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Retention of Most-at-Risk Entering Students at a Four Year College

Abstract

The literature on retention and graduation of college students suggests that institutions that serve higher proportions of at-risk students, such as low-income, first-generation, and minority students, have generally lower four-year and six-year graduation rates. Using both quantitative and qualitative research methodologies, this study focused on the retention of students from first to second year and from second to third year at a four-year college. Consistent with the literature, it was found that a disproportionately higher percentage of the at-risk students are likely to leave college without graduating. This study adds to the literature by providing specific information about factors that affect student retention from the first to the second year and from the second to the third year.

Introduction and Research Questions

Universities and colleges in the United States have shown keen interest in increasing the retention and graduation rates of low-income, first-generation, and minority college students in part because the literature suggests that institutions that serve higher proportions of low-income, first-generation, and minority students have generally lower four-year and six-year graduation rates. The literature in this area has identified common practices and policies that increase retention and graduation rates of such students. These practices and policies include designated faculty and staff members who work as "first responders;" a high level of student engagement in campus activities and programs; well-developed first-year programs; efforts to improve instruction in "gate keeping" introductory courses particularly in mathematics; early warning and advising systems; and ample academic and social support services such as advisement and special programs for at-risk populations (Astin & Oseguera, 2005; Carey, 2004; Gansemer-Topf, & Schuh, 2004; The Pell Institute for the Study of Opportunity in Higher Education, n.d., 2004).

Based on a literature review of at-risk student populations, the purpose of the current study was to compare retention statistics of low-income, first-generation, and minority students at a four-year college in the Northeast and to explore the reasons that specific populations of students leave college prior to graduation. The study tested the hypothesis that lower graduation rates for

at-risk students could be attributed to lower rates of retention from the first to the second year and from the second to the third year during their college studies. It sought answers to the following questions:

1. What are some of the most crucial factors in retaining low-income, first-generation, and minority students from the first to the second year and from the second to the third year?
2. What are some of the reasons that low-income, first-generation, and minority students leave prior to their second year or third year of their college experiences?

The answers to these questions are the result of Project Compass, a multi-year initiative carried out at Eastern Connecticut State University, which began in the summer of 2007 with a grant from the Nellie Mae Education Foundation. In conjunction with Eastern's strategic plan, one of the first Project Compass Grant initiatives resulted in the formation of the Academic Services Center (ASC), which opened in the fall of 2008. ASC includes the Mathematics Achievement Center, Writing Center, Tutoring Center, and the Advising Center and hence provides a one-stop center for key student support services. In addition to providing initial funding for ASC, the Project Compass grant supports four working groups: Advising and ASC Structure, Quantitative and Qualitative Data Analysis, Math/Writing Center/General Tutoring, and the First-Year Program and Faculty Development. Following the planning grant, in Year 1 of Project Compass the Data Analysis Group focused on identifying students who were most-at-risk of withdrawing prior to their second year and on assessing the effectiveness of the ASC services using both quantitative (logistic regression) and qualitative data (focus group interviews). During Year 2, the Data Analysis Group focused on predicting retention of both first and second year students, additional assessment of ASC services, and assessment emanating from a newly established faculty-development component. As part of faculty development, a blended, "asset-based" course was developed and offered to both part-time and full-time faculty. During Year 3 (the current year), the Data Analysis Group is focusing on predicting retention of first, second, and third year students and on assessing the effectiveness of various intervention strategies on different ethnic groups.

Methods and Data Sources

For the purpose of this study, low-income refers to Pell eligible students; first-generation consists of students for which neither parent has an associate's degree or higher. In addition, the study restricts its attention to cohorts of first-time, full-time students who enter the university in the fall semester.

This study used a mixed-methods research design (Creswell, 2008; Johnson & Onwuegbuzie, 2004). For quantitative analysis, automated data extracts (in the form of e-reports) from admissions applications and the university's data management system were developed. The e-reports provided easily accessible data used in the development of logistic regression models to identify students who were at risk of withdrawing in their first, second, and (currently under investigation) third years as well as significant factors related to withdrawal. In addition, the automated data extracts were designed to support data analysis focused on calculating, comparing and tracking retention statistics for minorities, low-income, and first-generation college students in comparison to the rest of Eastern's student population. Retention predictions from the model were compared to the actual retention statistics for the 2008 and 2009 cohorts. Second-to-third-year persistence predictions were compared to actual persistence statistics for the 2008 cohort.

