

An Integral Part: Placing the Two-Year College in the Higher Education Market

Over the past half-century, two-year institutions have come to play an increasingly important role in American higher education, serving a number of purposes for a range of students. Convenient and generally low-cost, these colleges provide access for those whose preparation for college may be inadequate; for adult or independent students who are returning to school; and, increasingly, for those who hold bachelor's degrees but want to obtain additional skills and training. The two-year college is, at once, a steppingstone toward a bachelor's degree and also a final stop for training and vocational education.

Because of their traditionally unique role within the enterprise, two-year institutions have always been considered in some way distinct from their four-year counterparts. The possibility that two-year campuses competed with convenience-oriented colleges and universities rarely emerged as a concern. Indeed, when the University of Pennsylvania's Institute for Research on Higher Education (IRHE) first developed its taxonomy of higher education (*Change, The Landscape*, November/December 1997), it also assumed that the distinctions among two-year institutions were driven by market demands different from those affecting four-year campuses. Accordingly, it developed a separate model for each type of campus.

Yet of the more than 15 million students enrolled in some form of postsecondary education, just under 6 million—or approximately two out of five students—attend two-year colleges. Because of their magnitude, as well as the importance of their role in higher education, many have begun to rethink the two-year campus's role in the market. This issue of *The Landscape* informs that thinking, reporting on an analysis that proves the two-year market is not so distinct from its four-year counterpart.

A Second Look

In 2001, IRHE revised its model for the four-year taxonomy, successfully and rigorously applying a pricing model to explain the structure of the market for four-year institutions



(*Change, The Landscape*, March/April 2001). The model found that calculated price—tuition and fees plus government appropriations and endowment income, less institutional financial aid, per full-time-equivalent (FTE) student—was the primary factor driving the organization of the four-year market. In the same year, Alexander McCormick, the editor of an upcoming volume in the Jossey-Bass series *New Directions for Community Colleges* and senior scholar at The Carnegie Foundation for the Advancement of Teaching, invited researchers, Susan Shaman and Robert Zemsky to write a chapter for a special volume of the journal. The Penn research team viewed the invitation as the perfect opportunity to rethink its model for the two-year sector.

The team members set out to test whether the pricing model used in the 2001 redux of the four-year market also applied to two-year institutions. They were faced with a glaring problem: The model using calculated price worked least well in the *User-Friendly/Convenience* segment of the four-year market, and two-year colleges are, of course, the quintessential “user-friendly” institutions.

The most successful pricing model for community colleges used net price—a close cousin of the calculated price-dependent variable used in the baccalaureate model. Net price (defined as tuition and fees minus financial aid per

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Chart 1.
Cohort Graduation Rate by Two-Year Market Segment

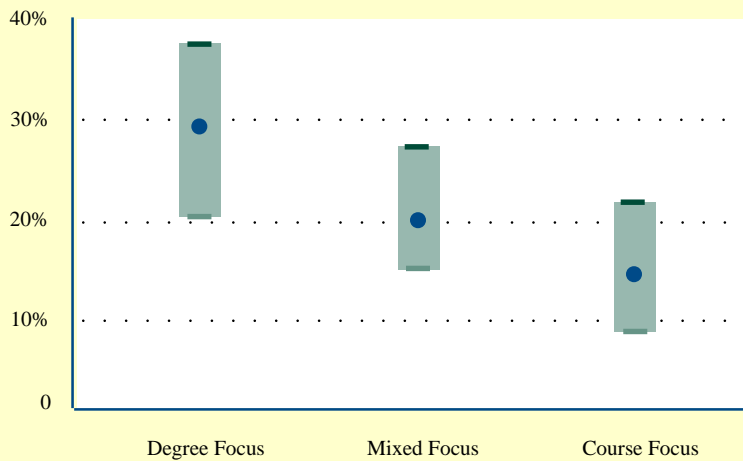
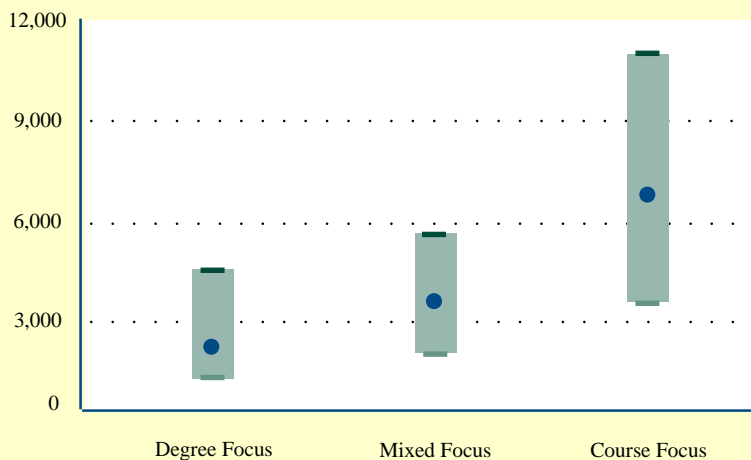


Chart 2.
Head-count Enrollment of Two-Year Colleges by Market Segment



FTE student) produced a model that not only worked, but worked well. Controlling for both the magnitude of the government appropriation and the type of government support (local community versus state government appropriations), the resulting model provided a sound theoretical basis for deriving the two-year college taxonomy. The analysis was confined to the public sector, which educates 95 percent of all two-year students and for which the most reliable data were available.

