ISSN 1526-2049

COMMUNITY COLLEGE RESEARCH CENTER

CCRC BRIEF

NUMBER 34 MARCH 2007

The Value of Student Right-to-Know Data in Assessing Community College Performance

Thomas Bailey, Peter M. Crosta, and Davis Jenkins

Traditionally, community colleges were judged on their number of enrollments and their ability to provide postsecondary education to a wide variety of students. Recently, however, state and federal policymakers have become increasingly concerned with student outcomes, and some states have even begun to consider linking the funding of community colleges to their performance on student outcome measures.

In 1990, Congress passed the Student Right-to-Know (SRK) and Campus Security Act. It requires that all colleges report graduation rates to the National Center for Education Statistics (NCES) in order for their students to receive federal financial aid. These Student Right-to-Know graduation rates are part of the Integrated Postsecondary Education Data System (IPEDS). The SRK rates are the only performance measures available for virtually every undergraduate institution in the nation, including community colleges, but critics assert that the rates understate the success of community colleges in several important ways.

This Brief summarizes a study by the Community College Research Center (CCRC) that investigated the nature and validity of the SRK rates for community colleges by analyzing data on students attending Florida's 28 community colleges. It sought to determine whether the rates provide useful information that can guide educators and policymakers working to improve the performance of community colleges, or whether the rates contain biases serious enough to negate their usefulness. This Brief also suggests how the process of determining the rates might be improved.

The Student Right-To-Know Graduation Rate

The SRK rate is based on what is referred to as the Graduation Rate Survey (GRS) cohort, which comprises all first-time (in college), full-time, degree-seeking students who enroll at a given time, such as the fall semester of a given academic year. These students are followed for one and one-half times the period of time normally required to complete the degree or certificate program in which each is enrolled. For purposes of calculating the rate, once students are included in the cohort they remain in it even if they switch to part-time enrollment or are no longer enrolled. After three years the graduation rate is calculated by simply dividing the number of completers (those who earned a credential at their starting institution within the respective tracking periods) by the total number of students in the cohort. NCES also requires colleges to report a transfer rate for students who transfer to another college without completing a credential at their initial college.

The SRK graduation and transfer rates are the only easily available and reasonably consistent outcome measures for all community colleges, and certainly the only college-level data based on a longitudinal measure of student achievement. While other national datasets, such as the Beginning Postsecondary Student Survey (BPS) and the National Education Longitudinal Study (NELS), do track student outcomes, they use samples that are not large enough to allow measurement of outcomes for individual colleges.

Critiques of the SRK Community College Graduation Rate

Despite the broad coverage and easy availability of the SRK graduation rate, it is controversial as a measure of college performance, especially for community colleges. Major criticisms of the measure are reviewed here.

The definition of the GRS cohort may not be consistent across institutions and states. All of the major elements that define the NCES GRS cohort — the time period of college attendance and the students' status as first time, full time, and degree seeking — are subject to some degree of interpretation by the reporting institutions or states. Thus the composition of the cohort can change depending on when the cohort is established, how entities define first-time students, the exact meaning of a credit or contact hour, what programs and students are considered degree seeking, and whether the college or the student determines degree-seeking status. Some states, such as Florida, decide the parameters used to define the GRS cohort for all its colleges, thereby facilitating a comparison of the rates within the state, but comparisons of individual colleges across states must be undertaken with an awareness of potential definitional differences.

Students who transfer and earn credentials at institutions other than the one that they first entered are counted as non-completers; therefore, the rate understates the success of the first institution in

transferring its students and helping to put them on a path to graduation. Students increasingly attend more than one college during their undergraduate education and very often transfer prior to completing a program at their initial institution. Our calculations based on findings from BPS:96/01 (U.S. Department of Education, 2003) indicate, for example, that up to 40 percent of first-time community college students attended more than one institution during the six-year period in which they were tracked. Yet a student who transfers and goes on to graduate at a new college is counted as a non-completer under the SRK definition.

