

Demography Is Not Destiny: Increasing the

Increasing the Graduation Rates of Low-Income College Students at Large Public Universities

THE PELL INSTITUTE for the Study of Opportunity in Higher Education



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The Pell Institute for the Study of Opportunity in Higher Education, sponsored by the Council for Opportunity in Education, conducts and disseminates research and policy analysis to encourage policymakers, educators, and the public to improve educational opportunities and outcomes of low-income, first-generation, and disabled college students. The Pell Institute is the first research institute to specifically examine the issues affecting educational opportunity for this growing population.

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EXECUTIVE SUMMARY

What accounts for the differences in retention and graduation rates among large public colleges and universities that serve *high numbers* of low-income students? To answer this question, the Pell Institute for the Study of Opportunity in Higher Education conducted a study to examine the institutional characteristics, practices, and policies that might account for such differences. This study, funded by the Lumina Foundation for Education, continues previous research conducted by the Pell Institute that analyzed retention policies and practices at smaller public and private four-year institutions with *high percentages* of low-income students. In the first study, we identified 20 four-year institutions with large proportions of Pell Grant recipients – 10 with higher than average graduation rates and 10 with lower than average graduation rates. Despite design limitations, the first study yielded important findings about what colleges and universities can do to improve student persistence.

The purpose of the current study was to determine whether the conditions for improving graduation rates that were observed at the smaller institutions are present or even possible to create at larger public institutions, where most low-income students in this sector are enrolled. The current study improves on the previous design by comparing 14 public four-year institutions with large numbers of Pell Grant recipients – 10 with higher-than-expected and 4 with lower-than-expected graduation rates given the characteristics of their incoming student population and other important institutional characteristics. By controlling for student and institutional "inputs" using regression analysis, we can more confidently attribute differences in graduation rate outcomes between "higher" and "lower" performing institutions to differences in policies and practices that were observed during this study.

In this report, we describe differences in institutional policies and practices, as well as commonalities among the higher-performing institutions. We discuss differences between the findings from the previous study and this one. Finally, we consider if practices aimed at improving overall graduation rates also work for low-income students, and offer recommendations for institutions. It is our hope that the cumulative results of our two studies will be instructive for policymakers and practitioners who seek to improve the chances for success for low-income students in higher education.

Findings from Large Public Institutions

The 14 institutions that participated in this study represent a diverse group of public four-year universities in terms of geographic location, institutional mission, and student body characteristics. Ten of the institutions graduate students at higher than expected rates, and four at lower than expected rates, after controlling for student and institutional characteristics through regression analysis.

To more fully capture and contextualize the differences between the institutions, we developed a typology with four categories that generally correspond to the relationships between institutions' actual and predicted graduation rates and between their actual rates and the national average. By describing our findings in this manner, we hope that practitioners and policymakers will be able to more readily see their institutions reflected in the study and be able to use its findings in ways that make sense given the realities on their own campuses.

High-Highs have higher-than-expected graduation rates and high graduation rates relative to the national average. High-Highs a.k.a. "The Traditionalists" are large research-extensive institutions with selective admissions that serve traditional student bodies. However, their students are graduating at better than expected rates, even after taking their strong academic backgrounds into account. High-Highs offer a wide range of support programs and services; but they place a high degree of responsibility on the students themselves by operating on a "self-service model." Improving retention is important at the High-Highs, although it is not necessarily their most pressing concern since graduation rates have been high and stable for years. Faculty support for retention initiatives was described as low, though, because they feel they are not provided with adequate resources or rewards for focusing on improving undergraduate success. This reflects the tension observed between the multiple and conflicting missions (i.e. research vs. teaching) at the High-Highs.

High-Averages have higher-than-expected graduation rates that are near the national average. High-Averages a.k.a. "The True Believers" are medium-sized institutions with moderately selective admissions that serve mostly traditional student bodies. Despite their size, High-Averages have a "small school feel" with high levels of student engagement on campus and student-faculty interaction. A student-centered culture is the result of intentional retention policies and practices that aim to institutionalize a "holistic approach to student development and the campus experience." High-Averages take a large degree of responsibility for student success by communicating expectations to students early through first-year programs, systematically monitoring student progress through "intrusive" advising and early warning systems, and providing students with ample support services. Improving graduation rates is a high priority for top administrators, who are "true believers" in the retention literature. Administrators create an institutional culture that promotes student success by providing adequate resources to fund programs, and offering rewards to faculty and staff for getting involved in retention efforts.

High-Lows have higher-than-expected graduation rates given their incoming student characteristics, but are lower than national averages. High-Lows a.k.a. "The Strivers" are medium to small-sized institutions with the least selective admissions in the sample that serve largely non-traditional students. Given such challenges, High-Lows may seem unlikely to include as "higher-performing" institutions. However, they can offer useful insights given their "relative" success. To improve retention, High-Lows are integrating traditional freshmen programming with curricular and instructional reforms in general education and remedial courses in order to transform the first-year experience. There is also high participation in special programs for at-risk populations that provide structured and intensive support to students through bridge programs, advising and mentoring, tutoring, and financial aid. Campus-wide expansion of special programs could result in higher overall graduation rates, although doing so is constrained by both the scale of the retention problem and inadequate resources at these institutions.

Low-Lows have lower-than-expected graduation rates that are lower than national averages. Low-Lows a.k.a. "The Underperformers" are medium- to large-sized institutions with moderately selective admissions that serve mostly, but not exclusively, traditional student populations. Compared to High-Lows, students at Low-Lows are somewhat more prepared for college and generally have fewer risk factors, but have similar or lower persistence rates. Thus, factors beyond student demographics related to institutional resources, policies, and leadership limit the effectiveness of retention efforts. Like High-Lows, Low-Lows face barriers to campus-wide implementation of effective retention programs for special populations, such as lack of resources and "turf wars." Administration-led retention efforts are underway, but there are also barriers to implementation such as a history of "failed" retention efforts, and lack of commitment to retention by administrators and faculty.

Common Practices and Policies Across "Higher-Performing" Large Public Institutions

As in the previous study, the majority of higher-performing institutions have moderately selective admissions and serve mostly full-time, residential, traditional-age student bodies. However, all the institutions in this study were selected because they serve large numbers of low-income students who are at risk for not completing college. Furthermore, students at the higher-performing institutions are graduating at better than expected rates, even after taking their relatively strong academic backgrounds into account. Therefore, what these universities *do* in terms of policies and programs, not just who they *are* in terms of student and institutional characteristics, contributes to the success of their students. Common practices and policies at higher-performing institutions include:

- Designated faculty or staff members as "first responders" to students' needs, helping students navigate these large, complex institutions.
- Relatively high levels of student involvement and engagement in campus activities and programs, which personalize the college experience for students.
- Well-developed first-year programs, such as freshman orientation programs, freshman success courses, freshman interest groups, and first-year learning communities, in which student participation is mandatory or high.
- Efforts to improve instruction in "gatekeeping" introductory courses, particularly in mathematics, such as reducing class sizes or keeping class sizes "small" through supplemental instruction.

- Early warning and advising systems in place to monitor student progress and to intervene when student performance is low.
- Ample academic and social support services, which are well-utilized by students due to proactive efforts to coordinate services with advising systems, to advertise services widely, and to train faculty and staff about available services.
- Special programs for at-risk student populations that incorporate many of the "best practices" in the retention literature.
- Strong leadership from top administrators who create an institutional culture that promotes student success by using rhetoric that demonstrates their commitment to retention, providing adequate resources to fund programs, and offering rewards to faculty and staff for getting involved in retention efforts.
- A central person, office, or committee that coordinates undergraduate education and/or retention activities across academic and student affairs staff and programs in order to foster collaboration.
- An emphasis on using data about retention in the decision-making process as well as on evaluating new retention programs in order to improve delivery of services, outcomes, and the efficient use of limited resources.

Does What Works for All Students Work for Low-Income Students at Large Public Universities?

The institutions in both studies were primarily focused on improving overall retention rates by implementing strategies that addressed the needs of the general student population rather than focusing specifically on the needs of at-risk students. In the previous study, low-income students were as likely to benefit from these retention efforts as other students since they were in the majority on these small campus. In the current study, however, low-income students differed from their peers in ways that limited the extent to which they utilized available retention services and programs at these large institutions. Barriers to participation include:

- Due largely to their lack of exposure to college, low-income students aren't aware of the programs and services that exist on campus, or they don't understand the function these programs serve or how they could benefit from them.
- A number of programs and services, such as orientation and tutoring, are fee-based and lowincome students cannot afford them. Students also cannot afford the incidental costs associated with such programs (i.e. costs incurred during travel and/or in taking time off work).
- Low-income students who live and work off-campus cannot take advantage of available services or programs because these are not offered at times that are convenient for them.

- Low-income students face difficulties with seeking and asking for help because they fear exposing or stigmatizing themselves.
- Low-income students "fall through the cracks" when retention services and programs lack centralization, coordination, or resources. Such programs were most likely to reach low-income students when they were offered to and/or mandatory for all students.

Impact of State and System Policies on Low-Income Students at Large Public Universities

Unlike in the previous study, state and system higher education policies had a major impact on retention efforts at the large public universities, with mostly negative results for low-income students:

- Admissions All of the large institutions have recently increased admissions standards (e.g. restrictions on remediation) and most have undertaken efforts to further increase recruitment and enrollment of more academically-qualified students (e.g. offering more merit-based financial aid). These trends had a negative impact on access for low-income and minority applicants at many of the institutions.
- Funding and Financial Aid All of the large institutions were negatively affected by steep declines in state funding for public higher education over the past five to ten years. In response, all of the institutions have raised tuition in recent years, in some cases dramatically. As a result, many of the institutions report high and increasing levels of unmet financial need among students.
- Mission The large institutions serve multiple, and at times conflicting, constituencies and missions. Most of the higher-performing institutions were concerned about improving their reputations and rankings given current performance by "objective" graduation rate standards that fail to account for student inputs as we did. The institutions felt the need to compete with more highly regarded institutions, often in the same system, by recruiting the most academically-qualified students rather than serve as an access point for the diverse populations they are already serving well.

