Is there a relationship between student engagement as measured by the National Survey of Students Engagement (NSSE) and selected measures of student success?

Purpose

Too many students who begin college do not earn a baccalaureate degree. One promising line of inquiry is research showing links between student engagement in educationally purposeful activities, achievement, persistence and graduation. Student engagement represents both the time and energy students invest in educationally purposeful activities and the effort institutions devote to using effective educational practices. Additional evidence confirming these positive relationships with the current cohort of undergraduate students would give institutional leaders, faculty and staff members, and policy makers more confidence in urging intentional, widespread use of effective educational practices in postsecondary education. The purpose of the Connecting the Dots (CTD) project is to determine the relationships between student engagement as measured by the National Survey of Student Engagement (NSSE) and selected measures of success in college.

Data

This analysis examined the relationships between NSSE results, pre-college experiences, college grades, and persistence to the second year of study for about 11,000 first-year and senior students at 18 baccalaureate-granting institutions including four Historically Black Colleges and Universities (HBCUs) and three Hispanic Serving Institutions (HSIs). Student-level data from NSSE responses, academic transcripts and financial aid information, and ACT/SAT score reports were analyzed to determine the effects of engagement on grades and persistence, controlling for a variety of pre-college and first-year experience variables.

Methods

We used logistic regression to estimate separate models for first-year and senior students of the general effects of time on task and engagement in educationally purposeful activities on academic year grade point average and persistence to the second year of college (for first-year students only). For first-year student outcomes, the first model estimated the effects of student background characteristics, high school academic and extracurricular involvement, and prior academic performance (high school grades and ACT score) on the students' first-year GPA and persistence to the second year at the same institution.

In the second model, first-year experiences (including time on task and the global engagement scale), and first-year grades and unmet need (in the persistence model only) were added to the variables in the

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This report is part of NSSE's *Psychometric Portfolio,* a framework for presenting our studies of the validity, reliability, and other indicators of quality of NSSE data, available online at **nsse.iub.edu/links/psychometric_portfolio**.

first model to examine the impact of these experiences on GPA and persistence. For the senior student analysis, the first model estimated the effects of background characteristics, pre-college academic performance, and senior year experiences (including time on task and engagement) on academic year GPA. In the second model, junior year GPA was added to estimate the impact of time on task and engagement on GPA after taking into account prior year GPA. That is, does engagement add value to academic performance, over and above one's established academic record?

Results

First Year GPA: On balance, net of a host of confounding pre-college and college influences, student engagement in educationally purposeful activities had a small, but statistically significant effect on first-year grades. Specifically, a one-standard deviation increase in "engagement" during the first year of college increased a student's GPA by about .04 points.

First Year Persistence: Student engagement in educationally purposeful activities during the first year of college had a positive, statistically significant effect on persistence, even after controlling for background characteristics, other college experiences during the first college year, academic achievement, and financial aid. To put this in perspective, students who are engaged at a level that is one standard deviation below the average have a probability of returning of .85, whereas students who are engaged at a level that is one standard deviation above the average have a probability of returning of .91. This is another piece of evidence consistent with the large body of evidence that engagement matters to student success in college.

Senior Year GPA: Two engagement measures – hours spent studying and the global student engagement scale – had a small positive impact on senior year grades, even after controlling for prior academic year GPA. For example, students who studied for 21 or more hours per week had a senior year GPA that was .04 points higher than their peers who studied for five or fewer hours per week. For every one standard deviation increase in student engagement in educationally purposeful activities, senior year GPA increased by .03 points.

References

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