The Missing Link

As with the earlier model, the two-year sector was divided into three market segments, based on degree production—the proportion of enrolled students who obtain an associate’s degree or a certificate in any given year. Regarding their principal missions, institutions were classified as having either a *Degree Focus*, a *Course Focus*, or a *Mixed Focus*.

Institutions with a *Degree Focus* generally are in the business of producing certified and credentialed individuals. A large proportion of their students obtain associate’s degrees and certificates. Institutions with a *Course Focus* generally allow students to “test the waters” or obtain spot training. Many students take courses to “try out” higher education or upgrade their skills, but are not pursuing a formal program. *Mixed Focus* institutions fall in between the two other segments, producing more degrees than their *Course Focus* cousins, but fewer than the *Degree Focus* set.

The three market segments are decidedly distinct from one another, and institutional characteristics generally align as they did in the four-year taxonomy. Because degree production was the characteristic used to create the market boundaries, it follows that cohort graduation rate, a related, but not identical measure, would line up according to segment (Chart 1). Cohort graduation rate captures the percentage of an identifiable entering cohort who achieve their degrees and certificates within a fixed period of time, usually defined as one and a half times as long as is prescribed for completion given full-time, continuous study. As Chart 1 shows, at 30 percent, the median cohort graduation rate at *Degree Focus* colleges is fully twice the size of the median cohort graduation rate at *Course Focus* colleges.

Other descriptive characteristics— institutional size, location, and the percentage of minority students—also track across the two-year market

segments. Using student “head count” as the enrollment measure, Chart 2 depicts the relative size of the student bodies within each segment. Not surprisingly, the median *Course Focus* institution serves a dramatically larger number of students (6,364) than the median campus in the *Degree* or *Mixed Focus* categories (2,021 and 3,336, respectively). Indeed, the median number of students on *Course Focus* campuses, which by definition serve students enrolling sporadically or one course at a time, is more than triple that of *Degree Focus* institutions. Understandably, a greater proportion of faculty and students at *Degree Focus* institutions are full-time.

In *Course Focus* institutions, a substantially higher percentage of enrolled students are underrepresented minorities (22 percent) than those in the *Degree* or *Mixed Focus* categories (12 and 13 percent, respectively). Indeed, the percentage of minority students attending classes at campuses that belong to the *Course Focus* segment is almost double the rate of other segments.

Finally, *Course Focus* institutions are more likely to be found in urban settings, defined as the central metropolitan areas within large or mid-sized cities. As shown in Chart 3, only 24 percent of *Degree Focus* institutions are located in urban centers, while 43 percent of *Course Focus* institutions serve these metropolitan areas.

In both the two- and four-year taxonomies, institutional resources are distributed along segment lines; within the two-year sector, the *Degree Focus* segment garners the largest share, as measured by the prices institutions charge and the revenue they receive through government appropriations. While net price served as the key in producing the model for the new two-year taxonomy, calculated price remained as a variable of keen interest, because it encompasses the largest revenue sources for community colleges: tuition plus government funding. This variable also serves as

Chart 3.
Percentage of Community Colleges Located in Urban Settings, by Market Segment

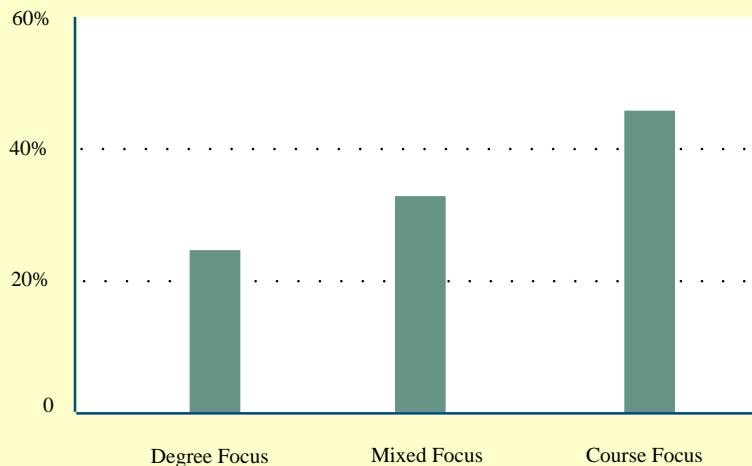
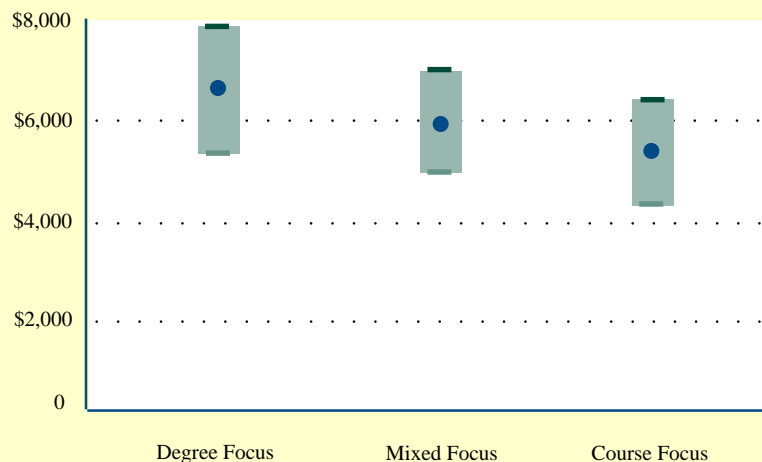


