

Moving Into Town—and Moving On:

The Community College in the Lives of Traditional-age Students

U.S. Department of Education

Moving Into Town—and Moving On:

The Community College in the Lives of Traditional-age Students

Clifford Adelman
Senior Research Analyst
Policy, Research, and Evaluation Staff
Office of Vocational and Adult Education
U.S. Department of Education

Executive Summary

Moving Into Town—and Moving On: The Community College in the Lives of Traditional-age Students, offers a series of transcript-based portraits of traditional-age community college students. As of 2001, students under the age of 22 constituted 42 percent of all credit-seeking students in community colleges and those under the age of 24 constituted nearly three-fourths of first-time community college students (tables 1 and 2). As the baby-boom echo continues to play out with larger high school graduating classes, and as national and state policies focus even more intensely on the intersection between secondary and postsecondary education, this group is of increasing importance to community colleges. The three portraits offered here are designed to help community college administrators and faculty, along with state higher education officers, in developing responsive indicators of institutional performance. They may also prove useful to researchers in refining and refreshing the questions they ask and the variables they employ when exploring similar terrain.

To provide the portraits, this data essay draws principally on the most recently completed of the grade-cohort longitudinal studies of the National Center for Education Statistics (NCES): the National Education Longitudinal Study of 1988 (NELS:88/2000), which began with a national sample of 25,000 eighth-graders in U.S. schools in 1988 and followed subgroups of this cohort to 2000. The postsecondary transcripts for 8,900 members of this cohort (representing a weighted 2.2 million students) were gathered in 2000, when most cohort members were 26 or 27 years old, and the story lines of *Moving Into Town* are built from the transcript records.

Three other NCES data sets are used to produce both comparative and trend data. Two of these are earlier grade-cohort longitudinal studies that also included college transcript data: the National Longitudinal Study of the High School Class of 1972 (NLS:72), for which postsecondary transcripts were gathered in 1984, when most of its students were 30 or 31 years old; and the High School and Beyond Longitudinal Study of 1980 high school sophomores (High School and Beyond/Sophomore Cohort), for which postsecondary transcripts were gathered in 1993, when most of its students were 29 or 30 years old.

More important is the Beginning Postsecondary Students Longitudinal Study of 1995–96, which followed its sample through 2001. The BPS96/01, as it is called, includes beginning students of all ages, and thus provides critical data justifying the focus of *Moving Into Town* on traditional-age students.

The Informing Analytical Metaphor of the "Town" and the Theme of Academic Process

This inquiry is guided by a strain in the literature of environmental design that approaches human settlements through the eyes and experience of people who use and move through them. It sees the community college as just such a human settlement, and for the convenience of narrative, calls it a "town," the fundamental commerce of which is the delivery of learning in different districts (subject matter) by various means and schedules. Those who move into town to

participate in its fundamental activity, students, establish residence of differing periods of time and intensity. Some are merely tourists; for others, this study uses metaphors of short-term visitors, longer-term tenants, and homeowners, each with a different type of stake in the time and place of the institution. These "settlement behaviors" have analogues in academic processes.

The analysis focuses on student *academic* history, not on social or psychological variables. It tracks what those who moved into town did (timing of move, extent of stay, academic activities and attainments before, during, and after the period of residence), but cannot provide full accounts of attitudes, beliefs, peer groups, mentoring or counseling, or social activities that may have played significant roles in the drama of their young adulthood. Academic history follows the student from high school (curriculum and performance) through postsecondary attendance patterns and attainment, with detailed data on postsecondary course-taking, to connections between postsecondary attainment, course-taking, and labor market experience. In so doing, it confronts the traditional censure of community colleges for "cooling-out" and "diverting" students from what the critics believe are more productive educational environments.

How Should Community College Students Be Described?

In order to provide those responsible for the administration and governance of community colleges with the most accurate information necessary for managing outreach, enrollments of different kinds, scheduling, advising, and other core and supportive services of the town's economy, it is necessary to draw clear boundaries around the student populations.

