

Putting Stock in Students: Exploring Effective Retention Efforts on College Campuses

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College attendance rates have been on the rise since the early 2000s (National Center for Education Statistics, 2018). Retention came to the forefront of higher education shortly after the financial crisis, when students were fleeing the market in pursuit of opportunity that did not cost upwards of \$100,000 (Matthews, 2009). Institutions were forced to re-strategize, so they shifted their focus from initial enrollment to retention. Since 2009, the overall retention rate has continued to rise with an increase of about 2.6 percentage points since 2009, (National Student Clearinghouse Research Center, 2018). This paper will examine both the statistical and practical impact each of financial or post-admission retention designs have on students. Many of these studies examine the impact of these efforts on underserved students, and although these efforts are both vital and necessary for these students, this essay will be focusing on the causal nature of retention efforts as a means to retain any student, rather than specific communities on campus that may particularly be susceptible to high drop-out rates.

States and institutions have become creative in their efforts to maintain high student attendance within institutions of higher education. Research has suggested that various retention efforts vary in their effectiveness for groups across campus. Dependent upon the intended treatment group, the type of effort needed to retain students from semester to semester varies. All retention efforts examined in this paper falls into two categories: financial aid and post-admission support. Within these subgroups include federal financial aid, state financial aid, campus scholarships or financial offerings, advising, mentorship and coaching opportunities, and academic guidance.

Financial Aid

When referencing financial aid, this does not necessarily refer to the money received through the filling of a FAFSA form. Although some of these efforts are received through state or federal government programs, the forms of assistance explored in this paper may be different than those received in the form of a low-interest loan from the federal government. The studies included in this paper are sourced from state and federal government programs, including both grants and scholarships. Non-governmental organizations also provide student scholarships and grants in various states, and the effectiveness of these programs will also be explored below. Campuses also provide their own form of assistance, although merit scholarships are lacking from the literature--this will be discussed later as a limitation of the literature on retention efforts.

State-Level Interventions

The first type of financial aid to be examined is a state-level intervention. Many states utilize grants or scholarship programs for a variety of reasons. For most state-provided grants or scholarships, these are limited to use within the state at public institutions. This reduces the number of students that flock to neighboring states for an education. In a study discussed later in this brief, this reduced the number of “leavers” to out-of-state institutions from eight percent to just four, (Angrist, Autor, Hudson, & Pallais, 2016). The focus of these programs is retention, however, this can clash with the institutional goals of in-state public institutions because the state government is not as concerned that the students stay on the same campus all four years, just that the campus they do enroll at is in-state. It is important to understand the focus of these programs so one may comprehend their unintended consequences--including how they play out both on campus and in a student’s decision making process prior to enrollment.

Florida is one state that maintains several incentives for students to remain in-state at public institutions. A need-based grant called the Florida Student Access Grant (FSAG) aims to incentivize students to matriculate to college immediately after high school to obtain a degree. Examining graduating

seniors of the class of 2001, Castleman and Long connected data from the Florida Department of Education K-20 Data Warehouse with in-state, public post-secondary data to understand the role the FSAG plays in student enrollment decisions. With a sample size of over one hundred thousand students, the authors utilized a regression discontinuity design to estimate the causal effect of FSAG eligibility on matriculation and persistence. With grant eligibility as the cutoff to view the margins, the authors found that FSAG eligibility increased the probability of enrollment, although this finding was not statistically significant. Furthermore, FSAG increased continuous enrollment rates by about three percent, increased the number of credits students earned by 2.2 credits, and thus increased on-time graduation rates for eligible students by about 2.5 to 3.5 percent, (Castleman & Long, 2013).

