Faculty Publications in Educational Administration   Educational Administration, Department of

2018

How to Measure Student Success? Toward Consideration of Student Resilience as a Metric of Success in Institutional Accountability Frameworks

Elvira Abrica
University of Nebraska-Lincoln, elvira.abrica@unl.edu

How to Measure Student Success? Toward Consideration of Student Resilience as a Metric of Success in Institutional Accountability Frameworks

Elvira J. Abrica

Department of Educational Administration Lincoln, University of Nebraska-Lincoln, Nebraska, USA; *email* elvira.abrica@unl.edu

ORCID — Elvira J. Abrica http://orcid.org/0000-0001-6140-5325

Abstract
Rates of student success—four-year transfer, degree, and certificate completion— are frequently discussed. Less frequent, however, are opportunities to reflect on how these outcomes are measured. In this paper, I reflect on how rates of success—specifically for men of color—are calculated based on two California institutional accountability frameworks. First, I compared measures of success for men of color using the methodologies outlined by each framework. Secondly, I explored enrollment data of men of color who did not transfer or complete a degree or certificate after six years, those who would not be counted by either framework. Findings indicate that some students who did not complete or transfer after six years were enrolled for several consecutive terms, demonstrating what I posit is an indicator of student resilience.

Keywords: Equity, institutional research, success

Student success—most often measured in terms of four-year transfer, degree, and certificate completion—is an important metric in assessing institutional effectiveness. Differential rates of student success can highlight the extent to which institutions provide equitable educational opportunity for various subpopulations (Harris & Bensimon, 2007). Although rates of student success are often discussed, less frequent are opportunities to reflect on how these outcomes are measured and the ways in which routine accountability reporting reinforce narratives of success and/or failure

It is imperative to understand how metrics can be used to document inequities that cut across race and gender. Relying on disaggregated data, researchers have uncovered troubling trends in transfer, degree, and certificate completion among men or color—including Black, Latino, Native American, and Asian American males (Wood, Palmer, & Harris, 2015). Men of color often face unique challenges that can result in lower rates of success than their female counterparts; their experiences should be centralized in routine accountability reporting and institutional research (Abrica & Rivas, 2017). Yet, a challenge researchers face is that the very metrics used as indices of educational opportunity may simultaneously highlight underachievement among men of color (Harper, 2010). There is a clear need to reflect on existing metrics of success—in terms of both their possibilities and limitations for capturing success among men of color.

About the study

As an intuitional researcher working in a California community college, I was trained to calculate transfer, degree, and certificate completion rates using two specific frameworks: The Community Colleges Chancellor's Office Scorecard Framework for Student Success and California's Student Equity Plan Disproportionate Impact Methodology. Although I knew *how* to calculate these success rates, I wanted to know *why* success was measured differently according to these metrics and how my reporting efforts could facilitate a more robust understanding of success for men of color. Guided by my positionality as an institutional researcher (Milner, 2007), I explored the following research questions:

(1) How do rates of transfer, degree, and certificate completion differ specifically for men of color using two metrics identified within California Community College accountability frameworks: Scorecard and Student Equity?

(2) What are some alternative ways of measuring the trajectories of men of color that can provide a more nuanced portrait of success among men of color?

Thus, the purpose of this quantitative study, exploratory and descriptive in nature, was twofold: to understand how student outcomes—specifically for men of color—are measured and to explore ways in which my routine accountability reporting could underscore success among males of color who might otherwise not be included in standard success metrics.

Comparing two frameworks: Student success scorecard and student equity disproportionate methodology

The California Community College Chancellor's Office Student Success Scorecard and Student Equity Plan frameworks offer two distinct methodologies for measuring student success. The Scorecard relies on Student Progress and Attainment Rate (SPAR) methodology. A SPAR cohort of first-time students who attempted Math or English in the first three years (these students are noted as demonstrating intent to complete) is created, and rates of transfer, degree, and certificate completion are measured after six years. The Equity framework relies on a Disproportionate Impact (DI) methodology to compute metrics outlined in the Success Scorecard as well as additional metrics of access, course completion, English as a Second Language (ESL), and basic skills completion. According to this methodology, colleges can identify disadvantaged student populations by taking outcomes for each student group and dividing them by the highest performing group. If the ratio was less than 0.80 for any student group, that student subpopulation would be identified as disproportionately impacted and in need of targeted intervention.