Conclusions and Recommendations

Our research indicates that many of the same conditions for success were, in fact, present at the small and large higherperforming institutions in both studies:

- A personalized education experience. Despite much higher enrollments than the small institutions, many of the higher-performing large public universities were able to "personalize" the undergraduate experience by making early contact with students through first-year programs, closely monitoring student progress through advising and early warning systems, limiting class size and/or reducing the negative effects of larger class sizes through supplemental instruction programs, and offering students individualized services and support in special programs.
- A commitment to undergraduate education. Though they serve multiple missions and constituencies, which conflict at times, a commitment to teaching and serving undergraduates was still an important part of the mission at all of the higher-performing large institutions. Some of the higher-performing institutions intentionally recruit and hire faculty who support the teaching mission of the institution. They also reward faculty in terms of promotion and tenure for focusing their time and attention on teaching undergraduates.
- A sense of shared community. Despite more heterogeneous student populations and less geographically isolated locales than the small institutions, many of the higher-performing large institutions were able to create a sense of community by promoting student involvement in campus activities and events, even at the institutions where the majority of students live and work off-campus. Participation in special programs also gave students a greater sense of belonging, as did involvement in college- and/or department-sponsored programs and events.
- An institutional culture that promotes success. Given the size of the institutions in the current study, creating a success- or improvement-oriented culture required much stronger leadership and higher levels of coordination than in the previous study. The higher performing institutions in this study were characterized by: key administrators who articulated a centralized vision and commitment to retention; support for and involvement in retention efforts from all members of the campus community; and campus-wide coordination and/or collaboration in retention programs, even when offered by separate offices or departments.

A major difference in this study, however, was that low-income students faced barriers that limited the extent to which they could participate in retention programs at large public universities. Furthermore, trends toward greater selectivity and reduced affordability at these institutions had a negative impact on college access and success for low-income student populations, which raises questions about which "public" is being served. In this era of college rankings, the institutions felt immense pressure to prioritize "excellence" over "access." If our research is any indication, it is indeed possible to serve as both a point of access and an exemplar of excellence. In order to re-align their priorities toward access, large public universities will need better incentives and rewards from systems and states for serving and graduating underrepresented populations. Given the rapidly changing demographics of higher education, such realignment is imperative.

While the findings we present here identify a number of promising institutional practices and policies that aid student retention at large public institutions, we also identify improvements that need to be made in order to increase

access to and success in these institutions, particularly for low-income students. Based on our research, we offer the following recommendations to be implemented at the institutional, state, and/or federal levels:

- Develop retention programs with low-income students in mind. The institutions we visited were primarily focused on improving overall retention rates by implementing strategies that addressed the needs of the general student population rather than focusing specifically on the needs of atrisk students. However, low-income students differ from their peers in ways that limit the extent to which they can utilize or participate in retention services and programs. Thus, institutions need to focus on the special characteristics and circumstances of low-income students when developing and implementing retention policies and practices on their campuses.
- Increase the use of disaggregated data in retention decision-making and program evaluation. While many promising retention practices were identified in the study, the use of data and evaluation was not as prevalent as it could or should have been at many of the institutions. In fact, most institutions could not provide persistence and graduation rates for low-income students due to limited data capabilities. Institutions need to improve their ability to collect disaggregated data in order to inform programmatic and policy decisions about retention.
- Implement provisional admissions programs to increase economic diversity. Given the trend toward greater selectivity in public colleges and universities, institutions should consider implementing provisional admissions programs like those described in this report in order to maintain economic diversity on campus. Many of the institutions in this study have evaluation research that shows that participants in such programs have the same or higher persistence rates as the overall student population despite entering with lower high school GPAs and/or SAT scores. However, institutions that choose to implement such programs will also need to increase their recruitment efforts among low-income and minority students because more stringent admissions requirements may be discouraging these students from applying at all.
- Reward institutions that provide an excellent education for all while maintaining access for low-income populations. Systems and states need to revisit how distinctive missions for different institutions are defined and assess institutional success accordingly. Otherwise, systems and states are allowing, and to some extent, encouraging universities in the same system to duplicate missions as research-focused institutions. Alternatively, systems and states may need to create better incentives to reward universities for serving both access and excellence missions. This is increasingly important given rapidly changing demographics and labor market demands.
- Require institutions to report retention and graduation rates by income. Postsecondary institutions are not required to disaggregate and report six-year graduation rates by student income level or even Pell Grant recipient status. As a result, few colleges and universities analyze and report such information, which makes it unlikely that institutions will identify or address retention gaps between low-income students and their peers. This needs to change. A national system of student-level data, based on the statewide systems currently in place in more than 40 states, could address this and other limitations in the available data. The U.S. Department of Education could further strengthen support for this proposal by providing the incentive of federal money to institutions that participate in the system and address achievement gaps that are identified as a result.



INTRODUCTION

This report presents major findings from a study about the retention of low-income college students. This study was conducted by the Pell Institute for the Study of Opportunity in Higher Education, with funding from the Lumina Foundation for Education. The study examined the policies and practices that affect retention and persistence at large public colleges and universities that serve *high numbers* of low-income students as indicated by Pell Grant recipient status.

This study continues previous research conducted by the Pell Institute, also sponsored by the Lumina Foundation, which examined retention policies and practices at four-year institutions with *high percentages* of low-income students. In the first study, we identified 20 four-year institutions with large shares of Pell Grant recipients – 10 with higher than average graduation rates and 10 with lower than average graduation rates. The first study was designed to compare colleges with high and low graduation rates in order to identify institutional factors that might account for these differences.

As a by-product of the research design, however, the sample selected for the first study consisted mostly of small public and private institutions with average enrollments under 5,000 students. Large public institutions were inadvertently excluded from the first study because low-income students make up a smaller share of their populations than at the small institutions, even though there are a large number of low-income students on these campuses. As a result, the sample was not representative of where the majority of low-income students who attend four-year institutions are enrolled.

Furthermore, we found that comparing institutions with the highest and lowest graduation rates was problematic because the institutions with the lowest graduation rates had far fewer economic resources, had less selective admissions requirements, and served an older, part-time student population than the institutions with the highest graduation rates. These confounding factors made it difficult to isolate specific policies and practices that could account for improved student retention and graduation rates.

Despite the design limitations, however, the first study did yield important findings about what institutions can do to improve student persistence. Across the 10 institutions with high graduation rates (HGRs), we observed four common factors or conditions that may account for their success:

- HGRs created a personalized educational experience for students by keeping close track of student progress through intrusive advising, getting to know students and getting them involved in small classes, and giving students individualized attention and services in special programs.
- HGRs demonstrated their commitment to undergraduate education by offering small classes, even at the introductory level, taught by full-time faculty for whom teaching was their primary responsibility. HGRs also provided extensive academic support to undergraduates, especially during freshman year, including courses and services to improve students' basic skills.
- HGRs had a shared sense of values and community among students, faculty, and staff. Most HGRs were residential campuses that were geographically isolated in rural areas, making the campus experience the center of students' lives. Many had a unique mission — half were Historically Black Colleges and Universities (HBCUs) — that attracted students and faculty with similar backgrounds and values.
- HGRs were explicitly concerned with retention and graduation, setting goals and measuring institutional performance. There was, in short, an institutional culture promoting success.

The main purpose of the current study was to determine whether the conditions for improving graduation rates that were observed at the smaller institutions are present or even possible to create at larger public universities, which serve much greater numbers of low-income students. The current study improves on the previous design by comparing public four-year institutions with higher- or lower-than-expected graduation rates, given the characteristics of their incoming student population and other important institutional characteristics. By controlling for student and institutional "inputs" in this study using regression analysis, we can more confidently attribute differences in graduation rate outcomes between "higher" and "lower" performing institutions to the differences we observed in terms of institutional policies and practices.

College Access and Success for Low-Income College Students

A college education is widely considered the key to achieving economic success and social mobility in American society. Higher levels of educational attainment are related to higher incomes and lower rates of unemployment, and the earnings gap between high school and college graduates only widens over time (College Board, 2004; Institute for Higher Education Policy, 2005). While access to higher education has expanded dramatically in recent years, students from low-income backgrounds remain at a distinct disadvantage. By age 24, only 12 percent of students from lowincome families will earn a bachelor's degree compared to 73 percent of their higher-income peers. The gap in college degree attainment is partly explained by lower college-going rates among low-income students. However, even lowincome students who do enroll in college are less likely to persist through degree completion than their higher-income peers (Mortenson, 2007).

The higher attrition rates of low-income students from postsecondary education can be partly explained by their background characteristics and experiences. Academically, low-income students tend to be less prepared for college

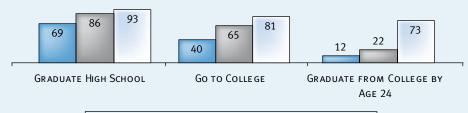
than their peers. They are less likely to have taken a rigorous high school curriculum, generally have lower college entrance examination scores, and are more likely to need remediation in college. Demographically, low-income students are more likely than their higher-income peers to be female, older, Black or Hispanic, and to be the first in their families to go to college. Low-income students are also more likely to be financially independent, to have dependent children, be married, and be single parents. All of these characteristics are associated with lower rates of college degree attainment (Berkner et al, 2002).

Low-income students' higher attrition rates can also be partly explained by how and where they attend college. Due largely to a lack of resources, low-income students are more likely than their peers to delay entry into postsecondary education, begin at two-year institutions, live at home with parents and commute to campus, and take classes part-time while working full-time, and to stop in and out of college. All of these enrollment characteristics have been shown to put students at risk for dropping out of college without earning a degree, particularly the bachelor's degree. Low-income students are also more likely

to attend less selective, public institutions than their higher income peers. Such institutions tend to have fewer economic resources, serve students with greater academic and financial need, and have lower overall graduation rates (Berkner et al, 2002).

Demography is not destiny, however. In our previous research, we studied institutions that both serve high percentages of low-income students and have high graduation rates. In the current study, we identified public fourvear institutions that serve large numbers of low-income students that not only perform better than expected after taking the diverse academic and economic backgrounds of their students into account, but also perform better than the national average. Thus, some institutions are indeed more successful than others at graduating low-income students. The collective purpose of our series of studies is to identify those institutional characteristics, practices, and policies that account for the differences in retention and graduation rates among colleges and universities that serve large populations of low-income students in order to improve the chances of college success for this at-risk group.

PIPELINE TO COLLEGE BY FAMILY INCOME OUT OF 100 HIGH SCHOOL STUDENTS, HOW MANY WILL...



