

Beyond Traditional College: The Role of Community Colleges, Career and Technical Postsecondary Education in Preparing a Globally Competitive Work Force*

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Introduction

The more than 1,200 community colleges in the country educate almost one-half of all undergraduates enrolled in college over the course of a year. They play a crucial role both in preparing a workforce for a modern competitive economy and in advancing the country's commitment to providing widespread access to postsecondary education. Moreover, as a result of changing demographic and economic trends, the effectiveness of the postsecondary workforce development role will increasingly depend on its ability to provide effective education to groups of students who have, in the past, had more limited access to our colleges and universities. Community colleges are well positioned to bring together these sometimes conflicting equity and efficiency functions of higher education. But to do this effectively, community colleges will have to improve some internal practices, especially their work with students who enroll with weak academic skills. The integration of community colleges within the overall education system—the relationship between these colleges and high schools on the one hand and four-year colleges on the other—will also have to be strengthened.

One problem that stands in the way of these improvements is that the image of the traditional college student still dominates thinking about higher education. The traditional student is a recent high school graduate attending a four-

year college or university full-time, living in a dormitory, and earning a bachelor's degree after four uninterrupted years of study. But the traditional student defined in this way accounts for only about one-fifth of all college students and excludes community college students, many of whom are returning to college after some time in the labor force, and the majority of whom attend part-time. Only a tiny percentage of community college students live in a dorm. The continued focus on "traditional" college students diverts attention and resources from community colleges, weakens the data and information available to study and improve the operation of those colleges, and distorts policy discussions and policy-making in higher education.

In this essay, I will describe the characteristics of community college students and discuss the role of the community college in increasing access to higher education by traditionally underserved students. I will describe the increasingly important contribution that they can make to preparing tomorrow's workforce. And I will suggest how those functions can be improved, focusing on practices that can improve the colleges' crucial work with students with weak academic skills and on efforts to strengthen the relationship between high schools, community colleges, and universities. Although many of these reforms will be the responsibility of the states, the federal government can also play a crucial role.

Community College Students

There are over 6 million community college students enrolled in for-credit courses—courses that lead to a state-recognized degree or certificate. In addition, there are at least as many non-credit students in the colleges. The non-credit programs at community colleges are playing an increasingly important workforce development role, yet are poorly understood.

Although there are indeed many 18- and 19-year-old full-time students in community colleges, they account for a much smaller share of students than at four-year institutions. Table 1 demonstrates that community college students tend to be older (which means that they delayed at least part of their college attendance after high school) and they are more likely to have dependents, and to attend part-year. About two-thirds of community college students attend part-time, compared to less than one-third of four-year college students. This is one of the most significant differences between the two types of students. Working with part-time students presents particularly difficult challenges for college faculty, counselors, and administrators. Furthermore, community college students are much more likely to enter college with weak academic skills. More than one-half of entering community college students is judged to be inadequately prepared for college-level work, compared to about one-quarter for four-year college students.

These student characteristics make the educational mission of community colleges more difficult, but other demographic characteristics illustrate the important role that the colleges play in providing opportunity for a broad range of students. Compared to four-year college students, community college students are more likely to be from low-income families (or families with low socio-economic status), first-generation college students, foreign born, and minority, especially Hispanic.

The characteristics and mission of community colleges explain the concentration of these demographic groups among their students.

Community colleges have much lower tuition and are more likely to be located near a student's home, allowing students to save money by living at home. The colleges are more likely to have flexible schedules to accommodate working students or students with other competing responsibilities. The admissions procedures of most community colleges do not reject students on the basis of their academic record, and most are committed to helping students prepare themselves to take college-level courses by offering developmental education. In several states, all developmental education (or remediation) given by public institutions is carried out by the two-year colleges. In addition, most community colleges have extensive English as a Second Language (ESL) programs and many also offer Adult Basic Education (ABE) for older students with very low literacy levels. Thus low tuition levels, proximity, open-door admissions policies, flexible scheduling, and specialized student and academic services all explain why community colleges have in the past been the foundation of our educational system's mission of providing access to college for all students who wish to enroll. For the same reasons, they will also provide the key to further expanding the reach and success of higher education. Such expansion will be an important component of any policy to prepare the country's labor force for the emerging economy.

