well. Non-students often use the facilities:

- Approximately 45,000 community residents per year come to the William Rainey Harper College (IL) campus each year for cultural events or to use college facilities (Lucas, 1982).

- Miami-Dade Community College (FL) operates art galleries, presents dance and musical performances, and opens its athletic facilities to the public (McCabe, 1996).
- Over 55 percent of the respondents to a survey of district residents had been on the Johnson County Community College campus in the previous year (Conklin, 1992).
- Similarly, half the residents of the College of the Canyons (CA) district reported using college facilities and services (College of the Canyons, 1990).
- In the sparsely settled district surrounding Dona Ana Branch Community College (NM), 31 percent of the residents had taken courses at the college (Baca, et al., 1993)

Contracts to train employees of local businesses represent another form of services.

- In California contracts with private businesses and with public entities generated $41 million during a three-year period (California Community Colleges, 1993).
- The most common subjects for which the American community colleges provided training were job-specific technical training, computer-related training, management training, and workplace literacy; more than one-third of the programs were paid for by employers (Doucette, 1993).
- Customized training for businesses were provided by the community colleges of Kansas with the average institution training nearly 2,000 employees per year (Kansas State Board of Education, 1991).

Links with Businesses. One more element of community services is seen in the way that community colleges assist in supporting new businesses.

- Kalamazoo Community College (MI) developed a business-education park, a business incubator, and promptly sponsored a museum and a convention center in the city (Schlack, 1993).

- Kirkwood Community College (IO) cooperated with various state and local agencies in organizing a small-business development center (Ovel & Olejniczak, 1992).
- Numerous cooperative arrangements were described in an issue of New Directions for Community Colleges that was published in Spring 1994.

Conclusion

Clearly, the American community colleges are heavily involved with workforce preparation both for people seeking training for their first job and for those needing career upgrading or retraining for a new job. The colleges also cooperate with various public agencies in developing new business and with private businesses in training employees for specific functions. Evidence points out that the representation of degrees awarded by the community colleges lead to higher earnings. The colleges are essential participants in the nation's economic development.

Table 1
Top Ten Highest Average Salary by Degree Programs

Program Name	*Average Salary*
1. Dental Hygiene	$29,560
2. Nuclear Medicine Technician	$26,625
3. Nursing	$26,522
4. Physical therapy assistant	$25,699
5. Aviation maintenance	$25,108
6. Surveying	$25,000
7. Respiratory therapy	$24,986
8. Manufacturing process technology	$24,940
9. Industrial technologies	$24,000
10. Interpreter	$24,000

Source: American Association of Community Colleges, Annual Fall Survey, 1994.

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