Methodology

To compare measures of success for men of color (as calculated using the two different methodologies), I ran simple descriptive statistics for the outcomes of transfer, certificate, and degree completion. To explore potential alternative measures of success among men of color, I isolated cases in which students had not received a degree, certificate, or transferred after six years (between fall 2009 to fall 2015), those who were not "successful" by standards outlined in the two accountability frameworks. Data were accessed through my position as an institutional researcher, wherein I routinely reported success using the two frameworks. Permission was granted to explore enrollment[1] for men of color who would otherwise not be included among six-year completers and transfers.

Results

Rates of success for men of color were similar between the two frameworks. The most significant difference in measures of success using the two frameworks lies in the ways the initial cohorts, from which rates of degree, certificate, and transfer are drawn six years later, are calculated. The Equity cohort included 676 Black, Latino/Hispanic, Native, and Asian males while the SPAR cohort included only 387. This is explained by the parameters for the initial cohort required by SPAR. Table 1 presents findings for degree and certificate completion using the SPAR methodology, Table 2 presents the same using Equity methodology.

Enrollment patterns of those men of color who did not complete or transfer in a six-year period (N = 517) revealed that 26.7% of students did not stay enrolled in fall 2009 and that 13% did not enroll past fall 2009. Yet, 13 of the total 517 men of color (who, again, did not transfer or complete within six-year per both the Scorecard and Equity frameworks) were consistently enrolled each semester between Fall 2009 and Fall 2015. Similarly, 14 of the 517 men were consistently enrolled for two years. Table 3 presents concatenated enrollment information.

1. Enrollment patterns were captured by concatenating term by term enrollment (using a sequencing of 0 for nonenrollment and 1 for enrollment), identifying the frequently occurring enrollment patterns, and reporting enrollment patterns for which there were five or more cases. These concatenated patterns were used to conceptualize the metric of student resilience I present herein.

Table 1. Transfer, degree, and certificate completion using SPAR methodology (N = 387).

	Cohort Totals	Number of Students who Transferred	Transfer Rate
Transfer Rates—Scorecard Methodology			
Black	37	16	43.2%
Asian	69	31	44.9%
Hispanic	278	72	25.9%
Native	3	1	33.3%
Total	387	120	31.0%

	Cohort Totals	Number of Students who Completed a degree	Degree Completion Rate
Degree Completion—Scorecard Methodology			
Black	37	7	18.9%
Asian	69	13	18.8%
Hispanic	278	40	14.4%
Native	3	1	33.3%
Total	387	61	15.8%

	Cohort Totals	Number of Students who Completed a Certificate	Certificate Completion
Certificate Completion—Scorecard Methodology			
Black	37	1	2.7%
Asian	69	5	7.2%
Hispanic	278	16	5.8%
Native	3	1	33.3%
Total	387	23	5.9%

Discussion and implications

In this study, I was concerned how rates of success differed for men of color using the two methodologies I used regularly as an institutional researcher. Secondly, I wanted to identify a potential metric of success that is not captured by either framework. Since both frameworks measure success as six-year transfer, degree, and certificate completion rates, I wanted to look at the students who would not be counted by these metrics. In exploring enrollments among non-completer and non-transfer

Table 2. Transfer and completion using student equity disproportionate impact methodology (N = 676).

