The Bahr Study of Student Types in the Community Colleges

Policymakers and researchers concerned with higher education have wanted to know if students in the community colleges actually represent distinct types of students. A statistical analysis by Bahr made the following points, among others on this topic:

1. “…[Bahr] executed a series of k-means clusters analyses, using thirteen variables that address various aspects of the course-taking and enrollment behaviors of a population of 165,921 first-time college students in 105 community colleges. Students’ behaviors were observed for 7 years, from Fall 2001 through Summer 2008. Six distinct clusters of students were identified, including: transfer, vocational, drop-in, noncredit, experimental, and exploratory…” [p. 741]

2. “Among the six clusters that emerged from this analysis, one appears to be oriented toward transfer in terms of course-taking and enrollment behaviors. Compared to students in other clusters, students in the transfer cluster attempted the most units overall and the most units of transferrable math, English, science, and ‘other’ coursework, on average…13% of the first-time student cohort…” [p. 731]

3. “…one group of students emerged that may be labeled vocational in orientation (3% of the cohort)…the highest mean number of occupational units of any cluster, as well as the second highest total number of units…”

4. “…the drop-in cluster (32% of the cohort)…attempted very few units, and these units typically were non-transferable occupational or ‘other’ transferrable units….students in this cluster overwhelmingly were successful in their coursework…” [p. 731-732]

5. “The label noncredit (3% of the cohort) best describes the fourth cluster identified…On average, students in this cluster enrolled in far more noncredit courses,…than did the students of any other cluster…attempted a few for-credit units…exhibited the second greatest mean persistence of any cluster…” [p. 732]

6. “The final two clusters might be labeled broadly as ‘investigative’ in orientation. However, they are sufficiently different from one another to warrant separate treatment. The first of these—the experimental cluster—is the second largest cluster of students at 30% of the first-time student cohort…characterized by a very short duration of enrollment, a comparatively low mean unit load, and the lowest course success rate of any cluster…Broadly speaking, these students appear to have ‘tested the waters’ of college and found those waters less than agreeable…” [pp. 732-733]

7. “The second ‘investigative’ cluster (19% of the cohort) is composed of students who appear to have made somewhat more of ‘a go of it’ than did the experimental students. They enrolled in a mix of transferrable and non-transferrable coursework…Although students in this cluster exhibited the second lowest course success rate (67%) of any cluster, their average rate of success was considerably better than that of the experimental cluster (23%). Given the broad, but seemingly undirected, range of coursework undertaken by these students, they are labeled here as exploratory in orientation…this exploratory label is somewhat more speculative than the labels of other clusters because the exploratory cluster appears in some respects to be an abridged version of the transfer cluster…” [p. 733]

8. “This study represents a significant step forward in ongoing efforts to develop a typology of community college students…because it offers both a tested conceptual map, based on students’ actual behaviors, of the varied segments of the population of first-time students and a means of operationalizing those segments…” [p. 742]
9. “…it is clear that a sizeable percentage of the first-time student cohort is composed of clusters that have short durations of enrollment…Nearly 32% of students were categorized as drop-in, while 30% were categorized as experimental. Both of these clusters exhibit a mean duration of enrollment of two semesters (in 1 year), and both attempted very few units of coursework and very few noncredit courses…” [p. 742]

10. “…this analysis is instructive with respect to ongoing debates regarding the reliability and validity of students’ self-reported academic goal…Self-reported goal appears to be more informative for some clusters of students than it is for others. For example, 62% of students in the transfer cluster reported an initial goal of transfer, and 55% of students in this cluster ultimately transferred. Thus, in the case of the transfer cluster and the drop-in cluster…, self-reported goal appears generally to align both with cluster assignment and with outcome. On the other hand, nearly two-thirds (62%) of students in the exploratory cluster reported a goal of transfer or a terminal credential, but only 31% transferred or completed a credential. For the experimental cluster, these figures are 47% and 10%, respectively. Accordingly, in the case of these two clusters, the alignment of self-reported goal and outcome is dubious at best. Hence, it does not appear that self-reported goal is a trustworthy measure of student intent in the absence of information about students’ actual behaviors…” [p. 744]

This study will help the parties that need to know how community college students can differ in terms of their course enrollment patterns. This knowledge may help policymaking for counseling/student services, curriculum planning, institutional evaluation, program evaluation, budgeting, and needs assessment.

For interested readers, Peter Riley Bahr, Ph.D. (Center for the Study of Higher and Postsecondary Education, University of Michigan) provides extensive technical details, a literature review, and other material in his article (“The Bird’s Eye View of Community Colleges: A Behavioral Typology of First-Time Students Based on Cluster Analytic Classification”) in the journal Research in Higher Education (December 2010, Vol. 51, pp. 724-749). People with some background in social research and community colleges will find the article very accessible.

Additional abstracts of research can be viewed at our website at: http://www.cccco.edu/SystemOffice/Divisions/TechResearchInfo/ResearchandPlanning/AbstractsofResearch/tabid/298/Default.aspx

[Abstract by Willard Hom, Director of Research, Analysis & Accountability, Chancellor's Office, California Community Colleges, 10/31/2011]