

Strategic Retention Initiatives: The Role of First-year Seminar Programming

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Abstract

University administration looks to the Office of Institutional Research (OIR) to efficiently conduct systematic analyses to understand why students leave and what interventions are effective. In response, OIR used SAS to build a database to follow incoming cohorts of degree-seeking students over time at the institution. Here, we demonstrate its power in conducting a retention analysis that was used as evidence to support an extensive expansion of the first-year seminar programming. Results show that certain at-risk student groups are less likely to voluntarily participate in a first-year seminar. First semester participation was related to retention after controlling for other factors.

Objectives of the Research:

University administration relies on OIR to efficiently conduct systematic analyses to understand why students leave and what interventions are effective. In response, OIR used SAS to build a database to follow incoming cohorts of degree-seeking students over their life course at the institution. The cohort table integrates data from all facets of the university. Here, we focus on how it can be used to conduct longitudinal analysis to inform policy-making and planning using a study of first-year seminar programming.

This research was part of a comprehensive effort to assess first-year seminar programming and its impact on student engagement and success. Here, we focus on the link between engaging in two kinds of first-year seminars and retention at the university. In 2002, academic first-year seminars (FYS) were introduced at our university along with a new version of the Introduction to an Honors University seminar (IHU). FYS were designed to provide first-year students with a small group experience that allows for active and collaborative learning with faculty and peers that incorporates traditional reading, writing, and lecture formats with field work, original research, group projects or performance. The IHU is a one-credit extended orientation and college survival course integrated into freshmen courses across the disciplines.^{1,2}

Literature Review

Low college retention and graduation rates are a national concern. Knowing the first year is critical to integrating new students into the university's academic and social communities,^{3,4,5} first-year seminars are customary intervention strategies to prepare students for long-term success and increase retention in America's colleges and universities.^{6,7,8} First-year seminars embody best practices in undergraduate education that are related to student engagement and success, including active and collaborative learning, academically challenging coursework, time on task, an enriching educational environment, student-faculty interaction, collaborations between academic and student affairs, student cooperation and collaboration, and a supportive campus environment.^{3-5,8-10} Thus, we should expect engaging in a first-year seminar is positively related to retention.

Although the implications of first-year seminar programming are far reaching, much of the research has focused on its relationship to retention.⁶⁻⁸ The predominance of studies shows a positive relationship between engaging in a first-year seminar and retention.^{8, 11-19} However, all of these studies do not control for much beyond gender, race, and pre-enrollment academic qualifications, and most recent research using logistic regression shows no evidence of a relationship.²⁰ Finally, most studies have not adequately evaluated the long-term impact of engaging in a first-year seminar on retention while controlling for known factors related to retention. Here, we assess the relationship between engaging in first-year seminars on semester, one-year and two-year retention while controlling a host of student characteristics.

Methodology:

Data for these analyses were drawn from the university's student information system. The population consists of degree-seeking new freshmen and new transfer students. Cohort analysis was used for this study; this is a type of longitudinal analysis.

First semester participation in first-year seminar programming—an academic first-year seminar or an Introduction to an Honors University seminar—were the primary independent variables in this study. The outcomes of interest included semester, one-year, and two-year retention. A number of other student characteristics captured at matriculation or during the first semester were controlled for in the study, including: sex, race, geographic origin, high school GPA, SAT scores, transferred in AP credits, Math and English placements, major area at matriculation, dorm status, Scholars Program or Honors College student, athlete, student on a university scholarship, applied for financial aid, expected family contribution (from FAFSA), credits attempted, percent STEM coursework, difficulty of coursework, and cancelled one's registration or withdrew from the university the first semester. Research has demonstrated the relationship between these variables and persistence.^{8, 21}

Descriptive analyses were conducted to understand the types of students who were more likely to engage in first-year seminar programming. Transfer students had very low participation rates; therefore, multivariate analyses were conducted using only new freshmen. Logistic regression was employed; mediating and moderating relationships were assessed. Predicted probabilities were used to understand the effect of engagement in a first-year seminar on retention and to estimate the number of students retained with these efforts. From this, one could project the impact of these efforts on enrollment and tuition.

Results

Certain at-risk groups were less likely to voluntarily participate in first-year seminars, including transfer students, commuting students, and students who were not affiliated with Scholars programs and the Honors College. Controlling for other factors, students who participated the first semester in a first-year seminar were more likely to be retained after the first semester, first year and second year. Ultimately, engagement in a first-year seminar decreased the rate of student attrition over time.

Limitations

There are two limitations to this study. First, the study does not control for the fact that students voluntarily enroll in these courses. Only one known study has controlled for the volunteer effect.¹¹ Future research should include registration data to discern students who wanted to take a first-year

seminar, and could not, from those who never intended to enroll in one. Second, aspects of the classroom environment are not controlled for, like the effects of an instructor's design and delivery of a course.

Implications for Research and Practice

This study offers a number of practical implications for institutional researchers. A conventional statistical package, like SAS, can be used to build a database that integrates data from across the institution to follow students over their life course at the university. By adopting this solution, we were able to conduct a comprehensive study of first-year seminar programming to inform policy-making and planning. Results from this study were presented to our President's Council and are being used by the Dean and Vice Provost for Undergraduate Education to support a proposed mandatory first-year experience.²² Finally, the study contributes to the existing literature by assessing the longer term effects of engaging in first-year seminars and controls for confounding effects other peer-reviewed studies have neglected.

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