Age

First, and most important to understanding what community colleges do and how to judge what they do, is to divide their student population by age. The differences between backgrounds, family and job commitments, and consequent academic behavior and progress of traditional-age (18-24) students—particularly those who enter prior to age 21, as most of them do—and those who start out at later points in life are so different that mixing the age populations does considerable disservice to understanding. Representatives of community colleges, for example, cannot answer typical inquiries from feeder high school sophomores and juniors (such as questions about recommended credit loads) on the basis of institutional data that include those of their parents who are community college students.

Institutional Type

Second, the subject population attends public, two-year institutions in which the modal degree awarded is the associate degree. It does not attend other kinds of two-year institutions. Unfortunately, some research does not make this distinction. It is important because the traditional-age populations of community colleges are different from students in other two-year institutions in socioeconomic status, non-English dominant backgrounds, and delay of entry to postsecondary education.

Transfer

Third, in an era when nearly 60 percent of traditional-age undergraduates attend more than one institution, and in increasingly complex enrollment patterns, the meaning of "transfer" must be very taut. With students going back and forth between community colleges and four-year colleges, it is important to mark transfer as a permanent change of venue, a migration that is formally recognized by system rules. A transfer student in this data essay is one who (a) started in a community college, (b) earned more than 10 credits from the community college before (c) enrolling in a 4-year college and (d) earning more than 10 credits from the four-year college. The only time limit set for these changes of venue and credit accumulation is the length of the longitudinal study. In the case of the NELS:88/2000, that means 8.5 years from the modal high school graduation date of June 1992.

Putting these guidelines together, a statement typical of those that might be used to judge the success of community colleges would read:

For 1992 12th-graders whose first postsecondary institution was a community college and who earned more than 10 credits from community colleges, 37 percent transferred to a four-year college by December 2000 (table 3). Of those who transferred, 60 percent had earned a bachelor's degree by December 2000 (not in table).

Education Expectations

Fourth, in trying to ascertain student goals, intentions, expectations, or aspirations, this study does not rely on one question asked in the senior year of high school or the first postsecondary registration line. Instead, a five-value variable built from answers to pairs of questions asked in the 10th grade and again in the 12th grade is employed. The variable describes the *consistency* of the student's vision of his or her ultimate *level* of education. Two years after the modal high school graduation date for the class of 1992, the question was asked again. What do we observe of this sequence for students who started out in community colleges?

- The most intriguing secondary school group consists of those who raised their education expectations to the bachelor's level between grade 10 and grade 12, and of these "belated bachelors," slightly more than half started in community colleges (table 4).
- Thirty-eight percent of those who started in community colleges consistently expected to earn a bachelor's degree when they were in high school, but only 36 percent of this group had applied to a four-year college (table 5);
- Logistic analysis confirms the composite education expectations variable as most significant, along with secondary school academic performance, of the factors accounting for attendance at a four-year institution among those who started in community colleges (table 6).

- Two years after high school graduation, an additional 19 percent of those who started in community colleges raised their education expectations to the bachelor's level, while 7 percent lowered their expectations from the bachelor's level (table 41).
- But ultimately, in terms of association with transfer, associate degree attainment, and bachelor's degree attainment, the "expectations" variable fades in power (tables 32, 33, and 42).

Education expectations are important to monitor, but not in a simplistic fashion. They are by-products as much as antecedents of performance.

Major Topics and Illustrative Observations

Three portraits of community college students are presented, each of which represents a stage of relationship between the student and the "town" of the community college:

- 1) The point of immigration from secondary school, an event;
- 2) Residence history subsequent to immigration;
- 3) Attainment and its consequences—moving on.

Each portrait begins as an outline. The descriptive details are then filled in, and the details suggest the most meaningful dependent variables for testing in terms of frameworks for accountability and potential change in the design of the town's academic processes.

