

How 'Good' is Your Retention Rate?

Using the CIRP Freshman Survey to evaluate undergraduate persistence

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Enabling students to complete their undergraduate degrees is of fundamental importance, not only to the students and their parents, but also to college and university personnel. Graduation rates are often viewed as a measure of institutional performance or accountability because high degree completion rates signify that both the institution and its students have been successful. Even the federal government has recognized the importance of degree completion through the Student Right to Know and Campus Security Act, which requires baccalaureate-granting colleges and universities to make public their degree completion rates.

But, is it reasonable to expect similar retention outcomes for all types of institutions? Using the Cooperative Institutional Research Program's (CIRP) data, a recent Higher Education Research Institute (HERI) study¹ found that two-thirds of the variation among institutions in their degree completion rates is attributable to differences in their entering classes rather than to differences in the effectiveness of their undergraduate retention programs.

Under these conditions, comparisons between institutions in their degree completion rates can be misleading if the academic preparation and other characteristics of their students at the time of entry are not taken into account. Accordingly, the best way to evaluate any institution's actual degree completion rate is to compute an expected degree completion rate based on the characteristics of the students when they first enroll.

Longitudinal study of degree attainment

In a national study of degree attainment in America's colleges and universities, HERI used data on entering students from the 1994 CIRP Freshman Survey and degree completion data provided six years later by the registrars at 262 baccalaureate-granting institutions. There were three main objectives of the study:

- To determine national degree completion rates by sex, race and type of institution.
- To identify entering-student characteristics that predict degree completion.
- To develop formulas individual institutions can use to compute expected retention rates.

Three different retention measures were used: baccalaureate completion within four years, baccalaureate completion within six years and students still enrolled after six years as degree completers. The report also includes several formulas an individual institution can use to compute expected degree attainment rates for each of these three retention outcomes. One set of formulas uses information that most institutions have readily available on their entering freshman classes: high school grade point average (HSGPA), SAT/ACT composite score, race and gender. Separate formulas are included for institutions that lack test data or data on students' race. Any institution can use these formulas to compute an expected degree completion rate that can be compared to its actual retention rates to gauge the effectiveness of student retention programs.

Advantage of being a CIRP participant

The CIRP Freshman Survey contains all the data needed for computing expected degree completion rates based on the HSGPAs, test scores, and sex and race of entering students. However, the study also shows substantially more accurate estimates of expected rates can be obtained by using many of the other entering characteristics included in the CIRP survey, such as life and degree goals, expectations about college, sources of financial aid, academic major and self-ratings.

Adding these additional CIRP variables to the equation increases the accuracy of the prediction by 57% for four-year completion and by 50% for six-year completion. Of particular interest is the fact that in these expanded formulas, the test scores add little to the prediction of four-year completion and nothing to the prediction of six-year completion.

Apparently, the other CIRP freshman variables contain virtually all of the relevant information that is contained in the SAT or ACT scores. These longer formulas would be especially useful to institutions that do not require the SAT/ACT for admission. The results reported later in this article are based on 56,818 students who entered 262 four-year colleges and universities in fall 1994 and whose degree attainment and enrollment status was determined in fall 2000. Results were statistically adjusted to reflect the entire population of freshmen entering baccalaureate-granting institutions in fall 1994.

Major study findings

Fewer college students are completing college in four years than was the case a decade ago. Only 36.4% were able to complete their bachelor's degrees within four

years, compared to 39.9% a decade earlier and 46.7% in the late 1960s. The degree completion rate jumps by nearly two-thirds—to 58.8%—if students are allowed six years to complete college and to 61.6% if those who are still enrolled after six years are counted as completers.

The highest four-year completion rates are enjoyed by Asian (38.8%) and white (37.6%) students, while the lowest rates occur among underrepresented minority groups: African-Americans (28.9%), Puerto Rican-Americans (23.6%), American Indians (21.6%) and Mexican-Americans (21.3%).

Four-year completion rates are higher for women (39.7%) than for men (32.6%). These rates increase by 20 to 25% for each racial or gender group when six-year completion is considered, but group differences are maintained. Within each racial group, women have higher six-year degree completion rates than men do, except among American Indian students, in which the rate for men is slightly higher (43.9% versus 41.1% for women) (see Table 1.)

Table 1
Six-year degree attainment rates by gender and racial group

	Percentage completing bachelor's degree within six years*		
	Women	Men	Total
White	61	57	59
African-American	54	42	50
American Indian	41	44	42
Asian-American	68	63	65
Mexican-American/Chicano/a	50	41	46
Puerto Rican-American	52	28	42
Other	60	48	54

*Figure in the table have been rounded to whole numbers

Effects of institutional type

Four-year degree completion rates for individual institutions vary widely: from a low of 1% to a high of 89%. Six-year rates range from 18% to 96%. Private institutions of all types consistently show higher retention rates than do public colleges and universities, regardless of the retention measure used. The highest four-year completion rate—67.1%—is found among students attending private universities, whereas the lowest rate—24.3%—occurs among students at public colleges. The four-year completion rate for students at public universities—28.1%—is also substantially lower than the four-year rates for students enrolled at all types of private four-year colleges: Roman Catholic (46.4%), other religiously affiliated (51%) and independent (56.3%). The

fact that these public-private differences decline somewhat when six-year rates are used suggests that students in the public colleges and universities are taking longer to complete their degrees (see Table 2).