Similar to Florida, Nebraska has a scholarship program that aims to incentivize immediate enrollment in college after high school. This scholarship is provided through the Susan Thompson Buffett Foundation for eligible students that attend an in-state public institution. Eligibility is based on high school grades and GPA, however, it is important to note that eligibility is not as strenuous as other scholarship programs, (Susan Buffett Scholarship Foundation, 2019). About \$36 million dollars is awarded each year to Nebraskan students (Angrist, Autor, Hudson, & Pallais, 2016). The authors examine college-going cohorts between the years of 2012 and 2016, when more than 3,700 scholarships were awarded by random assignment. Please note that this is not perfect random assignment, with basic eligibility guidelines set for students to obtain. Students that were considered in the “middle of the pack” were the ones that received the scholarship by random assignment. This was intentional--high achieving students were likely to receive other incentives to attend, and low-achieving students were facing additional barriers that the scholarship would likely not be able to help them overcome. With this “noise” removed, the scholarship is isolated as a causal variable for students to attend college after high school graduation. Some of these students were also afforded the opportunity to participate in a learning community under the “College Opportunity Scholarships.” Although this is labeled as a “scholarship” this award is a post-admission support program. This program will be examined later under post-admission retention efforts.

The scholarship program proved to be causal for increased overall enrollment at public institutions in Nebraska. Community college enrollment boosted by about five percentage points, while other institutions experienced a modest enrollment boost. The main effect of the scholarship was a decrease in drop-out rate. Although the average graduation rate for scholarship recipients was five years instead of four, the treatment group was nearly two times as likely to extend beyond the third year, where the dropout rate is usually highest, with more than half of scholarship recipients persisting from year three to four. This is likely due to the nature of the award, with the money available for five years. Sophomore retention increased by about seven percentage points, whereas about 28 percent of the control group students left by year three, (Angrist, Autor, Hudson, & Pallais, 2016).

Wisconsin provides a need-based grant titled the Wisconsin Scholars Grant, and although the evidence is not causal, the authors found that this lottery system increased on-time graduation rates, (Goldrick-Rab, Kelchen, Harris, & Benson, 2016). Over twenty percent of the grant recipients graduated and received a degree, whereas only sixteen percent of the control group finished, (Goldrick-Rab, Kelchen, Harris, & Benson, 2016).

Federal programs have also participated in retention efforts. The intent of these programs varies, but few are for the sole purpose of campus retention. Rather, these programs focus on overall economic and educational investment for eligible populations. The Pell grant is one of the more notable programs the federal government offers for low-income students.

Another federal assistance program available in prior to 1982 was the Social Security Student Benefit Program. This program aimed to assist the children of deceased social security recipients. When the program was discontinued in the early 1980s, author Dynarski used the discontinuation of the program as the cutoff for a difference in differences design to understand the role the program played in enrollment and retention choices for eligible students. Although this study only examined the children of deceased men, Dynarski did find that the discontinuation of the program caused a decrease in enrollment for eligible students, (Dynarski, 1999).

Ohio students showed the prevalence and importance of the Pell grant in enrollment decisions in a study by Bettinger in 2004 by linking detailed financial data and postsecondary attainment data from the Ohio Board of Regents. Using the available information, a multi-state investment model was created for the freshman class of 1999-2000 school year. Regressions included fixed effects that controlled for the school the student attended, capturing quality and independent campus barriers to success. Although the strategy used is conditional on initial enrollment, the authors found a causal relationship between the Pell grant and drop-out rates, with those that receive the Pell grant less likely to drop out than those that do not receive it, (Bettinger, 2004).

The literature on state-level financial aid is twofold--first, the goals of the state vary from the goals of campuses. The money provided in Florida, Nebraska, or Wisconsin may incentivize students to remain in state, but this may increase the likelihood that students are to transfer between institutions from semester to semester. These studies also are state-focused, even when federal grant dollars are at play. The literature has yet to capture how these programs impact inter-state educational enrollment and decision making, or how these funds have shifted campus demographics or retention within institutions.

Campus Provided Financial Aid

Few campuses provide data on any merit scholarships provided to students. This is the case for several reasons. First, at particularly endowed campuses, this money is provided to incentivize athletes and legacies--a sensitive topic in admissions. Providing this information opens institutions up to criticism and potentially lawsuits. Because these scholarships are provided based on "merit" rather than eligibility criteria, this seemingly ambiguous and arbitrary deliverance of financial assistance leaves little room for defense in a court of law. This is not to say that students that receive merit scholarships are not deserving, this is just to point out that ambiguity leaves room for criticism within higher education and that little data exists on the topic.