The "Event" Portrait: Starting Out in a Community College

The population of community college students is described at the moment of moving into town. Who are they? And what features of their precollegiate backgrounds help explain why they started out in a community college? Some highlights include:

- # Forty percent of traditional-age students who entered postsecondary education in the 1990s started out in community colleges, a slightly higher percentage than was the case in the 1970s (table 10).
- # For older beginning students, i.e., those starting out at age 24 or more, over 60 percent first enter community colleges (table 7). These older students are more likely to think of themselves as employees than students; over half have children; and they are far less likely to transfer anywhere in their undergraduate histories than traditional-age students (tables 8 and 9).
- # With the exception of Latinos, traditional-age minority students are no more likely to start out in community college than white students. This has been true for 30 years (table 10).
- # Over the 30-year period of the three national grade-cohort longitudinal studies, the community college share of entering traditional age students from the lowest socioeconomic status quintile increased from 44 to 55 percent (table 10).

- # There are considerable regional variations in the proportion of traditional age students who start in community colleges—from 20 percent in the New England census division (down from 30 percent in the 1970s) to 60 percent in the Pacific census division (table 11).
- # While there has been a notable improvement in the mathematics preparation of entering postsecondary students since the 1980s, 44 percent of those who started in community colleges in the 1990s did not reach algebra 2 in high school, compared with 11 percent of those who entered four-year colleges (table 14).
- # The more oriented a 12th-grader was to majoring in an occupational field in college, the more likely the student was to start out in a community college (tables 15 and 16).
- # Neither gender nor race/ethnicity nor second-language background nor first-generation status ends up playing a statistically significant role in explaining who starts out in a community college, but SES (socioeconomic status, a composite variable built from family income, parents' highest level of education, and prestige rating of parents' occupations) does play such a role: the higher the SES quintile, the less likely the student will start in a community college (table 16).

Why are these—and allied—details of the portrait of students whose first institution of attendance was the community college noteworthy?

Foremost because they drive home the importance of community college relations with secondary schools. The extent to which cooperative and outreach programs can move more high school students to the level of algebra 2 and beyond in mathematics would signal a major change in academic momentum of the entering community college population. The extent to which creative concurrent and continuous enrollment programs can reduce the proportion of community college students who currently delay entry to postsecondary education following high school graduation should result in a more sustained involvement in the academic economy of the town. Traditional age students constitute the bulk of the potential transfer population, and if community colleges seek to improve transfer rates, they would be advised to start the paths in feeder secondary schools.

Second because the geo-demography of entering community college students highlights the fact that community college enrollment planning for traditional age students will vary in each of the nine census divisions. And in terms of core demographic factors, until the Latino initial enrollment patterns change, community colleges would be advised to be particularly innovative in outreach programs for this population.

Other Users of the Community College: "Temporary" and Reverse Transfers

The event portrait also accounts for the 26 percent of students from the high school class of 1992 who attended community colleges at any time through December 2000 but started out in other types of institutions (95 percent of them in four-year colleges). There are three major groups of these "temporary transfers," defined by attendance pattern.

1. **"Four-year drop-ins"** constitute 42 percent of those who started elsewhere but also attended community colleges. Eighty-two percent of the drop-ins earned 10 or fewer credits from community colleges (table 19). These are high achievers: 87 percent earned bachelor's degrees, a rate 20 percent higher than others who started in four-year institutions.
2. Twenty-eight percent of those who started elsewhere were 4-year college students engaged in alternating patterns of attendance with community colleges, sometimes called **"swirling."** Fifty-two percent of this group earned 30 or more credits from community colleges (table 19). This is not such a high achieving group: 56 percent earned bachelor's degrees, a rate 10 percent below others who started in four-year institutions (table 19).
3. **True undergraduate reverse transfers** constitute another 25 percent of the universe of those who started elsewhere. This group is characterized by poor academic performance in terms of both grade point average (GPA) and credits earned at the four-year school (table 19); lower rates of continuous enrollment; and higher proportions of course withdrawals and repeats than those who started at community colleges (table 20), and a low rate of completion of associate degrees of 17 percent (not in table).