Community Colleges and Workforce Development

While the community colleges have played a crucial role in providing equity and access, what contribution have they and will they be able to make to the economy through preparation of the workforce? First of all, community college degrees do have value in the labor market. Men who complete an associate degree earn between 15 and 30 percent more than those who have only graduated from high school. The value of an associate degree for women is much higher. Not surprisingly, occupationally oriented associate degrees, such as nursing,

have more value than academic associate degrees (the latter are more appropriate for students who plan to transfer and earn a bachelor's degree). Community colleges play a central role in preparation for many occupations. About 60 percent of the registered nurses have an associate degree in nursing (ADN) and many nurses with bachelor's degrees (BSN), started their nursing education in community colleges. Community colleges train many other technical level workers in the health industry. A majority of "first responders" have community college training and many skilled construction workers acquire the classroom components of their apprenticeships in community colleges. Community colleges have also been very active in providing upgrade training for information technology workers. Most community colleges also maintain close relationships with local employers, organizing customized training for particular employer needs, or working with employers to design occupational programs appropriate for the needs of the local labor market. Adjuncts in occupational programs are often current or recently retired workers from local businesses. Overall, occupational projections suggest that there will be a continued strong demand for "middle level" jobs—those that need some education after high school, but less than a bachelor's degree, or precisely the types of jobs for which a community college education is appropriate.

Although most community college students enter the labor market directly after their community college education, the majority of entering students state that they plan to transfer and complete a bachelor's degree, at least. Thus, community colleges also serve as a pipeline to a four-year college degree, and according to occupational projections, jobs requiring a bachelor's degree will be the fastest growing segment of the occupational structure. Moreover, international data indicate that the percentage of the working age population with a college degree in other countries is growing more rapidly than that percentage is in the U.S.—indeed several countries now surpass the U.S. in

this percentage. If the share of the population with a college degree is going to increase, then college going rates for currently underrepresented groups will have to increase (almost all upper-income whites already attend and complete college.) Several states with an aging population are already trying to improve the state's educational levels by encouraging older workers to attend community college. Hispanics are the fastest growing segment of the population, yet their college attendance and completion rates are significantly below the average for the population as a whole. Thus community colleges will play a central role in any policy aimed at increasing the educational level of currently underrepresented groups—older workers, low-income and first generation students, immigrants, and minorities, especially Hispanics.

These trends demonstrate the important contribution that community colleges can make to the growing workforce needs of the country. They are less expensive (for the student and the state), they are directly preparing workers for important and growing segments of the labor market, and they are already disproportionately educating groups in the population whose educational levels will need to increase if the country is going to be able to generate the skills needed for a modern economy.

Improving the Performance of Community Colleges

Although community colleges are in a position to advance both equity and economic/workforce development goals, their contribution could be further strengthened by improvements in both the internal operation of the colleges and in their relationships with high schools and four-year colleges. While community colleges have done an excellent job of providing access to college, many students who initially enroll never earn a credential. According to National Center for Education Statistics data on a cohort of students completing high school in 1992, just below one-fifth of those entering community college students left before completing 10 credits. Eight years after initial enrollment, about two-fifths of community col-

lege students had completed a certificate or an associate or bachelor's degree, and another 10 percent had transferred to a four-year institution, but had not completed any degree. Thus 50 percent had neither earned a degree or certificate nor transferred. These outcomes vary significantly by race and socioeconomic status (SES). Sixty-two percent of students from the lowest SES quartile, 60 percent of Hispanic students, and almost three-quarters of African American students had not completed a degree or certificate 10 years after initial enrollment.

Many of these students face significant social and economic barriers to their education that thwart their educational goals. But certainly weak academic skills are the most important barriers. Community colleges offer developmental education classes and other academic services to strengthen those skills, but evaluations suggest that these are not very effective. A majority of students who are referred to developmental education in a particular field never complete a college-level course in that field.

To be sure, this is an extremely difficult problem, but if developmental education is to have any chance of succeeding, it will have to be significantly reformed. The traditional approach of conducting classes that coincide with semesters (often taught by adjuncts) is not working. One problem is that there is a surprising lack of good information and research on effective developmental practices. One promising approach involves attempts to accelerate the completion of developmental courses and sequences. These courses delay the start of college, cost students money and time, and are often extremely discouraging. A second approach is referred to as "learning communities." In these, cohorts of students are kept together to develop mutual support, and developmental classes are paired with college-level classes (often in occupational areas). This gives the students a sense of progress and has the additional benefit that it provides a substantive motivation for academic skills taught in the developmental classes. But a great deal more experimentation and research is needed to

establish the efficacy and optimal design of these strategies. This is a national problem and the federal government can play a central role in this program development process.