Table 2
Four-year, six-year and six-plus years* degree attainment rates, by institutional type

Institutional type	Unweighted <i>n</i>		Weighted percentage completing bachelor's degree within**		
	Students	Institutions	Four years	Six years	Six-plus years*
Public university	6,650	20	28	58	62
Private university	4,931	18	67	80	80
Public college	7,457	27	24	47	52
Nonsectarian college	17,610	75	56	66	67
Roman Catholic college	5,436	38	46	60	62
Other Christian college	14,734	84	51	61	62
All institutions	56,818	262	36	58	61

*Considers students who are still enrolled six plus years as degree completers.

**Figures in table have been rounded to whole numbers.

Note: Weighted to approximate national norms for 1994 freshmen.

Effects of academic preparation

The chances of completing college in four or six years varies widely according to the student's level of academic preparation. Those who earn an A or A-plus grade point average in high school have four and six-year completion rates of 58.2% and 77.5%, respectively, compared to rates of only 8% (four-year) and 20% (six-year) for those with C averages in high school. Similar differences are found with scores on standardized college admissions tests: Among students whose composite score on the SAT is at least 1,300, four and six-year completion rates are 62.3% and 76.5%, respectively, compared to only 18.2% and 39.8% for students whose composite score is less than 800.

The largest differences are observed when school grades and test scores are combined: students with A averages and scores of 1,300 or above have four and six-year completion rates of 68.9% and 82.6%, respectively, compared to 7.8% and 20.4% for students with C averages and test scores below 800.

The data in Table 2 suggest that it would be unwise, and possibly misleading, to compare the raw degree completion rates of different institutions without taking into

account the level of academic preparation of each institution's students when they first enroll. For this reason, the report provides tables that allow individual colleges and universities to compute an expected degree completion rate based on the academic preparation and other characteristics of their students at the time they first enroll.

When adjustments are made for these expected retention rates, institutional differences diminish substantially. For example, although the actual four-year rates of private universities are more than 40% higher than those of the public colleges (67.1% versus 24.3%), this difference diminishes to about 15% when expected rates are taken into account. Thus, when the actual degree completion rates of different types of institutions are compared after adjusting for expected rates, four-year rates of public colleges and universities fall only 11% and 15%, respectively, below their expected rates. The actual rates of different types of private institutions are between 2% and 6% higher than their expected rates.

When six-year rates are used, the actual and expected rates for public institutions differ by only 5%. These results suggest that students who choose a public over a private institution will run a slightly greater risk not only of not completing their bachelor's degree, but also of taking longer to complete that degree.

Academic preparation also helps to explain many of the differences in degree completion rates among racial groups. The relatively low six-year completion rate for African-American students, for example, appears to be entirely attributable to their lower level of academic preparation.

Researchers at HERI are currently in the process of updating these findings through a new retention study based on students who entered college during the fall term of 2004.

This article is adapted from:

Higher Education Research Institute, "How 'Good' Is Your Retention Rate?: Using the CIRP Freshman Survey to Evaluate Undergraduate Persistence" [research brief], 2005.

Reference:

1. A. W. Astin and L. Oseguera, "Degree Attainment Rates at American Colleges and Universities," Higher Education Research Institute, University of California-Los Angeles, 2005. (The full report, on which this summary is based, is available from the Higher Education Research Institute, Graduate School of Education and Information Studies, University of California, Los Angeles.)

Note:

The Cooperative Institutional Research Program (CIRP) Freshman Survey has many other uses. It can provide a detailed profile of the characteristics of an institution's new students as a pretest or baseline of data for studying student change and development during college. For more information regarding potential uses of this survey and of various CIRP follow-up surveys, contact the Higher Education Research Institute at (310) 825-1925 or heri@ucla.edu.

The Cooperative Institutional Research Program (CIRP) has administered the Freshman Survey since 1966, surveying more than 13 million incoming first-year students at 1,900 colleges and universities nationwide. The CIRP Freshman Survey documents the changing nature of students' characteristics, values, attitudes and behaviors. The data have helped shape public opinion about key issues related to the concerns of college youth and continues to contribute to critical policy considerations in education. The Higher Education Research Institute (HERI) at the University of California-Los Angeles (UCLA) is housed in the UCLA Graduate School of Education and Information Studies. The institute serves as an interdisciplinary center for research, evaluation, information, policy studies and research training in post-secondary education. For more information on HERI, visit www.gseis.ucla.edu/heri/index.php.