Undergraduate reverse transfers constituted 7 percent of the members of the class of 1992 who attended community colleges. Since they enter into the regular stream of enrollment management and become residents of the town, they are a group for whom the community college ultimately assumes responsibility. While it is difficult to determine exactly when they will arrive at the community college, it would be helpful if community colleges and "parent" feeder four-year institutions of reverse transfer students established joint monitoring and advising systems for potential reverse transfers at early stages of their college careers.

Finally, the event portrait marks all those who earned 10 or fewer credits at community colleges, and who hence are labeled as "incidental" community college students. Fifty-two percent of incidental students were based wholly in community colleges. Twenty-nine percent of this group carried records of course work that were overwhelmingly remedial, hence earned few credits that counted toward degrees, and another 45 percent of this group simply failed too many courses to accumulate more than 10 credits (table 21).

The reasons for including accounts of both temporary transfers and incidental community college students in the event portrait are as follows:

1. To exclude the temporary transfers from the universe for which the community college bears principal responsibility;
2. To provide a prism for evaluating the academic history and performance of those who move into town for a short period or periods of time; and
3. To remind the reader that the students who start in a community college do not represent the full range of students who attend community colleges during their undergraduate histories. The findings reflect the dynamics of multi-institutional attendance that became a prominent feature of undergraduate attendance patterns in the 1990s.

The "Residence History" Portrait

The issues raised regarding temporary transfers and incidental users of the community college facilitate consideration of long-term residents, those for whom the community college played a dominant role in undergraduate careers. These students started in and earned 30 or more credits from community colleges, and constitute slightly more than half of the traditional-age students who set out in community colleges. They provide a substantial history, one that enables analysts to use course-taking behaviors along with long-term attendance patterns and attainment to arrive at indicators of community-college system success. These students tell us what the community college really does, and provide a stable reference point for programming, course offerings, staffing and facility utilization.

The first group are called "Homeowners." Not only do they earn more than 30 credits from community colleges, but 60 percent or more of all their credits came from community colleges. They have the deepest stake in the town. The second group, called "Tenants," differs from the first in that less than 60 percent of their credits came from community colleges. A third group of residents consists of those who started in and earned between 1-29 credits from community colleges. These are called "Visitors." The labels reflect relative commitment to residence in town.

- # The Homeowners constituted 37 percent of those who started in and earned any credits from community colleges; Tenants constituted 18 percent; and Visitors accounted for 45 percent (table 23).
- # The Tenant group presented stronger academic momentum coming forward from high school (including over a third who reached mathematics beyond the level of algebra 2), and had higher and more consistent education expectations than either Homeowners or Visitors (table 25). Ninety-two percent of the Tenants entered the community college directly from secondary school; 64 percent earned more than 20 credits in their first calendar year; and 43 percent completed course work in college-level mathematics in their first year. All these percentages are significantly higher than those for the other two groups of residents (tables 26 and 27). It is not surprising that nearly all (96 percent) of the Tenants transferred, and 77 percent ultimately earned bachelor's degrees (table 31).
- # In terms of course-taking during the first calendar year of attendance, the records of Tenants were equivalent to those of students who began in four-year colleges with the exception of the type of college-level mathematics studied (table 27).
- # The course-taking activities of the Homeowners group in the first year comes up "light" in both the sciences and college-level mathematics, thus reducing the odds of completing associate degrees in technical fields (table 27).
- # For 37 percent of the Homeowners group, the associate degree was the highest degree earned—versus 4 percent of the Tenant group (tables 30 and 31). Sixty-six percent of those associate degrees were in occupationally oriented fields (not in tables).

Two Markers of Attainment

Two markers of attainment emerge for traditional-age students who start in community colleges and earn more than 30 credits there: either (a) transfer or (b) earning a terminal associate degree from a community college. Both these outcomes are sector performance indicators responsive to core missions of community colleges, but the community college seems to do better with the first than the second. By emphasizing the terminal associate degree as outcome, and seeking to identify academic behaviors that both contribute to and undercut that outcome, some guidance for improving the credentialing function of community colleges emerges.