The transition from developmental education to college-level courses is not the only weak transition. The developmental education problem itself reflects a disconnection between the secondary and postsecondary systems in that many high school graduates are judged not to be prepared for college when they enroll. (It should be noted though that many developmental education students are adults or immigrants—or both—who are returning to school after sometimes several years, so their lack of preparation cannot only be blamed on their high schools.) There are many promising policies, and indeed a national movement, to better connect high school and college through practices such as early warning assessments in high school, dual enrollment, and the alignment of high school graduation with college entrance assessments.

Another problematic transition is the process of transfer from community college to a four-year institution. This is notoriously difficult and students encounter many problems in transferring their credits, even to public four-year colleges, which are presumably part of the same state system. Moreover, a well-functioning transfer system is crucial if the community colleges are going to serve as expanded entry points to the bachelor's degree for students from previously underserved populations. But some states do a much better job at transfer than others (and transfer to a private institution is often much easier than to a public institution), suggesting that overall improvements can be made. Statewide articulation agreements in which four-year colleges agree to accept credits from specific courses, as if they were courses taken at the four-year institution, is an obvious first step. Another promising practice is automatic admission to the four-year college as a junior for students who complete an associate degree. Yet another approach, being discussed in Virginia, is to allow associate degree gradu-

ates to continue their education at public four-year institutions paying the lower community college tuition level. Finally, some community colleges have also begun to offer “applied” bachelor’s degrees when there are no appropriate nearby programs in four-year institutions, and in other cases, four-year colleges have begun to teach classes on community college campuses to ease the transition for community college students.

Since 1917, the federal government has played an important role in occupational education, most recently through the Perkins Career and Technical Education Act of 2006. Under this Act, the Department of Education oversees a portfolio of research and program development. Given the issues raised in this essay, one useful approach would be to promote the coordination of two- and four-year occupational programs. (This can be part of a broader program to promote transfer). Many of the fastest growing community college programs and those with the best job prospects also have associated four-year programs. Nursing is an excellent example. Yet in many cases, these two- and four-year programs are not well coordinated. Students have trouble moving from one to the other. Improving this process can be an important component of a strategy to

improve the use of the community college as an access point to the entire postsecondary system for previously underserved groups of students.

Much of the most useful information about what happens to college students comes from the National Center for Education Statistics’ superb longitudinal data sets. Most of what I have said in this essay is based on those data, which track individual students from high school through college for several years after the high school graduation date. It is particularly significant that the data include information from the student’s transcripts. I have emphasized that problems with the transitions among institutions must be addressed. Unless we can follow students as they change schools, we simply cannot understand what happens to them. This program of data collection should be expanded and research using them should be encouraged. Over the last few years several researchers have begun to use very large state longitudinal data bases to study higher education. These have some advantages and some disadvantages over the federal sample-based data sets. The federal government should also try to coordinate work on these data sets and encourage standardization and collaboration among states.

TABLE 1**Comparison of Characteristics of Students at Community Colleges and Public and Private Four-Year Institutions**

	Students		
	Community College (public 2-Year)	Public 4-Year	Private 4-Year (not-for-profit)
Income less than \$30,000	42.91	33.6	31.9
Age Under 25	47.0	71.0	66.9
Has Dependent Children	32.5	13.2	18.3
Part-Time Enrollment	66.1	30.2	26.7
Part-Year Enrollment	46.9	23.2	27.9

Parents' income for dependent students; student's (and spouse's) income for independent students.
Sources: Integrated Postsecondary Education Data System, 2004, and National Postsecondary Student Aid Study, Data Analysis System, 2004 (National Center for Education Statistics, U.S. Department of Education). Author's calculations.

* This essay is based on research conducted by the Community College Research Center, (<http://ccrc.tc.columbia.edu/>) and in particular from *Defending the Community College Equity Agenda*, Thomas Bailey and Vanessa Morest (eds.), Baltimore: Johns Hopkins University Press, 2006.