Given the high rate of student mobility, the argument follows that SRK institutional graduation rates, measured at a single institution, must under-report actual rates of student completion. To determine if that is so, we compared the SRK rate to the public two-year college graduation rate that we calculated using data from BPS:96/01, which tracked individual students across multiple institutions. Overall, according to our calculations using SRK data for the cohort starting in fall 1999, 22.3 percent of first-time, full-time community college students in a degree program attained a postsecondary credential in their starting institutions within three years. In contrast, we found that 18.1 percentage of such students in the BPS:96/01 sample earned a credential (certificate or associate degree) from their institution of first enrollment within three years. Therefore, contrary to what might be expected, the SRK rates seem to slightly overstate the actual average institutional graduation rate for community colleges nationally. This result should not, perhaps, be too surprising, however, because while many students presumably transfer to complete a bachelor's degree, the three-year tracking period is not long enough to actually earn such a degree.

Regarding the SRK transfer measure, there are serious problems with it because colleges often do not know whether their students leave in order to transfer to another college. We compared the SRK transfer rate to an equivalent rate calculated from BPS:96/01. According to the SRK data, 15.9 percent of the first-time, full-time GRS cohort transferred within 150 percent of the expected graduation time without earning a certificate or degree. Of the same BPS:96/01 cohort used in a calculation of an SRK-like graduation rate, 31.3 percent of the students transferred within three years without earning a degree. Limiting the calculation to transfers to two- and four-year institutions dropped the rate to 29.4 percent. Thus, the actual three-year transfer rate for full-time students who did not earn an associate degree is about twice the rate reported in the SRK data. Consequently, the SRK transfer rate appears to substantially undercount total transfers and is therefore too inaccurate to provide any meaningful measure of student transfer, an important function of community colleges.

The three-year time frame is too short to fairly measure community college student outcomes since many students take longer to graduate. The large number of community college students who enroll in remediation must spend a significant amount of time in courses that do not contribute credits toward their degree. According to our calculations using the BPS:96/01 data, the institutional graduation rate (graduation from the institution of initial enrollment) would rise almost eight percentage points if a six-year graduation rate were used. Yet an increased time period would also increase the difference between the institutional graduation rate and the individual graduation rate (graduation from any institution). We found from BPS:96/01 that the three-year institutional rate is 18.1 percent and the individual graduation rate is 19.7 percent, but the six-year institutional graduation rate is 25.8 percent while the six-year individual graduation rate is 39.5 percent.

Therefore, while using a three-year graduation rate certainly gives a more negative picture of community college graduation rates (since many students go on to graduate in subsequent years), it does minimize the bias created by attendance at more than one institution. The use of institutional graduation rates and the short time period do tend to make community college institutional graduation rates look low, but lengthening the time period would increase the extent to which the institutional rate underestimates the individual rates, making the institutional rates that much less reflective of actual student outcomes.

The rate does not capture the experience of most community college students because it is based on first-time, full-time degree program students. Since the majority of community college students attend part time for at least some of their enrollment, the underlying basis of the rate does not reflect the experience of the typical community college student (Dellow & Romano, 2002). According to BPS:96/01, 58 percent of the students starting in community colleges in fall 1995 met the SRK criteria (full-time attendance in a degree program). A more accurate figure comes from the National Postsecondary Student Aid Study 1999-2000, which is a cross-sectional survey of all students in postsecondary education enrolled during the academic year: only 22 percent of all students enrolled in credit-bearing courses in a community college during the 1999-2000 school year enrolled full time and for the full academic year. Thus the GRS cohort used in the SRK rate excludes a majority of community college students.

Community colleges enroll relatively large numbers of students who face economic, social, or academic barriers to college success that are not accounted for in raw graduation rates. Community college students face greater challenges when compared with students in four-year colleges. Community colleges also vary in the level of the personal barriers faced by their students. To be fair, efforts to compare the performance of different colleges need to take into account the characteristics of the students each serves (Astin, 1997). In other research (Bailey et al., 2006), CCRC found that larger colleges and colleges with a larger minority and part-time share of the student body tended to have lower graduation rates. Therefore, student body characteristics do systematically influence the SRK graduation rates, thus potentially leading to biased conclusions. Researchers can improve the accuracy of the SRK rates by using IPEDS data, which is easily available from NCES, to adjust rates for student and institutional characteristics.

Student Characteristics and College Rankings Using Different Cohorts and Outcome Measures

To conduct our analysis of the validity SRK graduation rates, we used unit record data obtained from the Florida Department of Education on a sample of about 50,000 students who entered one of the state's 28 community colleges for the first time in fall 1999. Information such as age, race, sex, and entrance exam scores, as well as college enrollment and outcome data over a period of 14 trimesters (four years plus two trimesters), were included. Students in the sample were flagged if they were a member of the federal Graduation Rate Survey (GRS) cohort used to produce the SRK graduation rates.