■ BOTTOM QUARTILE ■ MIDDLE QUARTILES □ TOP QUARTILE

SOURCE: Mortenson (2007).



STUDY DESIGN

The first step in selecting the sample for the current study was determining the actual and predicted six-year cohort graduation rates for our study universe of all four-year public institutions. Actual graduation rates were obtained using the most recently available data at the time (2002) from the Integrated Postsecondary Education Data System (IPEDS). Drawing on our review of the college student retention literature as well as our findings in the previous study, we developed a regression model — also using IPEDS data — that controlled for student and institutional characteristics independently associated with graduation rates. The model was then used to calculate predicted or expected graduation rates for all public four-year colleges and universities.

From this universe, we selected a sample of 15 institutions — 10 with higher-than-expected and five with lower-than-expected graduation rates. All of the institutions selected for the sample serve large numbers of low-income students, ranking in the top half of public four-year institutions in terms of the number of Pell Grant recipients enrolled. In order to reflect the diverse characteristics and missions of public, four-year institutions, we included 10 doctoral institutions (five research-extensive and five research-intensive) and five non-doctoral (master's comprehensive I) institutions in the sample.¹ Institutions were also chosen to represent adequate geographic diversity and student racial and ethnic diversity.

After institutions were selected and agreed to participate in the study, we conducted site visits at 14 of the 15 institutions in Spring and Fall 2005.² Prior to the visits, we developed a detailed institutional profile using publicly available information about each school (i.e. demographic profile of student body, financial resources and expenditures, financial aid awarded to undergraduates, campus programs, services, and resources listed on their website).

Two members from our research team of nine higher education research professionals visited each university. Over a two- to three-day period, the researchers interviewed administrators, faculty, staff, and students using an extensive interview protocol developed for this study based on our review of the retention literature. The researchers also collected relevant information on-site, such as internal institutional research data.

At the conclusion of each site visit, the researchers wrote a case study narrative about the policies, programs, and practices in place at the university that could help explain its performance. A data aggregation and reduction approach was used to systematically analyze the qualitative data from the site reports, the results of which are presented here.

Institutions were selected based on their Carnegie classifications from 2000, which were in effect at the time of site selection. Definitions of the classifications are as follows. **Doctoral/research-extensive universities** offer degree programs from the baccalaureate through the doctorate. They award 50 or more doctoral degrees per year across at least 15 disciplines. **Doctoral/research-intensive universities** offer degree programs from the baccalaureate through the doctorate. They award at least 10 doctoral degrees per year across three or more disciplines, or at least 20 doctoral degrees per year overall. **Master's (comprehensive) colleges and universities** offer degree programs from the baccalaureate through the master's degree. They award 40 or more master's degrees annually across three or more disciplines. The Carnegie classification system was since revised in 2006. One institution that was scheduled for a site visit in Fall 2005

withdrew from the study at a late date and we were not able to find a replacement.



LITERATURE REVIEW: A PRIMER ON COLLEGE STUDENT RETENTION

In the report from our previous study (The Pell Institute, 2004), we presented a comprehensive review of the persistence literature with a focus on institutional practices and programs that improve student retention and graduation rates. In this report, we offer a primer on the college student retention literature that complements our previous work. Here we categorize the vast research literature on college student retention into three major areas of inquiry: (1) student and institutional characteristics, (2) institutional policies and practices, and (3) institutional cultures that affect persistence to degree.

Student and Institutional Characteristics

The first and largest area of research focuses on the student and institutional characteristics that predict success. Students' level of academic preparation has been shown to be the strongest predictor (Adelman, 1999; Astin & Oseguera, 2005a). Rigor of high school curriculum as well as grade point average and college entrance examination scores are all positively correlated with success in college. Demographic characteristics such as race/ethnicity, income, and first-generation status are also predictive factors. Non-traditional student characteristics such as being older, financially independent, and/or a single parent are negatively associated with college graduation rates (Berkner et al, 2002). Academic performance during college, college major, as well as the intention to earn a degree can also affect students' persistence behavior (Tinto, 1993).

Students' enrollment patterns, which are influenced by their demographic characteristics, also affect retention. Students who delay entry into postsecondary education after high school, begin their studies at two-year institutions, take classes part-time while working full-time, and/or live off-campus are less likely to earn degrees, particularly bachelor's degrees (Berkner et al, 2002). The types of institutions that students attend also affect their chances for success. Graduation rates are generally lower at large public institutions with less selective admissions (Astin & Oseguera, 2005b). Institutions with low levels of expenditures on instruction and support services and high student-faculty ratios also have lower graduation rates (Astin & Oseguera, 2005b; Gansemer-Topf & Schuh, 2003-2004; Goenner & Snaith, 2003-2004). Furthermore, graduation rates are generally lower at institutions that serve greater proportions of at-risk students such as commuter students and low-income students (Astin & Oseguera, 2005b; Fiske, 2004).

Research has shown, however, that student and institutional "input" characteristics do not fully explain differences in graduation rates between colleges and universities. Mortenson (1997) found considerable variation in graduation rates remained even after controlling for characteristics such as the average SAT scores of incoming freshmen, the percent of students who attend part-time, and the percent who live on-campus. According to his regression analyses, some colleges and universities perform better than expected given the characteristics of their student body, while others perform worse. Mortenson attributes the differences between such "higher-" and "lower-performing" schools to institutional efforts (i.e. policies and practices) to provide supportive academic and social environments that foster student persistence and degree attainment. Using this type of analysis, recent research — including our own — has sought to identify and study "higher-performing" colleges and universities in order to determine and describe the

conditions that contribute to student success at these institutions (AASCU, 2005; Carey, 2004, 2005a, 2005b; Kuh et al, 2005; The Pell Institute, 2004).

Institutional Practices, Programs, and Policies

The second area of inquiry focuses on institutional policies and practices that can improve student retention and graduation rates. Our knowledge in this area comes primarily from evaluations of retention programs at individual colleges and universities as well as several larger-scale studies. Many of these programs aim to improve retention by increasing students' academic and social integration into the campus environment, which reflects the influence of Tinto's (1993) theories of college student departure. As we briefly review here, institutions have largely focused their retention efforts on: (1) improving the first-year experience, (2) monitoring student progress, (3) increasing student engagement, and (4) supporting student success.

IMPROVING THE FIRST-YEAR EXPERIENCE

In reaction to Tinto's (1993) research, many institutions have directed their retention efforts at improving the freshman year experience for students. The first year is widely recognized as a crucial point in the student departure process. According to ACT (2006), nearly 25 percent of students attending four-year colleges and universities leave before their sophomore year. In response, institutions have developed a number of programs to ease students' transition to college including summer bridge programs, orientation programs and courses, and learning communities. The major goals of first-year retention programs are to help entering students get "integrated into the social and academic communities of the college and acquire the skills and knowledge needed to become successful learners in those communities" (Tinto, 2003; pg. 8). Evaluations of first-year programs have demonstrated largely positive effects on student performance and persistence (see Lotkowski et al, 2004; Pascarella & Terenzini, 2005; Smith et al, 2004; Upcraft et al, 2004).

MONITORING STUDENT PROGRESS

According to Thomas (1990), advising is the most important component of any institutional retention effort. However, a recent survey by ACT and the National Academic Advising Association found that many colleges and universities are underutilizing and poorly administering their advising programs as well as failing to promote advising as a way to increase retention (Habley, 2004 as cited in Lotkowski et al, 2004). Furthermore, several national studies indicate that the part of their educational experience with which students are least satisfied is advising (cited in Kuh et al, 2005). Recent large-scale studies have found that institutions with high graduation rates have proactive advising programs (i.e. "intrusive" advising and early warning systems) in place that actively monitor student performance, intervene early when students experience academic difficulty, and follow-up on student progress (AASCU, 2005; Kuh et al, 2005; The Pell Institute, 2004). Evaluation research of such programs, while limited, does suggest positive outcomes, particularly for atrisk students (Abrams et al, 1990; Karp & Logue, 2002-2003; Mann et al, 2003-2004; Volp et al, 1998; Willet, 2002).

INCREASING STUDENT ENGAGEMENT

Institutions are more and more interested in adopting practices and programs that increase students' intellectual and social engagement in the classroom and on campus. Since 2000, nearly 1,000 colleges and universities have participated in the National Survey of Student Engagement (NSSE), which is administered by the Center for Postsecondary Research at Indiana University. Research by Kuh and others has consistently shown that positive interaction with faculty, staff, and other students is one of the strongest predictors of student persistence as well as learning outcomes (Astin, 1997; Kuh et al, 2005; Pascarella & Terenzini, 2005; Tinto, 2003). Active and collaborative learning strategies (i.e. class discussion and group activities) have been shown to increase interaction and engagement

in the classroom (Braxton et al, 2000). Faculty and peer mentoring programs (Campbell & Campbell, 1996; Newton & Wells-Glover, 1999; Schwitzer & Thomas, 1998) as well as undergraduate research programs (Nagada et al, 1998) are also beneficial. Living on campus has been shown to promote more frequent interactions with peers and faculty members as well as greater participation in extracurricular activities (Astin, 1997; Pascarella & Terenzini, 2005).

It is important to note that the ability to pay greatly affects whether and how students interact with their college environment (Cabrera et al, 1992). Unmet financial need increases the work burden on students, which may limit their academic and social integration on campus as well as their persistence to degree. Research on financial aid has generally found that grants, scholarships, and work-study increase student persistence rates. Work-study, in particular, seems to produce positive effects more consistently than other types of aid, most likely because students become more involved and attached to the campus and its staff (Adelman, 1999; Blanchfield, 1971, 1972; DesJardins et al, 1999; Li & Killian, 1999; Somers, 1995). Loans have been shown to have a negative impact on student retention when compared to grants, but a positive impact when compared to not receiving any aid (Blanchfield, 1971, 1972; Hu & St. John, 2001; Li & Killian, 1999; Somers, 1995).