Merit scholarships have, however, been studied in other countries, particularly Canada. In a study by Angrist, Lang, & Oreopoulos, students at a large public Canadian institution were randomly assigned various treatment arms including merit aid, post-admission support, and a combined treatment of both merit aid and post-admission support. Students who received merit aid earned fall grades nearly two percentage points higher than the control group, and those that received a combined treatment saw the greatest impact, with grades nearly three percentage points higher than the control, (Angrist, Lang, & Oreopoulos, *Incentives and Services for College Achievement: Evidence from a Randomized Trial*, 2009).

Post-Admission Support

The literature on post-admission support varies by both the strategic mission of the institution and available resources to pursue these campus goals. Post-admission support can include anything from advising, summer bridge programs, to small mentorship programs that are unique to a program or campus. Some of these are targeted for low-income, first generation, or other high-risk students. Other programs serve as a last-ditch effort to save certain students from dropping or failing out of college and acquiring debt without a degree. Overall, these programs tend to have a positive impact on students, whether this impact earns statistical significance on a Stata output. Due to the nuanced nature of student circumstances and the inability to randomize some of these treatments, few causal inference papers exist on this topic. This paper will explore the effectiveness of the various post-admission support programs campuses use to strengthen retention efforts for various student populations.

Advising is noted as one of the crucial keys to student success, particularly for at-risk students, (Christensen, 2016). In the study mentioned under merit aid by Angrist, Lang, & Oreopoulos, one of the three treatment groups were for post-admission support only. This treatment was relatively intensive. Students had access to peer advisors that received over a hundred hours of training, and voluntary academic support groups were available for major introductory courses. Although the findings were not statistically significant, the greatest impact was on women. This is likely because of the gender the peer

advisors available to them, with most of the peer advisors being women, (Angrist, Lang, & Oreopoulos, *Incentives and Services for College Achievement: Evidence from a Randomized Trial*, 2009).

Although post-admission lacks as many causal inference papers as financial aid, a large chunk of the papers includes valuable qualitative data on student experiences and preferences. For instance, a convenience sample of over thirty pre-nursing and thirty nursing students were asked about the important pieces of academic advising. The qualities listed by these students included knowledge, a tendency to foster and nurture students, as well as morality and virtue--all while maintaining an approachable stature, and strong organizational and communication skills, (Harrison, 2009).

Humanity is one key piece of the practice for underrepresented students at a predominantly white institution, (Museus & Ravello, 2010). About 45 individuals were interviewed, including 14 academic advisors and 31 racial/ethnic minority students. Of these students, 22 identified as low-income. The key takeaway from the interviews was that academic advisors had a responsibility to humanize the practice. All included in the sample stated the importance of shared responsibility the academic advisor has for minority students, ensuring that these students have access to the support they need, regardless of the nature of their problems. Academic advisors must be proactive, assuming a shared responsibility for student success. A systematized, proactive approach across campus offices is crucial for students from underrepresented backgrounds to succeed and thrive at predominantly white institutions, (Museus & Ravello, 2010).

Other forms of post-admission support can include course-specific incentives for student success. Clark, Gill, Prowse & Rush randomly assign students to two treatment groups, asking the treatment group to set goals for themselves within the course. This study occurred over multiple semesters of the same course, with students asked to set various types of goals. Some were asked to set overall course grade goals, some set goals on the number of practice tests they would complete that semester, some set goals on major assignments only. The study found that task-based goals are best for mitigating issues of self-control and have the potential to serve as a low-cost solution to improve college outcomes for all students, (Clark, Gill, Prowse, & Rush, 2017).

A multi-campus project of CUNY campuses in New York examined the causal impact of post-admission supports for their students. Students were randomly assigned eligibility for a post-admission support program called ASAP. Nearly 900 students were selected for eligibility. Overall, the study was a huge success, finding that the ASAP program caused an overall increase in graduation rates for the students of all campuses, (Weiss, Ratledge, Sommo, & Gupta, 2019).