We compared the demographic characteristics and course-taking patterns of students in the GRS cohort with those of two less-restrictive community college student cohorts — one including all first-time students considered by their colleges to be enrolled in a degree program and the other including all first-time students — to address the criticism that the GRS cohort does not reflect the experience of the typical community college student. SRK rate outcomes were then compared to a more comprehensive set of outcomes including retention and transfer, and the time period was extended from three years to nearly five years. Next, we compared the rankings of colleges based on these different measures to assess the quality of the SRK information on relative college performance. We also compared the rankings based on the SRK rates to rankings based on rates adjusted for the effect of student characteristics, thus exploring the criticism that the SRK rates do not account for differences among community colleges in the characteristics of their students.

Cohort characteristics. Of the three cohorts, on average, GRS students were younger, more likely to be White, to receive financial aid, and to have higher tests scores. GRS students also carried more credits and were less likely to enroll in developmental education.

Student outcomes for different cohorts. A much larger percentage of the GRS cohort completed a degree or certificate regardless of the time allowed for an outcome, and GRS students were more likely to transfer to the Florida State University System. They also completed more non-remedial credits than did students in the other cohorts at each measurement time, and were more likely to persist to the next spring and the next fall. Further, extending the time allowed beyond three years to measure levels of achievement or success increased those measures (although the rate of increase slowed after about the first three years of enrollment). The GRS cohort scored higher on these measures of success after 9 trimesters than did the other cohorts after 14 trimesters.

Institutional rankings using different cohort and outcome measures. To determine whether the relative performance of Florida's 28 community colleges changes with the use of different cohorts and outcome measures, we computed the means of several outcome variables and ranked the colleges for each college and cohort. We then used statistical tests to see if the rank order of the colleges changed with different outcome measures. We found that the rankings of colleges were quite similar for the three cohorts, demonstrating that a college's position did not change much across the three cohorts, regardless of the outcome measure.

We also performed a similar analysis comparing college rankings using the GRS cohort and the "all student" cohort for the same outcome measures to determine whether or not, within a particular cohort, changing the outcome measure leads to different relative comparisons of institutions. The results suggest that colleges that are good at graduating students also tend to be more successful at retaining students and at helping them accumulate credits. We further found that changing the cohort has little effect on the relative rank of the colleges — as long as each college uses an identical definition for the cohort.

Using raw measures of student outcomes to compare colleges may yield misleading conclusions if an institution enrolls students who face greater academic and life challenges than do students at other colleges. We therefore created a regression model that enabled us to predict outcome measures for each college while controlling for the individual characteristics of the college's students; to rank the measures; and then to compare the rates for the GRS cohort and the group of all first-time students. On average, the change in position between adjusted and unadjusted rankings within each cohort was less than five ranks, with a median of about three ranks. There is a less striking change in ranks within the cohort of all students compared to the GRS cohort for each of the three outcomes we considered: graduation within 150 percent of the expected time, credit accumulation after 14 terms, and fall-to-fall retention. These findings suggest that although regression-adjusting is a theoretical improvement over a comparison of raw measures, it may not have a substantial impact in practice since it does not significantly change the relative performance of institutions.

Conclusions

All of the criticisms of the Student-Right-to-Know graduation rates discussed above are reasonable and supported empirically. They suggest that SRK rates understate the actual outcomes of community college students and therefore also the performance of these colleges.

Nevertheless, some alternative methods of measuring student outcomes actually cast the colleges in a more negative light. For example, including part-time students will lower any outcome measure with a fixed time period. Lengthening the time period from three to six years would raise graduation rates, but as long as students are not tracked across transfers, it would not result in large increases. As long as the rates continue to be calculated by institution, without following students as they transfer, a three-year rate is probably better than a longer term rate because the longer time period does not increase the graduation rate by very much, and it produces a much larger gap between institutional and individual rates.

A more significant problem involves the combination of the time period and the absence of transfer data. According to our calculations using BPS, the graduation rate about doubles after switching to a six-year graduation rate and tracking students who leave their initial institution. A "graduation rate" that involves tracking students who

transfer would, however, require a national unit record system (although, in many states with large public systems, tracking students into the public universities would capture much of the relevant activity). An intermediate alternative might be a rate that includes both graduation and transfer (for students who do not graduate). Many colleges and states have started to use National Student Clearinghouse data, which at least allow colleges to determine if a student has registered at another college, although the data provide limited information about the success of students who transfer. Still, as we have seen from the Florida data, college rankings are not significantly influenced by a shift from an institutional graduation rate to measures that count graduation, transfer, and continued enrollment as positive outcomes.