SUPPORTING STUDENT SUCCESS

Institutions provide a wide range of academic and social support programs, many of which are geared toward at-risk populations. Developmental and/or remedial education programs have generally been shown to improve persistence and graduation rates for underprepared students. Recent research also demonstrates the effectiveness of Supplemental Instruction (SI) programs, which provide peer-assisted academic support to students in introductory "gatekeeping" courses with traditionally high failure rates (see Lotkowski et al, 2004; Pascarella & Terenzini, 2005; Upcraft et al, 2004). A number of colleges and universities offer comprehensive support programs to at-risk students. For example, Student Support Services (SSS), one of the federally-funded TRIO programs, provides services such as tutoring; academic, career, and personal counseling; and mentoring to low-income, first-generation, and disabled college students. A national evaluation found that SSS programs, which operate on more than 900 campuses across the country, have a positive impact on participants' performance and persistence in college (Chaney et al, 1997).

Certain retention practices and programs, such as freshman orientation, have become widespread, almost ubiquitous, on college campuses across the nation. According to Kuh and his colleagues (2005), what distinguishes higher-performing campuses from lower-performing ones is the effective implementation and overall reach of their retention programs. Successful retention programs are mandatory, well-advertised and/or proactively identify students in need of services; well-coordinated and/or centrally-operated; run by carefully selected, well-trained faculty and staff; and part of a broader institution-wide effort to improve the educational experience and outcomes of undergraduate students (AASCU, 2005; Kuh et al, 2005).

Institutional Culture

The third area of inquiry includes a new and growing body of research that examines the organization and culture of institutions with high retention and graduation rates. According to McClanahan (2004), "Thinking about retention has evolved from the identification and implementation of isolated programs and services designed to improve retention to a view of the organization as a whole and its effect on retention" (pg. 7). Research in this area has shown that high-performing institutions do not merely "plug-in best practices" from the retention literature to improve their graduation rates; rather, these institutions are characterized by an organizational culture that promotes student success (AASCU, 2005; Carey, 2005a; Kuh et al, 2005). As we briefly discuss here, two recent studies have identified three major (and interrelated) factors that help to develop and support an institutional culture that aids student retention: (1) shared

leadership and commitment, (2) campus-wide coordination and collaboration, and (3) consensus on a student-centered mission (AASCU, 2005; Kuh et al, 2005).

SHARED LEADERSHIP AND COMMITMENT

Foremost, these studies found that colleges and universities with high graduation rates had leaders who prioritized improving retention as an organizational goal and who consistently demonstrated their commitment to it through their words and actions. This commitment was demonstrated by allocating the necessary resources (even when scarce) to retention programs and by providing incentives and rewards to all members of the campus community, particularly faculty, to participate in as well as take ownership of retention efforts. In the 2005 AASCU study, top administrators at high-performing institutions, many of whom had been in their positions for a number of years, were described as "servant leaders" who empowered faculty and staff through shared decision-making styles that fostered mutual commitment to and responsibility for achieving the retention goals of the institution (AASCU, 2005; Kuh et al, 2005).

CAMPUS-WIDE COLLABORATION AND COORDINATION

It was also found that retention was a campus-wide cooperative effort on the high-performing campuses involved in these studies. Retention was not merely relegated to student affairs staff on study campuses; rather, there was a high degree of collaboration between academic and student affairs staff in developing and administering retention programs, which led to retention efforts that addressed the needs of the "whole student." In order to promote such cooperation, the leadership on these campuses had to recognize and reward it — or at least not inadvertently punish it. In the 2005 AASCU study, for example, it was found that "shedding territoriality was much easier where there were clear signals that cooperative actions that saved resources would not be penalized by taking away resources" (pg. 17). The campus-wide coordination of retention programs, such as through committees, task forces, or offices, also promoted greater communication and cooperation between academic and student affairs staff at the high-performing institutions in these studies (AASCU, 2005; Kuh et al, 2005).

CONSENSUS ON A STUDENT-CENTERED MISSION

Finally, many of the high-performing institutions in these studies did not necessarily perceive their success as a product of a "student retention effort" per se, but rather a focus on improving the student learning environment (AASCU, 2005). This finding reminds us of Tinto's (2003) claim that the "the ability of an institution to retain students lies less in the formal programs they devise than in the underlying commitment toward students which directs their activities" (pg. 7). The colleges and universities in these studies were decidedly committed to an institutional mission that put students and learning at the center. There was a pervasive belief on these campuses that all students have the potential to succeed and should be held to high expectations; the campuses reinforced this belief by recruiting and hiring faculty and staff who were also committed to student learning and success. There was also the sense that the colleges and universities in these studies with the mission of serving their current students" (AASCU, 2005). While all of these institutions expressed a desire to improve themselves, they felt that they — and their students — were special (AASCU, 2005; Kuh et al, 2005).



In the current study, we draw on the existing research literature presented here to help us examine whether the institutional practices, policies, and contexts that have been shown to aid student retention are present or even possible to create at large public colleges and universities that serve large numbers of low-income students. In doing so, we seek to contribute to and expand the literature by also considering whether and how retention practices documented as effective for all students also work for low-income students.

FINDINGS FROM LARGE PUBLIC INSTITUTIONS

The 14 institutions that participated in this study represent a diverse group of public, four-year universities, which differ in terms of geographic location, institutional mission, and student body characteristics. All of the institutions serve large numbers of low-income students as indicated by Pell Grant recipient status. Ten of the institutions graduate students at a higher than expected rate, and four at a lower than expected rate, after controlling for student and institutional characteristics that were determined through the use of regression analysis to be independently associated with graduation rates.

The universities in this study are not easily categorized into "higher" and "lower" performing institutions, however. There was considerable diversity among the institutions, particularly among the higher-performing ones, in terms of their missions and student populations. In fact, some of the higher-performing institutions actually have low graduation rates relative to the national average; however, these institutions are graduating students at higher than expected rates given the characteristics of their incoming student population and other important institutional characteristics. These institutions were included in the study because they offer useful insights given their "relative" success in the face of numerous challenges such as lower levels of student preparation as well as resources. There are, though, considerable differences between an institution with a 72 percent graduation rate and an institution with a 35 percent graduation rate, even if both are graduating students at higher than expected rates after taking student and institutional characteristics into consideration.

Thus, in order to more fully capture and contextualize the differences between the institutions in the study, we developed a typology with four categories that generally correspond to the relationship between institutions' actual and predicted graduation rates and the relationship between their actual rates and the national average:

- High-Highs a.k.a. "The Traditionalists"
- High-Averages a.k.a. "The True Believers"
- High-Lows a.k.a. "The Strivers"
- Low-Lows a.k.a. "The Underperformers"

The High-Highs, for example, have higher than expected graduation rates as well as high graduation rates relative to the national average. The graduation rates at the High-Lows are higher than expected given their student and institutional characteristics, but the High-Lows have low graduation rates by national standards. By describing our findings in this manner, we hope that practitioners and policymakers will be able to more readily see their institutions reflected in the study and be able to use its findings in ways that make sense given the realities on their own campuses.

Actual¹ and Predicted² Six-Year Graduation Rates for Institutions in Study Sample

Institution	Actual Rate	Predicted Rate	Difference	Relative to Predicted Rate	Relative to National Rate ³	Category
А	72%	63%	9%	High	High	High-High
В	66%	50%	16%	High	High	High-High
С	62%	50%	12%	High	High	High-High
D^4	57%	41%	16%	High	Average	High-Average
Е	55%	44%	11%	High	Average	High-Average
F	51%	42%	9%	High	Average	High-Average
G	49%	42%	7%	High	Average	High-Average
Н	46%	39%	7%	High	Low	High-Low
Ι	35%	19%	16%	High	Low	High-Low
J	35%	25%	10%	High	Low	High-Low
К	39%	51%	-12%	Low	Low	Low-Low
L	33%	46%	-13%	Low	Low	Low-Low
М	26%	41%	-15%	Low	Low	Low-Low
Ν	22%	34%	-12%	Low	Low	Low-Low

¹ Actual graduation rates were obtained from 2002 IPEDS data.

² Predicted graduation rates were calculated using regression analysis.

³ The six-year graduation rate in 2002 was 54 percent nationally according to IPEDS data.

⁴ Institution D and E were categorized as High-Averages because their graduation rates are only slightly above the national average whereas the graduation rates of the High-Highs are well above it.

In this report, we use these four categories to describe the differences in terms of policies and practices related to retention that we observed between the higher- and lower-performing institutions as well as among higher-performing institutions. We also discuss some commonalities that we observed across the higher-performing institutions, while noting important differences. We then discuss the major differences between the smaller public and private institutions in the previous study and the large public institutions in this study.

Finally, we consider whether the retention practices and policies that improve overall graduation rates at the universities in our study also improve the persistence of low-income students on these campuses. In our previous study, we visited 20 institutions with *high percentages* of low-income students. Pell Grant recipients were more than half of the student body on all but three of those campuses. While the institutions in the previous study were not able to provide us with graduation data for low-income students, we concluded that their graduation rates and experiences on campus were not likely to differ substantially from the overall student population since they were in the majority.

The universities in the current study serve *high numbers* of low-income students, but they are a smaller share of the undergraduate population. Pell Grant recipients are the majority of students on only two of the campuses in the

current study. As in the previous study, most of the institutions could not provide us with retention and graduation data disaggregated by income or Pell Grant status. The four universities that were able to provide the data had not examined graduation rates separately for low-income students prior to our request. Some of the universities that were unable to provide the data said they could not link students' admissions and persistence data to their financial data due to confidentiality issues. In other cases, the universities either did not have the technology or the technical support to link the data. This dearth of data is due in large part to the fact that postsecondary institutions are not required to disaggregate and report six-year graduation rates by student income level or even Pell Grant recipient status. As a result, few colleges and universities analyze and report such information.³

Thus, unlike in the previous study, we cannot conclude with as much certainty that overall graduation rates also apply to low-income students. As we will discuss, low-income students at large public universities differ from their peers in terms of the resources they bring with them to college, which affects their chances of degree completion. The academic, social, and financial resources that low-income students have at their disposal also affect the extent to which they can interact with and succeed in the college environment, including their ability to utilize or participate in available retention services and programs.

> ³ There are other limitations to using six-year graduation rates as they are currently collected to measure retention and graduation gaps between low-income students and their peers. Six-year graduation rates, as reported to the U.S. Department of Education on the IPEDS survey, only measure the progress of first-time, full-time students to degree. The measure excludes part-time, transfer, and returning students, which are hallmarks of how many low-income students participate in postsecondary education. Six years may also be insufficient to capture the actual graduation rates of low-income students, some of whom remain enrolled six, eight, and even to years before earning their degrees.