Two logistic models address each of the sector performance indicators.

- # Taking the entire population of community college entrants into account, the logistic model indicates that the factors of academic history that facilitate **transfer** to a four-year college are credits in college-level mathematics in the first year, earning credits during summer terms (a proxy for intense persistence), continuous enrollment, and avoidance of no-penalty course withdrawals and repeats (table 32). No demographic factors play a role.
- # Taking the entire population of community college entrants into account but excluding those who transferred to four-year colleges, the second logistic model addresses factors of academic history that are associated with completing a **terminal associate degree at the community college**. Three of those factors are the same as in the case of transfer: continuous enrollment, college-level math credits, and avoidance of no penalty withdrawals and repeats. But two other ingredients emerge: holding a campus job during the first two years of enrollment and earning a higher ratio of credits in occupational fields to all credits earned (table 33). One of the problems with the occupational credits ratio, though, is that there is a tipping point: when the ratio rises above 65 percent, degree completion rates fall (table C-12). Balancing the occupational degree programs of the Homeowners group with more arts and sciences course work is thus an appropriate interventionary advisement to improve associate degree completion rates.

The Community College "Graduates" Portrait

The third portrait of traditional-age community college students is focused on the movement from the educational institution we have called the town into the labor market. Its defining element is the highest level of credentials *earned from a community college*, and these are divided into occupationally oriented and academic categories. Also included in the analysis are students who did not earn credentials, rather sufficient credits in specific fields (including credits in the General Studies distribution) so that their community college records could be classified as occupational or academic. The students from the High School Class of 1992 were too young at the age of 25 or 26 at the point in their careers at which labor market status was recorded to use earnings as an outcome. Instead, the analysis examines (1) continuity of employment, and (2) congruence between course of study and occupation as potential markers of success under the workforce development mission of community colleges.

- # Excluding the core academic associate degrees in general arts and sciences, students who earned associate degrees in protective services (principally criminal justice) and business were more likely to transfer than those with associate degrees in technology and health occupations (table 36). Ultimately, when one seeks to connect educational histories to labor market histories, the content of credentials is a critical component of the assessment.
- # And credentials are more important than earned credit thresholds in labor market analysis. Credentials appear to make a difference in continuity of employment. Seventy-nine percent of those who earned occupational associate degrees, and 71 percent of those who earned academic associate degrees were employed full-time for at least two years in the 1997-99 period compared to 58 percent of those who earned more than 60 credits but no degree (table 37).
- # When "congruence" between course of study and occupation in early labor market history is examined, 61 percent of those who earned occupational associate degrees from community colleges were in jobs related to their major fields. No other category of community college "graduate" comes close to that percentage (table 38). This relationship is yet another argument for improving the associate degree completion rate in occupationally oriented fields, hence contributing to workforce development.
- # When the distribution of occupations for those who earned occupational associate degrees is set forth, it reveals the strong suits of the community college curricula in protective services, business support, computer-related, and medical licensure and support occupations (table 39). But one out of five of the occupational associate degree recipients was employed as a clerical worker at age 25 or 26 (table 39). Making sure that these students have stronger options for entering business support occupations when they move on from their residence in the community college town requires monitoring of their course portfolio so that it includes something that promotes the student's marketability, for example, coursework in accounting information systems or public health.

If research on labor market outcomes uses only variables such as years of schooling or the fact of attending a community college, and glosses over not only credentials, but more importantly, the content of students' course of study, it does not advance the evaluation of institutional mission. As an example of a more profitable analytic framework by which community colleges can judge how well they have prepared students for the labor market, the essay selects community college students from the High School Class of 1992 who were working in computer-related and technical occupations in 1999, and extracts from their transcript records the 35 courses that accounted for more than three-quarters of their credits (table 40). These students' records show college level mathematics, two supportive clusters of course work in graphics or drafting and computer science or computer programming, and nearly 20 percent of credits earned in writing and communications skills. The community college had clearly provided these students with what they needed to assume roles as midlevel technicians.