Although current SRK graduation rates are, to say the least, misleading as a measure of *individual* community college student outcomes, our comparative analysis of rankings based on different cohorts and outcome measures suggests that they nevertheless contain useful information when used for gauging the *relative performance* of colleges. Such a comparison is improved when the SRK graduation rates are adjusted for college characteristics, but our Florida analysis showed that the college rankings were not significantly changed either by using alternative cohorts and outcome measures or by adjusting rates for student characteristics. Thus, in sum, looking at the actual SRK graduation rates is a reasonable first approximation of relative college performance.

Recommendations

We offer several suggestions for improving the usefulness of the SRK rates and for moving beyond them to improve information on college performance in general. First, any national level analysis of the determinants of graduation rates must control for definitional differences across states. Second, each state should standardize the cohort and graduation definitions used within the state. Third, states should help their institutions make use of the National Student Clearinghouse to produce a more accurate measure of transfer rates.

Fourth, thoughtful discussion of graduation rates (including rates adjusted for student and institutional characteristics), the causes of differences among those rates, and ideas for improving them should be a regular component of state-wide meetings and professional development of college personnel within a state, and should be informed by research using quantitative and qualitative information. Fifth, as shown by the Florida data, the state data systems in many states allow much more accurate and informative measures of college performance than the SRK rates. Such extensive data are available in many states, but utilizing them involves several problems: they are often not organized or stored in an easily usable form, state and institutional level staff may not have time and capabilities to use them strategically, and privacy and political concerns often prevent tracking of students across educational sectors.

In addition, the federal government should take steps to increase the use and improve the usefulness of the SRK rate and other outcome measures. It could work toward better standardization of cohort and graduation definitions. It could also ask for different outcome measures including retention and credit accumulation. NCES could promote better measures of transfer by encouraging the use of the National Student Clearinghouse data. Lastly, the government could fund efforts for states to work together to improve their state data systems, to make them more consistent with each other, and to discuss the reasons for the variation in institutional performance across states.

References

Astin, A. W. (1997). How "good" is your institution's retention rate? *Research in Higher Education, 38*(6), 647-658.

Bailey, T. R., Calcagno, J. C., Jenkins, D., Leinbach, T., & Kienzl, G. (2006). Is Student Right-to-Know all you should know? An analysis of community college graduation rates. *Research in Higher Education, 57*(5), 491-519.

Dellow, D., & Romano, R. (2002). Measuring outcomes: Is the first-time, full-time cohort appropriate for the community college. *Community College Review, 30*(2), 42-54.

National Center for Public Policy and Higher Education. (2004). *Measuring up 2004: The national report card on higher education.* San Jose, CA: Author.

U.S. Department of Education (2003). *Beginning Postsecondary Students Longitudinal Study second follow-up data files and ECB.* NCES 2003-160 [Data CD-ROM]. Washington, DC: National Center for Education Statistics.

Funding for this study was provided by Lumina Foundation for Education through the Achieving the Dream: Community Colleges Count initiative. (For more information see www.achievingthedream.org.) The authors would like to thank Patricia Windham and Judith Thompson of the Florida Department of Education's Division of Community Colleges and Workforce Development for sharing the data used in this research and for helping to interpret the findings. The full report is available for download free of charge at http://ccrc.tc.columbia.edu.

Thomas Bailey is Director of the Community College Research Center, the National Center for Postsecondary Research, and the Institute on Education and the Economy. He is also the George and Abby O'Neill Professor of Economics and Education at Teachers College, Columbia University.

Peter M. Crosta is a Research Fellow at the Community College Research Center, Teachers College, Columbia University. He is a doctoral candidate in Economics and Education at Teachers College, Columbia University.

Davis Jenkins is a Senior Research Associate at the Community College Research Center, Teachers College, Columbia University.

Community College Research Center
Teachers College, Columbia University
525 West 120th Street, Box 174
New York, New York 10027

Director: Thomas R. Bailey
Managing Editor: Doug Slater
(212) 678-3091 fax (212) 678-3699

ccrc@columbia.edu
http://ccrc.tc.columbia.edu