For the qualitative component, a total of 19 focus group interviews were conducted with students from the various targeted cohorts, full-time and part-time faculty, and professional advisers (114 people in total). The interview questions were drafted with the goal of identification of reasons for students' withdrawal and ways to address students' needs on campus. Each interview lasted approximately one hour. All of the interviews were first audio taped and later transcribed. The qualitative data were analyzed using the constant comparative method (Guba & Lincoln, 1989). Furthermore, minutes of monthly faculty and staff meetings were analyzed to explore possible reasons for student withdrawal from the college.

Results

As discussed above, logistic regression models were used to predict the probability of withdrawal. Hence, a positive value for coefficient *B* indicates a variable associated with increased likelihood of withdrawal. Tables 1 and 2 list variables in the models related to the

research questions. Variables significant at 0.1 level have been highlighted. The logistic regression model presented in Table 1 shows that black students were more likely to be retained from the first to the second year compared to their white counterparts. In all three years of data analysis, coefficient *B* for Black is negative even though the p-values were not consistently less than 0.10. Although the pattern of withdrawal was fairly consistent for Blacks, that was not the case for Hispanics. The data from the 2010 cohort predicted that Hispanic students were more likely to withdraw from the first to the second year ($p < .01$). However, Hispanic was not a statistically significant factor in the logistic regression models for the 2008 and 2009 cohorts. In the same way, first generation was not a statistically significant factor in any of the first-year retention models; however, the value of *B* associated with that variable was consistently positive (indicating an increased likelihood of withdrawal). The reverse is true for the factor low income (Need-Grant or Pell); although the coefficient *B* associated with that factor was not significant, it was consistently negative. There was some consistency based on students' towns of residence. The models indicate that students who live west of the Connecticut River are more likely to withdraw. They were also more likely to withdraw prior to their second year if they lived in a more affluent town, a factor that was introduced into the model for the 2010 cohort. The 2010 cohort of student data indicated if the District Reference Group (DRG) was *A* (most affluent), they were more likely to withdraw ($p < .01$). However, the towns in DRG *A* lie west of the Connecticut River. Hence, it is difficult to say whether students are likely to withdraw because they are from an affluent town or because they are far away from home. It could also be a combination of both.

Table 3 contains retention rates related to the 2008 Project Compass cohort (low-income, first-generation, or minority students). Overall, the Project Compass Cohort (PCC) students (and all subgroups) were retained from the first-to-the-second year at a higher rate than the non-PCC students. However, the average number of credits earned the first year was 1.189 credits less for the Pell students than for the non-Pell students and 3.901 credits less for the minority students than for the non-minority students. In the same way the grade point average (GPA) of the PCC students (first-generation, Pell, or minority) was lower compared to the non-PCC students. Not surprisingly, first-year GPA and credits earned were important factors in students' persistence from the second-to-the third year.

The second-to-third year persistence rates are also provided in Table 3. The patterns are just the reverse of the retention rates – the rates for the PCC students and all subcategories that make up the PCC are lower than for the non-PCC students. The second-year persistence model (see Table 2) indicates that Hispanic students are significantly more likely to leave prior to their third year compared to whites ($p < .05$). For blacks, although not significant, the coefficient is positive. Although not significant in the first-year models, the second year model for the 2008 cohort predicts that the persistence rate of Pell students in the second-year model is lower than for non-Pell students ($p < .01$). In addition the model indicates that students from more affluent backgrounds (DRG ABC) who are retained their first year are then significantly more likely to stay from the second to the third year.

The reasons for at-risk students' withdrawal prior to their second or third year were further explored using the qualitative data. There is a common belief among some faculty and staff that students leave Eastern because of their lack of academic preparation and failure to successfully complete required courses. Although it is true that some students leave Eastern solely for academic reasons, the focus group interviews indicate that students who have decided to leave Eastern leave for various reasons. The primary reasons that students left the university were: financial difficulties, lack of family support, lack of engagement and motivation, lack of confidence (self-efficacy), lack of academic preparation, and lack of proper advisement. A significant number of students also left the university because this institution was not their first choice.

The Student Development Specialists (SDS), based on their contact with students through advisement, identified several reasons why students leave Eastern.