This is the type of analysis necessary for community colleges to build empirical profiles of curricula likely to be congruent with current knowledge and skill practice in the labor market,

and from those profiles, rearrange the pathways (curricular sequences), signs (advising), and transport (course scheduling) of the town to produce optimal results. It also argues once again for adjustments to the larger academic transport system that begins in secondary school.

Revisiting the 'Cooling Out'/Diversion Critique of Community Colleges

Recognizing that the populations attending community colleges have changed considerably since the 1960s and 1970s, when major critiques of the institutions as "diverting" promising students from four-year colleges and "cooling out" their aspirations were written, the essay underscores and elaborates three major factors of community college life that alter the conditions under which diversion can be judged:

- # The community college does not serve secondary school students from the highest quintile of academic preparation, and policy in many states has driven more remediation into the town of the community college. Over 60 percent of traditional-age students entering community colleges from both the High School Class of 1982 and High School Class of 1992 wound up in at least one remedial course (table C-9).
- # Students who start out in community colleges are not those with uniformly high education aspirations either, but, contrary to "cooling out" analyses, the experience of entering community college students over a two-year period has, on balance, a positive effect. As noted above, 19 percent of the 12th-graders from the High School Class of 1992 who first entered community colleges raised their education expectations to the bachelor's-degree level by the spring of 1994 compared with 7 percent who lowered their expectations from that level. There were no differences by race/ethnicity in this regard (table 41).
- # The diversion we *do* witness among community college students from the High School Class of 1992 occurred *within* the history of students who were occupationally oriented. That diversion involved first-year course-taking, and missed opportunities for passing through "gateways" in English composition and college-level mathematics (table 27). If research ignores discrete curricular choices and their sequences, it may never identify the reasons that students fall away from the path to credentials.

Revisiting the cooling out and diversion critique requires a logistic account of bachelor's degree attainment of traditional-age students who start in community colleges. The multivariate analysis underscores variables noted previously (positive effects of earning summer term credits and number of credits earned in college mathematics, and the negative force of no-penalty withdrawal and repeat courses). But it also brings forward, although in subordinate and statistically weaker positions, the number of credits earned from community colleges themselves, and the critical momentum line of earning 20 or more credits in the first calendar year of enrollment (table 42).

Summary

Across the portraits and the various aspects of student academic history examined in this study, it is clear that there are six distinct traditional-age populations served by the community college:

1. A persistent group oriented toward traditional academic and occupational fields that establishes a path of attainment involving transfer and earning a bachelor's degree;
2. An equally persistent group oriented toward the intermediate occupational credentials awarded by community colleges that also establishes a path of attainment;
3. A group with significantly weaker secondary school preparation that struggles to acquire a modicum of credits in the community college, then stops;
4. A group that basically withdraws on entry to the community college, earning few if any credits;
5. Temporary visitors who are based in other types of institutions, principally four-year; and
6. A small population of undergraduate reverse transfers who evidence declining momentum toward credentials at any level.

In terms of what happens to each of these groups, think of a bookkeeper's ledger, with line items. In its accountability metrics, the community college is wholly responsible for the first three of these groups, and on a consolidated line. Inclusion of the fourth group on that line is problematic, as these students do not attain even the status of tourists in the town. The temporary visitors deserve a separate page in the ledger, since the community college should mark the course work provided for them (table C-3). Reverse transfers are the most difficult of these groups because they arrive in the town of the community college at unpredictable moments and with experiences of varying length and quality in the four-year sector.

These populations are derived from their histories, and if we think of them starting out as settlers in or immigrants to a town or city that already possesses form and function, what we observe is a range of accommodations to the environment. We judge accommodations successful when they result in attainments that allow individuals to move on to other education environments or to find harmony between education and economic activity. When attainment rates fall short, the elements of student academic history that play notable roles are highlighted for special attention. No, they don't play equally notable roles in all community colleges, but they provide a very practical map for those in a position to study, redesign and adjust local environments.