ROMISING PRACTICE

At one of the High-Highs, there are no universitywide first-year experience programs, but there are two well-developed programs operated by individual departments within the institution in close partnership with centrally-run student affairs. Both departments offer freshman success seminars to introduce students to the campus, its services, and the expectations of faculty and staff. The seminars include a weekly lecture taught by a faculty member from the department with discussion sessions led by student affairs staff. "What makes these programs work," a student affairs staff member said, "is the student affairsacademic affairs partnership that takes a holistic view of the student."

The liberal arts department has also developed a first-year learning community in which students take a year-long sequence that explores a common theme in one course each quarter. Students take these themed courses with the same cohort, graduate assistant, and peer mentors all year. This department has also recently developed an arts and ideas course to expose new students to music performances, art exhibits, and public lectures, and a summer reading program in which incoming students read the same book. Freshman interest groups will be piloted next fall. According to a faculty member from the department, "The goal is to eventually capture every student (in the department) in an intentional and evaluated freshman year experience program."

The natural sciences department has developed a freshman scholars program that targets students enrolled in the "weed-out" introductory chemistry course sequence. All year, students have lectures with the same instructor, a weekly one-hour discussion session with the same graduate teaching assistant, and two workshops a week with the same peer mentors who are trained by student affairs staff at the learning center. Upon completion of the freshman scholars program, students are eligible to apply for a summer research position with a faculty member and/or to receive training to become a peer mentor with the program the following year.

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HIGH-HIGHS A.K.A. "THE TRADITIONALISTS"

People and Place

The High-Highs are a group of three large research-extensive doctoral-granting institutions with selective admissions and largely "traditional" student bodies. About 90 percent of students at High-Highs attend full-time and the majority of students (about 50 percent) live on campus, including most freshmen (over 80 percent). Transfer students do not make up a large percentage of the student population. On average, one-third of students receive Pell Grants and one-fifth of students come from under-represented minority backgrounds. First-year retention rates and six-year graduation rates at High-Highs are well above the national averages.

Institution	Type	Median SAT	FTE Undergraduate Enrollment	Pell Recipients	% Pell	% Minorities	% Part-Time	% Over Age 25
A	Doctoral/ Research Extensive	1225	26,342	6,849	26%	16%	9%	9%
В	Doctoral/ Research Extensive	1065	13,300	5,985	45%	29%	9%	6%
С	Doctoral/ Research Extensive	1060	16,162	4,202	26%	8%	16%	23%
Average		1117	18,601	5,679	32%	18%	11%	13%

Institutional Profile: High-Highs

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

The "traditional" student characteristics of the High-Highs generally contribute to their high rates of student success. However, the large size of these institutions can complicate their retention efforts. For example, the High-Highs tend to have larger class sizes, especially in introductory courses for freshmen, than the other higher-performing institutions in the sample. Furthermore, these large institutions are organizationally complex with decentralized policies, services, and funding spread across colleges and departments that operate in a loose federation. This can make it more difficult to coordinate retention programs institution-wide as well as make it more difficult for students to learn about and participate in these programs. Despite these attributes, the High-Highs are performing better than expected even after controlling for student and institutional characteristics. Therefore, these institutions are, in fact, contributing to student success through their policies and programs aimed at retention.

Student Outcomes: High-Highs

Institution	1st Year Retention Rate ¹	4-Year Graduation Rate	5-Year Graduation Rate	6-Year Graduation Rate	Transfer Out Rate ^{2,3}
А	88%	44%	65%	72%	12%
В	N/A	39%	61%	66%	N/A
С	85%	31%	56%	62%	N/A
Average	87%	38%	61%	67%	12%

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

¹ Average first-year retention rate for public four-year institutions is 74 percent (ACT, 2006).

² Reporting transfer-out rate to IPEDS is optional unless transfer is part of the institution's mission.

³ Mean transfer-out rate at public four-year institutions is 23 percent based on 2003 IPEDS data (2002 not available).

Practices and Programs

While the High-Highs offer a wide range of programs and services to support student success, such as first-year programs and academic support services, they do place a high degree of responsibility for success on the students themselves, who may choose whether or not to use the available services. There are moderate to high levels of participation in first-year programs, such as summer orientation, university 101 courses, and freshman interest groups and learning communities. Internal evaluation research at one of the institutions shows that students who participate in first-year programs have higher grade point averages and persistence rates, especially students from disadvantaged backgrounds. However, most first-year programs are voluntary and many of them are offered separately by the various colleges and departments. Thus, students in different majors are not necessarily offered the same options to participate in first-year programs university-wide at the High-Highs.

The High-Highs provide ample academic and personal support services, such as tutoring, academic coaching, and counseling, which are often offered through a "learning center" run by student affairs. However, aside from strict academic probation policies, the High-Highs do not have "intrusive" advising or early warning systems to identify or direct students in need of such services before they get into trouble. Students actually described academic advising as the "weakest part of the experience." At the High-Highs, advising is decentralized as a departmental function, which leads to inconsistencies across majors (e.g. some departments require students to get signatures from advisors prior to registration while others do not). In short, student support services at the High-Highs, including advising, operate on a "self-service model."

The most structured and intensive support provided to students at High-Highs is found in special programs for atrisk populations, including low-income and underrepresented minority students. All of the High-Highs have one or more of the Federal TRIO programs, including Student Support Services, which target services to low-income and first-generation college students. One of the universities also has a state-funded program for low-income students; in fact, it is a requirement that 10 percent of the student body must be eligible for and served by this program. Another

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The departments have developed their firstyear programs without additional funding from the university, but as the dean of one of the departments said, "We couldn't afford not to do it." The departments have also developed their own capacity to rigorously evaluate their first-year programs because they "can't afford feel-good programs," according to the dean of the other department. Internal evaluation research thus far has shown that students who participate in firstyear programs have higher grade point averages, declare a major sooner, and are retained at higher rates, especially first-generation college students. One of the High-Highs participates in a longrunning state-funded program that was created in the 1960s to increase access to and success in higher education for economically and educationally disadvantaged students. The program funds campus-based outreach and support services at nearly all of the public and private institutions in the state. Ten percent of each incoming freshman class must be eligible for and served by the program. One administrator at the institution said that the program mandate gives campus leadership "an excuse to do the right thing" when faced with competing demands for resources.

At this institution, the program recruits lowincome students through contact with guidance counselors in high schools in economically depressed areas as well as by providing transportation for students to visit the campus. Early outreach to and partnerships with high schools are key components of the program because inadequate preparation is considered the major barrier to low-income students gaining admission to this selective institution. Students admitted through the program are required to attend a residential summer bridge program and orientation to ease the transition to college life. *During the academic year, program participants* receive support services such as personal, academic and career counseling, tutoring and study skills workshops, and peer mentoring. Students participating in the program also receive grant aid. The program sponsors a student organization that allows participants to organize and advocate for themselves, both on campus and with the state legislature.

Student satisfaction with the program is high, and so too are student outcomes. Students graduate at higher rates than low-income peers who do not participate in the program and within 10 percentage points of the overall student population. The program annually serves over 2,400 students on this campus. university participates in a statewide scholarship program for high-achieving, low-income students funded by a private foundation. These programs provide structured and intensive support by requiring students to meet with advisors early and often throughout the semester, and by offerring additional support from well-trained peer tutors and mentors. Several of these programs also sponsor a related student organization/club on campus.

All of the High-Highs also have programs that target services to underrepresented minority students, such as separate programs for the largest minority groups on campus or an integrated Multicultural Student Services office. Such programs provide tutoring and mentoring by students and faculty of color as well as cultural programming. These programs provide a "home base" on campus for minority students, and the staff members in these programs often serve as "first responders" to students' needs by providing referral services to other offices and programs. Students participating in these programs said they feel more comfortable going to program staff than to academic advisors or faculty when problems arise with their coursework or financial aid. As a result, special programs and their staff serve an important role in helping at-risk students navigate and succeed in these large institutions.

Policy Environment

Improving retention and graduation rates is important at the High-Highs, although it is not necessarily their most pressing concern. As selective institutions, graduation rates have been stable and high for the last 10 years. To a large extent, the High-Highs view their high graduation rates as a function of selective admissions and they expect their retention and graduation rates to improve due to recent increases in their admissions standards. At the High-Highs, improving retention is an important goal in so far as it supports the goals of maintaining or increasing enrollment, especially recruiting and admitting high-ability students, and improving institutional reputation and rankings. Furthermore, there has been less focus on retention at these institutions because "baby boomlet" demographics have provided a steady stream of enrollment in recent years.

Six-Year Graduation Rates from 1997 to 2002: High-Highs

Institution	1997	1998	1999	2000	2001	2002
А	73%	73%	73%	75%	73%	72%
В	68%	68%	66%	64%	64%	66%
С	68%	59%	59%	57%	60%	62%
Average	70%	67%	66%	65%	66%	67%

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

Regardless, there are administration-led efforts underway at each of the High-Highs to increase retention and graduation rates. Top administrators, such as the President or Provost, have appointed taskforces to study how to improve the major aspects of the undergraduate experience (e.g. general education, advising, academic support programs, first-year programs, etc) in order to increase timely student degree completion. Two of the institutions have also taken steps to review and remove any administrative impediments to students graduating on time, such as policies that affect course load or availability, as part of their "Finish in Four" campaigns.

Such efforts are supported by the relatively strong institutional research function in place at these universities. Administrators at High-Highs are responsive to and rely on data in the decision-making process. For example, the Provost at one institution developed a set of innovative retention programs aimed primarily at first-year students in response to low scores on the National Survey of Student Engagement (NSSE).

According to administrators, sound data are also critical to gaining the support and participation of faculty members in retention efforts, which was described as low at the High-Highs. According to one administrator, "You've got to use research to show faculty how to do things differently. They aren't ideological, they're data driven. If it appeals to their intellectual and rigorous values, they'll respond to it. They'll change in response to it." Administrators at another institution made a conscious decision to use highly-regarded instruments such as the NSSE and the Equity Scorecard to collect retention data on their campus. They felt faculty would be more receptive to changes proposed in response to the findings if they respected the methods by which the data were collected. These administrators also collaborated with faculty members to collect and disseminate the results of these surveys in order to encourage their involvement and support in institutional retention efforts.