> The primary reason students leave is because they are not successful due to financial aid and work. Some of these students come from dysfunctional families. These students come to college and are seen as the family member with the most flexible schedule, they are family problem solvers and resources for the family. They get drawn off into family needs and that becomes their priority instead of academics. They have problems creating boundaries and telling their family they are busy and can't leave campus. They will first deal with family

> things. The academics become secondary. The families don't understand they are working here, not hanging out and having fun with friends.
>
> The most at-risk groups are first generation, low income that do not know how to navigate campus and academic life and are reluctant to ask. Once they do come in, they utilize the support services but will get drawn off if family and financial issues become too much.

Other SDS agreed with these statements and corroborated that issues related to family factors were a major reason for withdrawal. As one SDS stated, "Some students just are not ready to be here. Sometimes the family pressures students to go to college and it's not for them." In some cases, the families did not have sufficient financial resources. They managed the resources just for one semester (fall) and then students were left to worry about the finances in the spring semester. "Many students are just learning about college and then they have to figure out the financial piece. Many are working so many hours outside of Eastern...Big Y, waiting tables, etc. They are killing themselves."

Faculty focus groups echoed this feeling. A faculty who was liaison to the Advising Center stated,

> There are probably a lot of students that are officially full-time but they are working more than 20 hours per week. That could impact their graduation rate. We haven't really analyzed the number of students working more than 20 hours a week to see if there is a correlation with workload outside of Eastern with the amount of time it takes to graduate. I'd rather see students take fewer classes and get a solid grade than to squeak by with 4 or 5 classes, get the minimum 2.5 GPA. The job opportunities will be less for the 2.5 grad than the 3.0 graduate.

A faculty member who has been teaching a first-year course said students do not take notes during the class and they "don't want to mark up their book because they want to sell it." Another faculty member added, "I have students who don't buy the book because they can't afford it."

Consistent with SDS and teaching faculty, some students attested the importance of work for financial reasons. A student said, **"**If I go home just for like a weekend, like Friday, Saturday and then come back on Sunday. Sometimes I work over there in the weekend." Another student said, "When I go home over spring break or Christmas break and for a longer period then I would work." A second year student said, "I know the reason my friend is dropping out is financial. She needed a job to afford school and couldn't handle a job and classes. She wants to, she just can't. To get Financial Aid, you have to take 12 credits and it just did not work for her."

Sometimes students leave simply because of a family situation. For example, one first-year student, who was moving to Florida, said, "I'm not moving because I want to. I'm moving because my parents, my mom's already down there to a new job. My father's moving down there for another job and they will all be down there and want me to be closer. That's why I have to move."

The focus groups were consistent in reporting that students were more likely to withdraw if Eastern was not their first choice. According to them some students came to Eastern knowing that they would transfer to another institution after their first or second year.

> Some students always intended to use Eastern as a starting place, always planning to leave after a semester or two. One of my students was waitlisted at UConn so came to Eastern and was already accepted into UConn for the second semester. Her friend was doing the exact same thing. Some students see Eastern as a place to start if they didn't get into their first choice. They want to do well here so they can move onto their first choice. (Student Development Specialist)

> The ones that don't attend or may not engage [in class] can sometimes be the stronger students and they don't see the value in LAP130 [a first-year colloquium] and they don't want to be there. The stronger students in my LAP 130 have left Eastern. Typically the 3 or 4 top students go to UCONN or out of state. It's a value judgment on their part. They don't see something at Eastern that keeps them here. Some of them take my course because they want to get into other programs and they want to be in the program so they are taking the LAP130 in case they complete at Eastern. I think it's a decision they make when they get

> here and it's discouraging because these are the top students who chose to come to Eastern. They decide they want a program we don't have (such as nursing). So are these students considered failures or successes? I fear we are not counting them. I would count them as a success. They choose not to complete at Eastern but they complete somewhere else. In the annual statistics they are failures-people we didn't keep. (Faculty Teaching LAP 130)

A second-year Targeted Advisement Cohort (TAC) student said, 'A lot of my friends transferred to larger schools. They were okay with the academics here but wanted a larger school---many for the parties. On the other hand, some just left because they could not handle the academics."

A member of the Student Advisory Council (SAC) said,

> I know a lot of students drop out mainly because of frustration. They can't balance the academic and social life at Eastern. We have to encourage people to get involved in social activities for a balance between academic and social. I was probably one of the luckier ones. The FYR's [a one credit First-Year Resource course] need to be more personal. If I was a student who had no idea how to balance, it would have helped if I had better advisement as freshmen. High school compared to college is so different.

