



## Assessment Bulletin

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# Student Retention: Comparing Major Public Universities

**SUMMARY** A study conducted by the University of Arizona compared 5-year student graduation rates at 52 major public universities. Within this group, UMass Amherst had the twelfth highest graduation rate. The Arizona study also compared institutions in terms of the results that would be expected given the characteristics of the students enrolled (that is, after taking into account student academic preparation and other factors). In this comparison, UMass Amherst moved up to eighth place, indicating an even higher level of student success than the raw data suggest.

**G**raduation rate (the percentage of students entering an institution who ultimately receive a degree from that institution) is frequently used as a measure of institutional effectiveness. The importance of this measure has grown with the passage of federal "Student Right to Know" legislation, which requires institutions to publish their graduation rates to assist students and parents in making enrollment decisions.

The University of Massachusetts Amherst, through its Office of Institutional Research (OIR), conducts extensive research on the graduation rates of its students. As part of this effort, the campus is participating as one of 52 leading public institutions in the "National Graduation Rate Study" conducted by the University of Arizona. This study compares the graduation rates of a group of Land Grant, AAU and Carnegie Research I institutions. The study began with the cohort of first-year students that entered in 1988.

Studies of graduation rates vary with respect to the point in time at which the measurement is made, with most reporting the rate either four, five, or six years after the student enters. The Arizona study reported graduation rates after five years. The analysis found that the Amherst campus's five-year graduation rate of 64% compared quite favorably with those of the other institutions examined, and placed the campus twelfth among the 52.

## Actual vs. Expected Graduation Rates

The principal focus of the Arizona study, however, was to look beyond the raw data on graduation rates and consider how well institutions perform *given the characteristics of the students they enroll*. Alexander Astin, one of the nation's leading researchers in the area of student persistence and retention, argues that simple graduation rates tell only part of the story of institutional effectiveness.

Astin says a clearer picture emerges when an institution compares its *actual* graduation rate to the rate one would predict given the entering characteristics of the student body (e.g., SAT scores, high school GPA, race or ethnicity). Astin has used this technique to study many different institutions and has found important differences in performance:

The study ... showed that some institutions with "high" graduation rates should really have rates that are even higher, given the kinds of students they admit. By the same token, a number of other institutions with graduation rates that appear to be very modest are actually retaining their students at a significantly higher rate than would be expected from student inputs. (Astin 1993, p. 1)

### Participating Institutions

U. of Alabama	U. of Hawaii	U. of Mississippi	Pennsylvania State U.
U. of Arizona	U. of Idaho	Mississippi State U.	U. of Rhode Island
Arizona State U.	Indiana U.	U. of Missouri	Rutgers U.
U. of Arkansas	U. of Iowa	U. of New Mexico	South Dakota State U.
U. of California Davis	U. of Kansas	U. of Montana	U. of Tennessee
U. of California San Diego	Kansas State U.	Montana State U.	U. of Texas
U. of California Santa Barbara	U. of Kentucky	U. of Nebraska	Texas A&M U.
U. of Colorado	Louisiana State U.	New Mexico State U.	U. of Vermont
Colorado State U.	U. of Maine	SUNY Buffalo	U. of Virginia
U. of Connecticut	U. of Maryland	North Carolina State U.	U. of Washington
U. of Delaware	U. of Massachusetts	North Dakota State U.	Washington State U.
U. of Florida	U. of Michigan	U. of Oklahoma	U. of Wisconsin
Florida State U.	U. of Minnesota	U. of Oregon	U. of Wyoming

This view of retention is especially important for institutions committed to enrolling students with diverse academic backgrounds. One would expect institutions that take a chance on some students with lower academic profiles to have lower graduation rates than institutions with extremely selective admissions criteria. But selectivity is not the same as effectiveness. Astin argues that somewhat less selective institutions may actually add more value and, in the end, do a better job for their students.

### UMass Amherst's Effectiveness

But just as selectivity is not necessarily equal to effectiveness, neither is opportunity necessarily equal to student success. An institution might admit a number of less-well-prepared students and then fail to deliver on the promise of good academic progress and, ultimately, graduation. To test Astin's point, the Arizona study applied his methods to a group of public Land Grant, AAU, and Research I universities. The Arizona researchers predicted five-year graduation based on four characteristics of the students entering each institution: standardized test scores, high school GPA, sex, and ethnicity. They then compared this predicted rate to the institution's actual performance.

The comparison for the 1988 entering cohort at UMass Amherst shows that this institution graduated a higher proportion of its students (65.2%) than would have been expected (58.8%) given the entering characteristics of its students.

### Comparison With Other Universities

The UMass Amherst results compare favorably with those for the other 43 institutions with usable data. In fact, with the "difference" between actual and predicted graduation rates ranging from +18.8 percentage points to -18.5 points across the group of institutions, UMass Amherst's difference score of +6.4 points placed it eighth among this group of leading public universities.

### Implications of the Study

This kind of comparison is an important addition to our understanding of how well the campus is meeting its goal of promoting student success. As Astin suggests, institutions — like UMass Amherst — that graduate a higher proportion of their students than would be expected are increasing their students' chances of earning a degree.

This type of analysis is especially important given the crisis in elementary and secondary education, which compels many institutions to confront the needs of increasing numbers of underprepared students. Institu-

tions that increase a student's chance of success are making a major contribution to a problem that requires action on many fronts. This fuller accounting of graduation and student success is particularly important for public universities whose missions include a commitment to serve students with diverse academic preparations.

### Future Research

The data for the freshman class that entered in 1988 indicate that UMass Amherst improved students' probability of graduating. It is important to see if this pattern continues for the cohorts that entered in 1989 and beyond (groups of students that varied greatly in terms of the traditional measures of academic preparation). The Arizona researchers plan to continue their analysis, and the results of this longitudinal study will make it possible to track institutional performance over time.

### References

- Astin, A. (1993). "How good is your institution's retention rate?" Los Angeles: Higher Education Research Institute.

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For more information, contact:

Martha L. A. Stassen  
Associate Director for Assessment  
Office of Academic Planning and Assessment  
237 Whitmore Administration Building  
University of Massachusetts  
Amherst, MA 01003  
413/545-5146

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