However, some faculty members at High-Highs remain skeptical of administration-led retention programs, such as supplemental instruction, because they feel that the resources allocated to such programs should be used to reduce class size instead. As one faculty member said, "The idea is that you do something on the side. But if you have the dollars, you should have smaller classes. The people who are best able to help the students are the ones who are teaching them. We can't tutor them all individually so we need to put the resources in the classroom." Some faculty also doubt whether retention is a priority for administrators. Faculty members feel that they are not provided with adequate resources such as teaching assistants or rewards in terms of promotion and tenure for focusing additional time and effort on improving undergraduate student success. These views reflect the tension observed between the multiple (and at times conflicting) missions — research vs. teaching — at research-extensive institutions in the High-High category.

According to an administrator at one of the High-Highs, "The assumption at 'traditional' research universities is that students can fend for themselves. If they are successful they'll stay, if not they don't deserve to be here." The High-Highs do ascribe to this "traditionalist" view of retention in that they largely attribute the success of their students to selective admissions policies. Furthermore, they view increasing admissions requirements as the primary means by which to further improve their retention and graduation rates. However, the High-Highs are actually performing better than expected even after taking the strong academic backgrounds of their students into account. Thus, these institutions are in fact contributing to the success of their students.

The problem, as one administrator said, is that their success has been somewhat "accidental." This administrator's institution, which is one of the most diverse research-extensive institutions in the country, is trying to figure out how to become more "intentional" about their success, particularly their success with underrepresented low-income and minority student populations. As she says, "We are already doing it, but we are not doing it deeply. We have to become deliberate about the type of institution we want to be, otherwise it's just serendipitous." Her comment also suggests the possibility that the High-Highs may risk their current success, particularly their success with diverse student populations, by unnecessarily or incorrectly changing course.

When the results of the NSSE survey at one of the High-Highs showed low levels of student engagement in class and on campus, particularly amona freshmen. the administration noticed and took action. The Provost first convened student focus groups to discuss the results of the survey. According to an administrator, the campus community, particularly the faculty, was "in denial" until students confirmed the survey findinas in the focus groups. The Provost next created the *Teaching Academy, a select group of 12 faculty* members charged with studying and making recommendations about how to improve teaching and learning in and out of the classroom. At the request of the student government president, the Provost created the Student Learning Academy to institutionalize student feedback to the Teaching Academy. These two groups have worked together to define the aoals, processes, and outcomes of learning at the institution, disseminating their work to the faculty and staff. Some items from the NSSE survey are now included on faculty course evaluations.

In response to the NSSE data, the Provost also initiated the Freshman Focus program, a living and learning community for first-year students. According to an administrator, the purpose of the program is to "integrate students' academic and student life experiences by linking academic affairs and student affairs programmatically." As part of the program, freshmen will be enrolled in at least two courses with other students who live on their floors in the residence halls. Some students were skeptical about the program; one student said "it will be easier to skip class because you can send one person from the floor to take notes." Informed by the NSSE research, the administrators developing the program are well aware that block scheduling alone will not increase student engagement in and out of class. Thus, a major goal of the program is to help faculty change the way they teach by utilizing more active and collaborative learning methods to facilitate better connections between course material and students' experiences on campus.

One of the High-Averages has an entirely commuter population of students who both live and work off-campus. Due to the limited amount of time students spend on campus, student engagement is much lower here than at other *High-Averages. However, this institution has made* a conscious effort to increase student involvement in campus activities and events through a special proaram aimed particularly at new students. *The program requires all freshmen and transfer* students to participate in six campus activities by the end of their first year. Activities include social or cultural events, extracurricular activities, and academic activities such as library tours or study skills workshops. Students must collect stamps on a card for each event they attend and they get a certificate upon completion of the program. The program was developed and implemented by the Office of Student Retention.

In order to increase student participation in the program, activities are often offered during a "free hour" twice a week when no classes are scheduled from 12:00 to 1:00pm. One student said, "You never have to pay for lunch on Mondays and Wednesdays" because many "free hour" activities offer free food to encourage student participation. *The purpose of the free hour is to encourage* students to stay on campus between morning and afternoon classes to increase their level of interaction with the campus, other students, and faculty. The free hour allows students to participate in events that they would not be able to attend *in the evening due to their demanding work* schedules. The Office of Student Retention also *maintains a master calendar of program-eligible* events on campus in order to facilitate student participation in the program.

HIGH-AVERAGES A.K.A. "THE TRUE BELIEVERS"

People and Place

The High-Averages are a group of four medium-sized doctoral/research intensive and non-doctoral institutions with moderately selective admissions. They serve mostly traditional age students, the majority of whom attend full-time. At three of the institutions, many students live on campus or in nearby campus-affiliated housing, including the majority of freshmen; the other institution has an entirely commuter student population. On average, one-third of students receive Pell Grants, and one-fifth of students come from under-represented minority backgrounds. First-year retention and six-year graduation rates are at or above national averages — and are higher-than-expected after controlling for student and institutional characteristics. It is also noteworthy that graduation rates at the High-Averages have improved on average by 10 percent from 1997 to 2002.

Institution	Type	Median SAT	FTE Undergraduate Enrollment	Pell Recipients	% Pell	% Minorities	% Part-Time	% Over Age 25
D	Non-Doctoral	970	7,475	2,467	33%	32%	37%	55%
E	Doctoral/ Research Intensive	1025	15,396	4,003	26%	16%	8%	12%
F	Non-Doctoral	1010	10,133	2,736	27%	10%	12%	15%
G	Non-Doctoral	1040	9,131	3,652	40%	23%	36%	35%
Average		1011	10,534	3,215	32%	20%	23%	29%

Institutional Profile: High-Averages

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

The student and institutional characteristics of the High-Averages generally contribute to their success. Despite their large size, these institutions were described as having a "small school feel" with high levels of both student engagement in extracurricular activities on campus and student-faculty interaction in small classes and/or advising sessions. Most courses at the High-Averages are taught by full-time faculty members, including many at the introductory level. Students describe faculty at the High-Averages as "dedicated," "caring," "approachable and accessible," and "qualified." Many of the faculty at these institutions come from similar backgrounds as their students, most of whom are from low- to moderate-income families and many of whom are the first in their families to attend college. Thus, faculty members often serve as role models for students at High-Averages. Faculty members are also often "first-responders" to students' needs at these institutions. When asked, students at High-Averages could typically name at least one person on campus, usually a faculty member, to whom they could go if they had a problem.

Student Outcomes: High-Averages

Institution	1st Year Retention Rate	4-Year Graduation Rate	5-Year Graduation Rate	6-Year Graduation Rate	Transfer Out Rate
D	65%	40%	57%	57%	14%
E	77%	26%	49%	55%	20%
F	76%	29%	47%	51%	24%
G	87%	22%	42%	49%	19%
Average	76%	29%	49%	53%	19%

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

Much like the smaller colleges and universities in the previous study, which had average enrollments under 5,000, students and staff at the High-Averages describe these institutions as "family-like" and "like a second home." In fact, the children of the Chancellor at one of the High-Averages had attended the university. The student-centered culture at the High-Averages, which many faculty and staff credit for the success of their students, is not a product of chance. Rather, it is the result of intentional retention policies and practices that aim to institutionalize a "holistic approach to student development and the campus experience," according to a senior administrator at one of the institutions.

Institution	1997	1998	1999	2000	2001	2002
D	40%	43%	46%	47%	52%	57%
Е	48%	49%	50%	51%	52%	55%
F	45%	45%	43%	47%	49%	51%
G	37%	40%	38%	39%	42%	49%
Average	43%	44%	44%	46%	49%	53%

Six-Year Graduation Rates from 1997 to 2002: High-Averages

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

Practices and Programs

The High-Averages take a large degree of responsibility for the success of their students, right from the start. Administrators at the High-Averages have made improving the first-year experience an integral part of their plans to increase retention and graduation rates. All of the High-Averages have mandatory or high participation in first-year programs — including freshman orientation, seminars, and living-learning communities — that are offered to all

The President at one of the High-Averages has made improving students' curricular and co-curricular experiences during the freshman year the centerpiece of the university's master plan to improve retention and graduation rates. The President's newly implemented First Year Experience (FYE) program consists of three major *initiatives. The first is a mandatory summer* orientation program where all freshmen receive advising, take placement tests, and register for courses prior to the fall semester. The second initiative involves enrolling every freshman in one FYE course per semester during the first year. FYE courses are general education classes that limit enrollment to 20 students, which allows for more engaging and active teaching styles that increase interaction between students and faculty, as well as among students. FYE classes also integrate involvement in co-curricular activities into course content in order to connect student learning inside and outside of the classroom. Juniors and seniors serve as peer mentors to freshmen, and as teaching assistants to faculty in FYE courses. FYE peer mentors and faculty are "hand-selected" to participate in the program and receive extensive training and support. The third initiative involves residence hall living and learning communities, which provide support services such as counseling and tutoring in the dorms to help students make the academic, social, and personal transition to college.

At one of the High-Averages, advisors keep especially close track of students who sign up for the university's four-year graduation guarantee program. The university ensures freshmen that they will araduate in four years if they meet the program requirements, or the rest of their tuition is free. Students involved in the program must sign a contract that commits them to meeting with their advisor at least once a semester prior to registration and to consulting their advisor before making any changes to their schedule. Participants must declare a major upon entry to the program. maintain a full-time schedule each semester with courses that apply toward dearee reauirements. and meet the grade point requirements defined by their academic programs. Students also accept responsibility for registering on-time for classes and financial aid. In return, the university auarantees that the courses students need to complete degree requirements will be offered when they need to take them. If graduation is delayed due to course unavailability, the university will either allow students to substitute a comparable course or waive tuition to allow students to take the course for free the next semester. Advisors - and students - can keep track of progress to degree using online technology that supports the program. One advisor says she continuously evaluates each student's dearee plan and notifies the student if he or she is not on track. This helps to identify and address problems earlier. Internal research shows that students who participate in the program are nearly twice as likely to graduate in four vears.

students university-wide. Most of these programs are coordinated and run centrally by student affairs administrators and staff. In most cases, however, strong collaboration exists between academic faculty, advisors, and student support personnel, each of whom deliver key components of the services offered to freshman through first-year experience programs.