It was evident from focus groups that the students who were more successful were able to balance their social and academic lives. Peer mentors and members of the Student Advisory Council were most successful because of their ability to balance their lives. They were highly motivated, did well in their academics, and participated in clubs and activities. Consequently they were retained at a higher proportion than students who could not balance their academic and social lives.

Qualitative data analysis from faculty, staff and student focus groups has provided greater understanding of why students leave Eastern, suggesting that greater focus is needed on family issues, financial and other counseling, and especially in engaging students in university activities early on through student clubs, employment, peer advising and tutoring.

Significance and Implications

The quantitative and qualitative data indicate that a disproportionately higher percentage of low-income, first generation, and minority college-students are likely to leave without graduating, even though they were more likely to be retained from the first year to the second.

The findings from this study have been very useful in improving services at Eastern. The university created the centralized Academic Services Center and has developed a comprehensive four-year advising plan for improving first-year advising and enhancing advising from summer orientation through the major, to graduation. The Academic Services Center has expanded the opportunities for experiential learning for Eastern's students whether serving as peer advisors, peer mentors, or tutors. Faculty have been involved in an online course and campus-wide discussions on how to best utilize assets of targeted student cohorts, and understanding of their characteristics, to improve their probability of retention and progress to graduation. As a result, student satisfaction with advising and services has increased over previous years and is consistent for all groups interviewed

The outcomes of this study are useful for all colleges and universities in which at-risk students are enrolled. This study provides empirical evidence of not only who leaves and who stays in college but also why they leave and why they stay. This study adds to the literature by providing specific information about factors that affect student retention from the first to the second year and from the second to the third year. The paper provides information about minority students (blacks and Hispanics), whose retention rates from the second to the third year are significantly lower than that of their white counterparts. The findings from this study clearly imply that low-income, first-generation, and minority college students need support not only during their first year but also during the second year of their college experience. Further studies are needed to investigate what kinds of supports are essential for these students particularly during their second year. This information could be beneficial not only for educational researchers but also for university administrators who are interested in increasing retention and graduation rates of at-risk students.

Next Steps

The university is currently focusing on identifying students' assets and developing a repertoire of teaching and advising strategies based on those assets. A hybrid course for faculty has been created with an intention to develop strategies to utilize students' assets and culturally relevant pedagogy. A special focus is also placed on differences among minority students in order to tailor interventions/resources to better meet their specific needs. Further research is being carried out on second to third year persistence patterns and on the development of multivariate models for making year-by-year projections toward graduation.

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Table 1. First Year Retention Logistic Regression Model

2008 Cohort

Variables	B	Sig
Black	-0.127	0.746
Hispanic	0.257	0.481
First Gen	0.216	0.218
West CT	0.466	0.017
Fed Loan	-0.680	0.002
Need-Grant	0.567	0.141

2009 Cohort

Variables	B	Sig
Black	-0.867	0.047
Hispanic	-0.036	0.927
First Gen	0.237	0.270
West CT	0.326	0.111
Fed Loan	0.249	0.253
Pell	-0.085	0.819

2010 Cohort

Variables	B	Sig
Black	-0.441	0.054
Hispanic	0.561	0.008
First Gen	0.070	0.491
West CT	0.434	0.000
Pell No Loan	0.144	0.551
Pell Fed Loan	-0.193	0.208
DRG A	1.048	0.002

Table 2. Second Year Persistence Model

2008 Cohort

Variables	B	Sig
Black	0.213	0.611
Hispanic	0.970	0.027
First Gen	0.148	0.539
West CT	-0.109	0.637

Pell	0.677	0.009
DRG ABC	-0.508	0.069

Table 3. First-to-Second Year Retention and Second-to-Third Year Persistent Rates

2008 Cohort Variables	First-to-Second Year Retention	Average Credits Earned	Average GPA	Second-to-Third Year Persistence
PCC	79.6%	25.532	2.561	81.35
Not PCC	73.3%	26.377	2.630	87.3%
Minority	81.3%	22.658	2.255	78.6%
Not Minority	75.8%	26.559	2.659	85.1%
First Generation	80.9%	26.048	2.629	82.1%
Not First Gen	73.8%	25.834	2.568	85.4%
Pell	84.5%	24.951	2.499	78.9%
Not Pell	75.0%	26.140	2.614	85.2%