	Cohort Totals	Number of Students who Transferred	Transfer Rate	Disproportionate Impact
Transfer Rates—Equity Methodology				
Black	77	25	32.5%	0.82
Asian	108	43	39.8%	1.00
Hispanic	487	90	18.5%	0.46
Native	4	1	25.0%	0.63
Total	676	159	23.5%	0.59

	Cohort Totals	Degree Completion	Degree Completion Rate	Disproportionate Impact
Degree Completion—Equity Methodology				
Black	77	9	11.7%	0.97
Asian	108	13	12.0%	1.00
Hispanic	487	46	9.4%	0.78
Native	4	1	25.0%	2.08
Total	676	69	10.2%	0.85

	Cohort Totals	Number of Students who Completed a Certificate	Certificate Completion	Disproportionate Impact
Certificate Completion—Equity Methodology				
Black	77	1	1.3%	0.29
Asian	108	6	5.6%	1.23
Hispanic	487	22	4.5%	1.00
Native	4	2	50.0%	11.07
Total	676	31	4.6%	1.02

students, I uncovered consistent enrollment patterns, what I refer to as an indicator of *student resilience*. Resilience is defined as the ability to persist toward educational goals in light of racial marginalization experienced in post-secondary contexts. The introduction of the metric of student resilience complicates routine accountability that, too often, reinforces a narrative of student failure rather than holding institutions accountable for providing equitable opportunities to all students. The

Table 3. Most frequently occurring enrollment trends among non-completers and non-transfers (Spring 2010–Fall 2015) who began in Fall 2009 (N = 517).

Enrollment Pattern	Frequency	%
000000000000	138	26.7
100000000000	69	13.3
111000000000	37	7.2
110000000000	31	6
111100000000	14	2.7
111111111111	13	2.5
111110000000	10	1.9
111111000000	8	1.5
010000000000	7	1.4
001000000000	6	1.2
011000000000	6	1.2
111111110000	6	1.2
111111111000	6	1.2
111010000000	5	1
111111100000	5	1
111111111110	5	1

metric of resilience, perhaps, moves us toward measures that are reflective both of intuitional effectiveness and individual agency employed to navigate those contexts.

In terms of the two main accountability frameworks, the Equity framework allowed for the inclusion of students without a valid social security number. Such cohort parameters have obvious implications for undocumented students who would not be included among those with a valid social security number. Researchers might consider including in routine reporting an estimate of undocumented students and track both student resilience and intuitional effectiveness in supporting success. Finally, findings from this study extend beyond the context of California. Intuitional researchers across the country should continue to reflect on ways in which data tell a story about both institutions and students. Narratives of success of men of color and other historically marginalized populations must be balanced and reflective of their resilience, effort, achievement, and investment in the community college.

Conclusion

This study relied on descriptive statistics to explore how accountability frameworks measure success for men of color. There were 517 men of color who did not complete a degree or certificate or transfer after six years, the basic measure of success outlined by both frameworks. Among those who did not transfer or complete, there were a handful of students who were consistently enrolled for the entirety of the six-year period. I posit that such consistent enrollment is reflective of student resilience, a potential metric to be included among traditional measures of success.

References

Abrica, E., & Rivas, M. (2017). Chicanas in IR: Data-driven advocacy for Latino students from institutional research contexts in the community college. *Association of Mexican American Educators (AMAE) Journal*, *11*, 43–64.

Harper, S. R. (2010). An anti-deficit achievement framework for research on students of color in STEM. *New Directions for Institutional Research, 148*, 63–74.

Harris, F., & Bensimon, E. M. (2007). The equity scorecard: A collaborative approach to assess and respond to racial/ ethnic disparities in student outcomes. *New Directions for Student Services*,120, 77–84.

Milner, H. R., IV. (2007). Race, culture, and researcher positionality: Working through dangers seen, unseen, and unforeseen. *Educational Researcher, 36*(7), 388–400.

Wood, J. L., Palmer, R. T., & Harris, F., III. (2015). Men of color in community colleges: A synthesis of empirical findings. In M. B. Paulsen (Ed.), *Higher education: Handbook of theory and research*. New York, NY: Springer International.