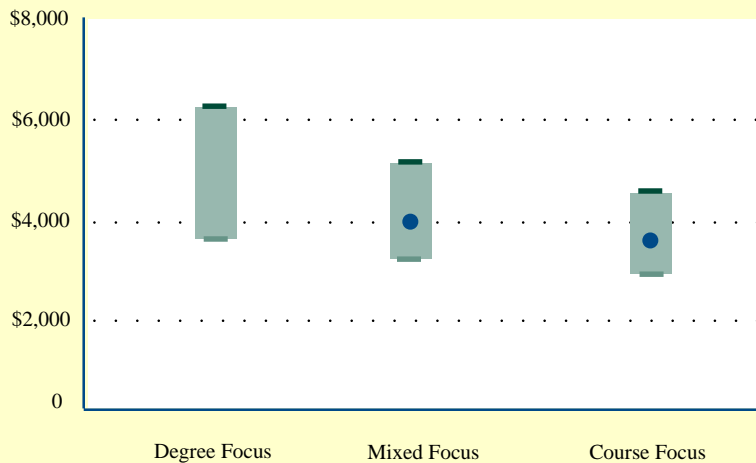
Chart 4.
Calculated Price per Full-Time-Equivalent Student



the organizing principle in the four-year model—and helps to indicate how the two- and four-year sectors form a seamless continuum across the higher education market.

As indicated in Chart 4, median calculated price is substantially higher for *Degree Focus* institutions (\$6,682) than for *Mixed Focus* (\$5,915) and *Course Focus* colleges (\$5,328), providing additional evidence that the segment model is indeed a market model.

Chart 5.
Government Appropriation per FTE Enrollment by Market Segment



The key components of calculated price—net price per FTE and government appropriation per FTE—are also ordered by segment. For example, median government support declines noticeably from \$4,878 at *Degree Focus* campuses to \$4,022 at *Mixed Focus* and \$3,607 at *Course Focus* colleges (Chart 5). In addition, control tends to vary according to segment. *Degree Focus* campuses receive a larger proportion of their revenue from state sources, while *Mixed* and *Course Focus* colleges rely more heavily on the local tax base for their support.

Perspective: A Seamless Continuum

The bottom line is that the taxonomy derived for two-year public institutions produces three distinct segments that are distinguished on the basis of price. Determined by degree production, the two-year sector represents a continuation of the taxonomy for four-year institutions, with campuses in the four-year *User-Friendly/Convenience* market competing with *Degree Focus* campuses in the two-year segment. The market for higher education has evolved into a single entity that now encompasses all institutions—the for-profit sector

(*Change, The Landscape*, November/December 2001), two-year local colleges, and a wide variety of baccalaureate colleges and universities.

Beyond empirical analysis, there is other evidence that indicates the continuity in the higher education market, specifically how students move between the *User-Friendly/Convenience* four-year market and two-year certificate and degree programs.

Many two-year institutions are located in major metropolitan areas, where convenient transportation networks facilitate student enrollment at different institutions—even at the same time—and increase competition between four- and two-year colleges in the same regions. The emergence of distance learning now allows students also to move beyond their local communities and to enroll at institutions outside of their convenient commuting range.

Finally, many four-year institutions, from small sectarian women’s colleges to large universities, offer programs in continuing education that lead to associate’s degrees and other credentials. These programs compete directly with those offered at nearby community colleges. Where such a student chooses to enroll will be determined by a number of personal and career considerations—once again reinforcing the power of the market in shaping the contours of higher education. □

A forthcoming edition of *New Directions for Community Colleges* will feature the full report on the two-year market model. Published by Jossey-Bass, the chapter by Susan Shaman and Robert Zemsky of IRHE will be published along with the taxonomies of four other researchers. Visit www.josseybass.com for ordering information.