Relative Impact of Interventions to Improve Achievement and Retention in Postsecondary Occupational Programs

Overview

Occupational programs at two-year public colleges play a critical role in reducing poverty among individuals and families; however, degree or credential completion rates for students at community colleges, including occupational students, are abysmally low. The Relative Impact study is a longitudinal correlational study using institutional data collection of behavioral, verifiable measures at four U.S. public two-year colleges that have occupational programs and that incorporate clearly defined interventions aimed at improving student retention and completion. It seeks to identify which interventions are most effective in improving retention and academic outcomes for students in postsecondary occupational programs, and how student characteristics mediate and moderate these effects, with the goal of determining what works best for which types of students. Two cohorts of students are included in the study: those who entered college in Fall 2009 and Fall 2010, respectively. For the purpose of this study, the term interventions includes programs, services, supports, and other initiatives that can be analyzed at the student level and for which student-level data are available. The objective of this study is to measure the association between existing retention interventions and combinations of interventions, on the one hand, and student retention and program completion, on the other. The goals are to understand which interventions are likely to be effective for which kinds of students and to help community colleges select and implement effective interventions to improve student outcomes in occupational programs, as well as to obtain information to guide the subsequent design of a suite of interventions that can be combined and implemented to maximize effectiveness.

Research Questions

The primary research question is:
• What interventions and combinations of interventions are most strongly associated with retention and completion for students in postsecondary occupational programs, and how do student background and other characteristics mediate and moderate those associations?

The secondary research questions are:
• What are the characteristics and prior educational and other experiences of students who choose to access each retention intervention?
• Which student characteristics tend to influence the frequency and duration of use of the interventions overall?
• How do retention interventions and combinations of retention interventions support retention in and completion of postsecondary occupational programs, from the students’ points of view?

Study Sites

The four colleges—Freedom County College, River Port College, Scenic Hills College, and Valley West College (all pseudonyms)—were selected because they were all fully
accredited, had detailed student data systems in place, and had at least four retention-related interventions in place. In addition, at all four sites, there was a strong commitment on the part of administrators and institutional research personnel to participate in the study. Three of four sites also had entering student bodies for Fall of 2009 that were at least 10% minority. The four sites enrolled a total of 5,674 incoming students in Fall 2009, and a similar number in 2010, all of which are being followed using institutional data.

**Data Sources**

Study data sources include institutional data, student surveys, student and staff interviews, and publicly available sources such as course catalogs and websites. Institutional and survey data are being used to follow two incoming cohorts of community college students (all entering students in Fall 2009 and Fall 2010, including former dual enrollment students who exited high school and subsequently enrolled in college) at four sites over a three-year period (Fall 2009 through Spring 2012). By the end of Spring 2012, the study will have amassed three years of institutional and survey data on the 2009 cohort (Cohort 1) and two years of institutional data, plus a single survey, on the 2010 cohort (Cohort 2), as well as interview data from a small sample of students from both cohorts.

**Data Analyses**

Analyses of data obtained over the course of the study employ logistic regression and hierarchical linear models to determine which interventions are associated with retention and completion of occupational degrees and programs, and the extent of student retention, and examine the interaction of these interventions with each other and with key student variables. In addition, the study conducts surveys and interviews of samples of students from each cohort to further support the assessment of the effect of mediating and moderating variables for which data are not collected by institutions.

**What We Learned**

**Interventions.** The interventions under consideration in this study are those identified by the four sites as intended to have an impact on retention and completion. The interventions identified as in place at two or more sites include:

- **Pre-enrollment and orientation programs** (e.g., credit for prior learning and experience, dual enrollment of high school students, orientation, and prep/bridge programs)
- **Advising and counseling programs** (e.g., academic advising, early alert and mid-term intervention systems, personal counseling, probation/suspension, and retention advising/counseling)
- **Curriculum and instruction programs** (e.g., Adult Basic Education (ABE) on-site, cohorts, college success skills courses, developmental education, English as a Second Language (ESL), learning communities, online and hybrid courses, and tutoring)
- **Extracurricular activities programs** (e.g., athletics and recreational sports and student activities and organizations)
- **Programs providing support for low-income students and special populations** (e.g., disability services, TRIO programs, financial aid, multicultural programs, veterans’ services, and women’s programs)
- **Programs providing support for post-college transition** (e.g., career exploration and counseling and transfer services)

**Survey and interview findings.** Initial analyses have been conducted using data available from the 2009-2010 academic year. Among the first-year survey highlights:

- Occupational students are less likely to have entered college immediately after high school and are more likely to seek a certificate or a two-year degree than non-occupational students.
- Occupational students were more likely to have experienced a major life event in the past year, particularly financial setbacks.
- Most students participating in the survey were employed, regardless of their occupational or non-occupational status.
- Although the overall retention rate varied from site to site, the difference in the proportion of occupational and non-occupational students retained at each site from Fall 2009 to Spring 2010 is relatively small.

Retention interventions, although sharing goals and strategies across sites, were found to be implemented in ways that are locally determined and often quite inventive. The process of interviewing staff about these programs has helped project researchers understand the degree to which two programs of the same name or type might differ across sites, and this information continues to be helpful as the data are examined for patterns within and across sites.
Current and Future Study Activities

Although the survey results from Fall 2009 offer some insights into the student population at the four colleges, the response rate is inadequate to allow generalization to other students in Cohort 1. For the 2010-2011 academic year, the study added a second cohort of students, those entering in Fall 2010. The central study activity over 2010-2012 is the acquisition of remaining data for Cohorts 1 and 2 and analysis of these data to meet the goals of the study. In addition, a third round of site visits are taking place in 2011. These visits focus on ensuring that the appropriate institutional data are being collected. Project researchers are working with college administrators, data managers, and staff to ensure data are as complete as possible. Structured interviews of college staff will be used to obtain missing details in descriptions of interventions and ascertain any changes to college programs or policies since the previous year. Project staff are also interviewing administrators to determine how retention interventions are selected and evaluated at each site, and are interviewing a small number of students to answer the last secondary research question, “How do retention interventions and combinations of retention interventions support the community college retention and completion of students in postsecondary occupational programs, from the students’ points of view?”

Conclusions and Recommendations

By analyzing how college retention interventions affect student outcomes, this study will inform community college administrators and policymakers about which interventions are successful and for whom. The results of this study are also expected to provide postsecondary institutions with data supporting the development and implementation of other effective policies and programs to improve student persistence. The researchers hope to conduct a follow-on project to develop a suite of interventions, along with guidelines concerning their likely value for different populations of students. In turn, colleges will have greater success in preparing graduates who will be able to meet the challenges of a rapidly changing global economy.

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