The High-Averages maintain a high level of support for students by systematically monitoring student progress and providing ample support services. Three of the institutions have well-developed and well-utilized advising programs; the advising program is "under review" at the fourth institution. According to the President of one of the High-Averages, "Advising is the heart of our retention program. We know our students by name, not by a number." Advising is decentralized at all of the institutions, with advisors (both professional and faculty) and/or advising centers located in individual colleges and departments. However, two institutions have coordinating bodies (i.e. "Council of Advisors") that meet on a regular basis to review advising policies, practices, and procedures across campus. Another institution requires advisors to attend orientation. These efforts are intended to ensure consistency in the delivery of advising services campus-wide. Several High-Averages also coordinate advising through the use of online technology that allows advisors and students to track progress to degree.

In addition to tracking students' progress through advising, all of the High-Averages have an "early warning system" that alerts students to low grades at midterm through letters that encourage them to take advantage of the support services available on campus. Midterm progress reports are usually sent to students (as well as to their advisors) by a central office such as the "Academic Support Center," which also runs the support programs. Students who do not improve their performance by the end of the term can be placed on academic probation, which may be followed by suspension. However, at the High-Averages, the probation policies were described as "proactive, not punitive" and advisors and faculty were described as "doing a great deal" to help students avoid suspension. At several institutions, students on probation are required to sign performance contracts that commit them to a course of action that may include academic advising, personal counseling, tutoring, and study skills workshops.

Due partly to the degree of coordination with the advising systems, student support services are well-utilized at the High-Averages. One institution contacts students each semester to advertise about the services available on campus; another institution provides an orientation for faculty and advisors on the available services to help them make appropriate referrals to students in need of assistance. Overall, the High-Averages set and communicate high expectations to students through first-year programs, systematically monitor student progress toward their degree goals through "intrusive" advising and early warning systems, and provide students with ample support services to help them persist through graduation.

Policy Environment

At the High-Averages, increasing retention and graduation rates is a high priority. The impetus for improving retention comes from top administrators whose strong commitment to retention reflects an institutional commitment to students and their success. As one Chancellor said, "We recruit graduates, not just students. We make a commitment to students and we provide the resources they need – we genuinely want them to succeed." According to another Chancellor, "Focusing on student success is the responsible thing to do. We have a moral duty to do the best we can with the students we enroll, to save the students we have rather than recruit new ones to replace them." At the High-Averages, the prevailing attitude among administrators is that the university has made a commitment to helping students succeed by admitting them to the institution.

Top administrators at the High-Averages are "true believers" in the retention literature — they are well-versed in it and even quote it. Informed by the literature, they have set concrete goals and developed action plans to improve retention and graduation rates at their institutions, with a major focus on the transition from freshman to sophomore year. They have allocated ample resources to fund their retention efforts and they have allowed for practical implementation by pilot testing and evaluating new retention programs. As one faculty member said, "We have the freedom to admit when a program doesn't work." Leaders at High-Averages stress the importance of "continual quality improvement" and "positive restlessness," both terms from the literature (see AASCU, 20005; Kuh et al, 2005), with respect to assessing and improving retention programs in order to better meet students' needs.

At the High-Averages, involvement in retention efforts is not limited to administrators only. There is an institutionwide commitment to retention at the High-Averages as well as a high degree of collaboration between administrators, faculty, and staff to develop and implement retention policies and programs. This campus-wide "buy-in" and commitment to retention reflects an overall commitment to undergraduate education as the primary mission at the High-Averages. At these institutions, teaching undergraduates is the main responsibility of faculty; faculty are encouraged to conduct research in as much as they can use it to improve their teaching and/or they can involve undergraduates in it. The High-Averages intentionally recruit and hire faculty who support the teaching mission of the institution as well as acculturate new faculty to it through orientation programs. Faculty members are also rewarded in terms of promotion and tenure for focusing their time and attention on teaching undergraduates.

As a further reflection of their clear sense of mission and priorities at the High-Averages, our researchers described one of the institutions as "comfortable with who they are, the students they serve, and their niche in the state's higher education system. Although the administrators, faculty, and staff at the institution believe they can improve in many ways, they see improvement occurring within their current context and capacity, not as a competitor of the state's flagship campuses."

The major conflict with respect to priorities for the High-Averages is a push by several of the institutions to increase enrollment. At one institution, enrollment has already increased by nearly 50 percent in the last five years and the goal is to increase enrollment by another 50 percent in the next five years. This institution in particular will have to consider whether a substantial increase in enrollment will constrain resources and limit progress toward the goal of improving retention. Such growth could alter the "student-centeredness" and "small-school atmosphere" that many on campus credit for their current success.



Overall, the High-Averages are characterized by an institutional culture that promotes student success, which is considered the responsibility of all members of the campus community. This culture is the product of intentional policies and practices that are promoted by strong leadership and enacted through campus-wide collaboration and consensus on the primary mission of the institution – to fulfill the commitment made to students to help them succeed by virtue of admitting them to the university.

Advising is at "the heart" of retention at the *High-Averages. Two of the High-Averages are* particularly effective at advising students who have not declared or have changed their majors, which can be risk factors for early attrition. One of the institutions offers a structured program that allows students who enter the university without a major to explore different fields of study. Typically, *20 to 30 percent of all freshmen enter through the* program. Academic advisors work closely with students in the program to help them identify their interests, values, and abilities through extensive career and personal counseling. Students may remain in the program through the first semester of their sophomore year, at which point they must declare a major in order to register for the next semester.

The other institution prepares advisors to help students deal with the "disappointment" of not meeting the requirements of their chosen major by assisting them with selecting a related field or a field more suited to their interests and abilities. The process of changing majors was described as particularly difficult for low-income and firstgeneration students at this and other institutions. *Faculty and staff said that low-income students* often feel that changing majors is "a sort of failure." Due to a lack of college-going experience *in their families, low-income students tend to have* limited exposure to the full range of options in terms of majors and careers. Furthermore, faculty and staff said many low-income students feel pressure from family members to major in fields in which they can "make a lot of money." As a result, a number of low-income students major in subjects that do not match their interests, abilities, or academic preparation, which can lead to "crushing disappointment," especially for students who have had a "lifelong dream." As one advisor said, "We will lose them if we can't find them a new dream."

HIGH-LOWS A.K.A. "THE STRIVERS"

People and Place

The High-Lows are a group of three medium- to small-sized institutions, including one doctoral/research extensive, one doctoral/research intensive, and one non-doctoral institution. The High-Lows are the least selective institutions in the sample and serve largely commuter student populations from the surrounding local area. These institutions also serve the highest proportion of low-income, minority, and female (average 61 percent) students in the sample. In fact, two of the institutions are HSIs (Hispanic-Serving Institutions) and one is an HBCU (Historically Black College or University). First-year retention rates are actually at or above the national average, which may be a major factor in the "relative" success of these institutions. Six-year graduation rates are well below the national average; however, they have been steadily increasing. While data were not available for all of the institutions, the transfer-out rate was high, 42 percent, at one of High-Lows.

Institution	Type	Median SAT	FTE Undergraduate Enrollment	Pell Recipients	% Pell	% Minorities	% Part-Time	% Over Age 25
н	Doctoral/ Research Extensive	970	11,192	4,813	43%	50%	16%	21%1
I	Doctoral/ Research Intensive	865	5,738	4,533	79%	98%	14%	26%
J	Non-Doctoral	805	6,004	3,482	58%	68%	41%	53%
Average		880	7,645	4,257	60%	72%	24%	33%

Institutional Profile: High-Lows

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

¹ 2003 data were used because 2002 data were not available.

The high rates of attrition at the High-Lows are, in large part, a function of their student and institutional characteristics. Students attending the High-Lows are generally academically underprepared for college. All of the institutions serve a high remedial function, even if it is not called remediation due to system or state policies that ban it. At one of the institutions, nearly every student requires remediation in either English or math. The High-Lows also serve a large number of low-income, minority students who are the first in their family to go to college. Due to the lack of college-going experience in their families and communities, most students at the High-Lows are unfamiliar with how to navigate the college environment. In addition, some of these students have family members and friends who

are "unsupportive" or even "hostile" about them attending college. Many of the students at the High-Lows have to work not only to support themselves and to pay for college, but to provide financial support to their families as well. The vast majority of students at the High-Lows commute to campus. At one institution, some students must take as long as a two-hour bus ride on public transportation to get to class. Students' personal situations were described as "heart wrenching" at this institution.

Student Outcomes: High-Lows

Institution	1st Year Retention Rate	4-Year Graduation Rate	5-Year Graduation Rate	6-Year Graduation Rate	Transfer Out Rate ¹
Н	72%	13%	37%	46%	N/A
I	77%	16%	30%	35%	N/A
J	N/A	5%	22%	35%	42%
Average	75%	11%	30%	39%	42%

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

¹ Reporting transfer-out rate to IPEDS is optional unless transfer is part of the institution's mission.

The characteristics of the institutions themselves only exacerbate the many challenges their students face. The physical plant of one of the campuses was described by administrators as "depressing." At this institution, students often sit in their cars between classes because there are too few places for them to gather together on campus. At another institution, students describe the campus as "shutting down at 4:00 pm." Student engagement on campus is low at the High-Lows due to a lack of available services and activities and/or the fact that services and activities are offered at inconvenient times for students due to their demanding work schedules. Construction on a new student union and/or dorms is underway at all of the High-Lows in order to help create a greater sense of community on their campuses.



44%

31%

30%

35%

45%

32%

26%

34%

43%

33%

31%

36%

46%

35%

35%

39%

Six Year Graduation Rates from 1997 to 2002: High-Lows

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

Н

1

Average

40%

29%

26%

32%

42%

26%

32%

33%

Thus, the student and institutional characteristics of the High-Lows generally contribute to their low retention rates. The exception is a strong determination or "striving" to succeed among students, also referred to as an "immigrant

One of the High-Lows is both a recipient of a Title *V* grant and a participant in the BEAMS project. *Title V grants are awarded by the U.S. Department* of Education to Hispanic-Serving Institutions (HSIs) to enhance and expand their capacity to serve Hispanic and low-income students. Grants may be awarded for activities such as faculty professional development, curriculum development, academic tutoring, counseling, and/ or student support services programs. The BEAMS project is a partnership between the Alliance for Equity in Education and the National Survey of Student Engagement (NSSE), funded by the Lumina Foundation for Education. BEAMS aims to *improve retention, achievement, and institutional* effectiveness at minority-serving institutions (MSIs). Participating campuses assemble a BEAMS team to collect extensive data about institutional performance, including two administrations of the NSSE. The BEAMS team attends a summer academy sponsored by the Alliance to devise an action plan to implement strategies to improve retention on their campus.