Although the Susan Buffett Foundation mentioned in the financial aid section of this paper provided scholarships for students in Nebraska, they also assigned students to "learning communities." There were no statistically significant findings that enrollment increased for students that participated in the learning communities, (Angrist, Autor, Hudson, & Pallais, 2016).

Moving Forward: Retention Efforts and Limitations of the Literature

There are multiple limitations of the literature on retention efforts. First, it is difficult to provide a fully randomized trial to isolate each decision factor for students in the college-going process. Combined with limited campus resources, policymakers must make decisions based on the information available to them--lacking both causal evidence and direction.

Retention efforts are often only discussed in times of crisis. Particularly stringent and intentional retention strategies are reserved for the most at-risk students. Nearly all the post-admission support studies included in this paper were targeted for students that were already systematically less likely to succeed than their traditional counterparts. Therefore, it is unclear what retention efforts work for students that fit the traditional college-going checklist. Social researchers may be hesitant to examine this group because they are already the most likely to succeed, however, it may be the case that a rising tide lifts all boats, and the best method is to support already privileged students to de-stigmatize help for the underserved communities on college campuses.

It would be an understatement to say that college is a complex choice and process in which students face multiple exit points and disincentives to persist. Therefore, it is difficult to isolate any

treatment from the inevitable external and internal pressures students face when pursuing a degree. Retention is a continuum. The complexity of retention and student circumstance clouds the literature with little room for clarity. For instance, it is unclear in the literature if retention includes initial enrollment. It certainly relies on initial enrollment to retain from the first to second year and graduate after that. Does retention include graduating on time? Certainly, this is a benefit, but academia and campus leadership have not defined the scope of their efforts, making it unclear if a program assists in retention, enrollment, or persistence. Persistence and retention are often used synonymously both in campus mission statements and academia examining the topic. Persistence is supposed to mean that students persist year after year, whether they start at institution A and graduate from institution A, or transfer and graduate from institution B. Retention means that students remain at the same institution semester after semester, with the aim that they eventually graduate from the school they started at. However, academics often cite findings that students persisted from year one to year two, creating confusion around whether experiments successfully increase retention or persistence amongst targeted students.

Policymakers must first, before implementing programs that use valuable time and resources, decide the intent of the program itself. State policymakers are likely better off using financial incentives that keep students within their state, enrolling at public institutions. Programs like this cost less than it would to lose these students to private or out-of-state institutions. Keeping students in-state boosts economies, both state-wide and local to the communities surrounding institutions.

Institutions have many choices when it comes to effective retention strategies for their campuses. First, campus leaders must evaluate the demographics of their institution, as well as the students most likely to experience barriers to retention. As indicated throughout this paper, the literature on retention largely revolves around targeted retention efforts. Institutions will likely have little to no difficulty finding literature on effective efforts for the students at risk on their campus, if they choose targeted retention efforts.

In instances where resources are available, campuses should consider policies that incentivize overall retention with the goal that “rising tides lift all boats.” Where possible, institutions should internally track the student’s outcomes and the effectiveness of these implemented programs. Qualitative studies should also be captured when possible to understand how these policies and programs impact students beyond the quantitative outcomes measured. Research-based institutions should consider implementing new literature on the topic that will benefit their students, and other students on other campuses as well.

Although the effort is small, it is crucial for academia to strengthen their definitions and understanding of enrollment, retention, and persistence. Without clear definitions of each of these three things, the literature will continue to muddy the waters on retention efforts. Social scientists have a responsibility to value the subjects they study, whether these subjects are included in a dataset or participants in an in-depth interview. Each student that does not enroll, retain, or persist is a student that will likely be afforded fewer opportunities on the basis of their educational attainment, or lack thereof. Retention is a serious issue for campuses, not just because of the financial investment lost, but because of the lifelong outcomes afforded to graduates are stripped from students that do not finish. Education is not necessary for excellence, but it is our responsibility as leaders in the field to eliminate as many barriers to education as possible. Sometimes students fail the system--and sometimes the system fails students. We must do our part to fix the leaks in the graduation pipeline so that students have the greatest opportunities afforded to them by the institution they choose.

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