At this institution, the BEAMS team – comprised of seven academic faculty and student affairs staff – devised and implemented a plan to use a block roster model to combine the first-year experience course with remedial and introductory math courses for freshmen. Under the direction of the BEAMS team, the Title V funds were used to recruit and train faculty to teach the linked courses. Faculty were provided with stipends from grant funds to attend three one-day workshops in which they collaborated with each other to develop common syllabi and assignments for the linked courses. The BEAMS team "hand-picked" faculty members who were "motivated to make change" to participate in the project. Internal research shows that students who enroll in the linked courses have higher grade point averages and retention rates. The institution would like to expand the program to include more students (less than half of incoming students currently participate), but lacks the resources to do so at this time.

Another one of the High-Lows has undertaken a major effort to improve the introductory algebra curriculum without the support of outside funds. The program was initiated by two new faculty members in the math department who were hired specifically to address a major goal in the university's master plan - to improve math instruction. The purpose of the program was to address the low attendance and high failure rates in algebra as well as to address students' tendency to "put off" the required algebra course until their senior year. The lead faculty assembled a team of math instructors and graduate assistants to revise and standardize the alaebra curriculum: the team continues to meet on a monthly basis to review implementation of the new curriculum and other aspects of the program. The program includes more accurate placement testing and continuous assessment of student progress throughout the semester, with the chance to re-take exams. The program also includes additional contact hours with students through required tutorials. Faculty are further encouraged to conduct one-on-one tutoring sessions, participate as math lab tutors, *request homework online, and conduct homework* problem sessions. Internal research demonstrates that the program has increased students' grades and pass rates in the algebra course.

sensibility," described by faculty and staff at the High-Lows. Students were described as failing and re-taking courses, as well as stopping out and re-enrolling numerous times. According to faculty and staff at two of the institutions, up to 10 percent of students remain enrolled after six, eight, and even 10 years. While it may be a credit to these institutions that they are sensitive to the profile of their students and are willing to allow second or third (or more) chances, it seems a greater credit to the students that they are willing to persist past six years in order to earn their degrees.

Given the numerous challenges faced by the students and the institutions alike, the High-Lows may seem an unlikely group to include as "higher" performing institutions in this study. However, since these institutions are performing better than expected, the High-Lows can offer useful insights given their efforts to "strive" to achieve even relative success in the face of such challenges.

Practices and Programs

In an attempt to raise retention and graduation rates, all of the High-Lows have undertaken major efforts to improve the first-year experience. As previously mentioned, first-year retention rates at the High-Lows are actually at or above the national average. These institutions have implemented or are in the process of implementing first-year programming that includes freshman orientation programs, freshman success courses and seminars, and freshman interest groups (FIGS). All of these programs currently have moderate to high levels of student participation. The High-Lows are also involved in initiatives to improve both content and instruction in general education and remedial courses for freshmen. These initiatives have largely been funded by outside sources such as Title V grants from the U.S. Department of Education and/or involve support from outside groups such as the Building Engagement and Achievement for Minority Students (BEAMS) project. Through such efforts, the High-Lows are integrating traditional freshmen programming with curricular and instructional reforms in general education and remedial courses in order to transform the first-year experience for their students.

At the High-Lows, there are also high levels of participation in special programs for at-risk populations, such as lowincome and under-represented minority students. At one institution, more than 25 percent of incoming freshmen are served by the state-funded Educational Opportunity Program and federally-funded Student Support Services program. Such programs provide structured and intensive support to students through bridge programs, advising and mentoring, tutoring, and financial aid. As a condition of their participation in such programs, students are also often required to attend full-time, live on campus, enroll in freshman seminar courses, and/or join campus organizations. According to campus representatives, program evaluations have shown that students who participate in these programs have much higher retention and graduation rates than the overall student population. A number of these programs are also funded by outside sources, such as the federally-funded TRIO and CAMP (College Assistance Migrant Program) programs.

At this time, however, innovative programs aimed at improving retention are often limited to these special initiatives at the High-Lows. While about one-fourth to one-third of incoming students are involved in such programs, the majority of students are not. With the exception of athletes, the High-Lows do not systematically monitor or intervene with respect to student progress. Advising is inadequate and/or inconsistent and there are no early warning systems to alert students or their advisors to academic trouble. Liberal registration policies allow students to add and drop courses well into the semester without consulting an advisor, which can have negative consequences on students' progress toward degree as well as their financial aid status. Academic and social support services are also limited. Campus-wide adoption of the successful policies and practices already utilized in special programs could result in higher overall retention and graduation rates. Although doing so is currently constrained by both the scale of the retention problem and inadequate resources at these institutions.

Policy Environment

All of the High-Lows are institutions whose missions include striving to serve the postsecondary needs of historically underrepresented populations. The administration and the faculty at these institutions generally remain committed to this role, yet they are frustrated by the lack of recognition it entails. As the President of one of the institutions said, "The national rankings should acknowledge differences in inputs and measure the quality of outputs in terms of the value added. We are the access point for students without options. The more selective institutions are meant to be filters, but this one should be a ladder. We should celebrate and build the organization on that and be proud of our students." In order to serve this important mission, however, these institutions will require more, not fewer, resources than other institutions, resources they do not have at this time.

All of the High-Lows have severe budget constraints due, in large part, to steep declines in system and/or state funding in recent years. At two of the institutions, funds from the system/state have also been reduced due to low or no enrollment growth; one institution may actually have to return money to the system due to a decline in enrollment this year. The dearth of resources not only limits the funds available for student life and academic support programs that may aid retention, it also restricts the funds available to meet the basic costs related to instruction. Faculty at the High-Lows, while described as "dedicated," are also described as underpaid. The institutions are increasingly relying on part-time instructors and the average class size is increasing as well. Due to the combination of a high remediation burden, a high number of students repeating courses, and a low level of resources, the High-Lows do not have enough instructors to offer the courses required of both upper- and lower- classmen when the students need to take them. Students were often described as "chasing just one class to graduate."

Administrators noted there is a self-perpetuating cycle between scarce resources and poor reputation at the High-Lows. A lack of resources leads to poor student outcomes, which leads to a bad reputation which leads to low enrollment, which leads to fewer resources. In response, all of these institutions are attempting to improve their reputations by securing more outside grants for research and/or by recruiting more academically-able students. In doing so, however, the High-Lows may divert energy and resources from their primary mission, which is to serve populations who are under-represented in higher education.

Overall, the institutions in the High-Low category and the students they serve face numerous challenges; however, both the institutions and the students alike are "striving" to succeed beyond expectations despite such challenges. The High-Lows offer evidence of promising practices contributing to their "relative" success that could be expanded to improve their retention and graduation rates if the obstacles to doing so (mainly funding) could be overcome.

LOW-LOWS A.K.A. "THE UNDERPERFORMERS"

People and Place

The Low-Lows are a group of four medium- to large-sized institutions, including one doctoral/research extensive, two doctoral/research intensive, and one non-doctoral university. The Low-Lows are moderately selective institutions that serve mostly traditional-age student populations; however, there are sizeable and growing populations of parttime, adult, and transfer students on these campuses. The Low-Lows have historically served an "access mission" for the local service area, but underserved populations do not represent the majority of students. On average, roughly one-third of students receive Pell Grants and one-third of students are from under-represented minority groups. Most students live off-campus, including most freshmen. The Low-Lows have first-year persistence rates and six-year graduation rates that are below the national average. Two of the institutions have relatively high transfer-out rates; however, neither of them are designated as "branch" campuses where transfer to the main university within the state's higher education system is the primary function.

Institution	Type	Median SAT	FTE Undergraduate Enrollment	Pell Recipients	% Pell	% Minorities	% Part-Time	% Over 25
к	Doctoral/ Research Extensive	1010	15,667	5,640	36%	17%	11%	23%1
L	Doctoral/ Research Intensive	1005	11,688	3,390	29%	9%	38%	41%
М	Non- Doctoral	1005	15,199	5,472	36%	54%	28%	33%
N	Doctoral/ Research Intensive	950	6,802	3,061	45%	35%	40%	45%
Average		993	12,339	4,391	37%	29%	29%	36%

Institutional Profile: Low-Lows

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS

¹ 2003 data were used because 2002 data were not available.

The student and institutional characteristics of the Low-Lows likely contribute to, but do not fully explain, their high levels of attrition. The students were described by faculty and staff as academically under-prepared for college, as well as unable to commit to college as their main priority given conflicting obligations such as work and family. Compared to the High-Lows, however, the Low-Lows have students who are somewhat more prepared for college (as measured

by SAT scores) and generally have fewer risk factors associated with leaving college (as indicated by students' demographic characteristics), but still have similar or lower persistence and graduation rates. Thus, the institutions in the Low-Low category are "underperforming" relative to the characteristics of their student bodies. There was a sentiment at the Low-Lows that, as one senior administrator said, "there is only so much the institution can do" given their student population. While acknowledging that there are constraints on institutional responsibility for student retention, there were factors on these campuses beyond student demographics related to institutional resources, policies, and leadership that limited the effectiveness of retention efforts at the Low-Lows. In other words, it is not just the students, but also the institutions that are "underperforming" in this category.

Institution	1st Year Retention Rate	4-Year Graduation Rate	5-Year Graduation Rate	6-Year Graduation Rate	Transfer Out Rate
К	N/A	17%	34%	39%	29%
L	67%	13%	26%	33%	12%
М	64%	6%	18%	26%	47%
Ν	64%	9%	17%	22%	17%
Average	65%	11%	24%	30%	26%

Student Outcomes: Low-Lows

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

Institution	1997	1998	1999	2000	2001	2002
К	36%	40%	39%	43%	42%	39%
L	35%	33%	29%	33%	31%	33%
М	25%	27%	25%	23%	27%	26%
Ν	17%	21%	19%	18%	25%	22%
Average	28%	30%	28%	29%	31%	30%

SOURCE: 2002 data from the Education Trust's College Results Online based on IPEDS.

Practices and Programs

At the Low-Lows, like the High-Lows, the most innovative and effective retention efforts were often found in programs for special populations. The programs for conditionally or provisionally admitted students at these institutions

Two of the Low-Lows have well-developed programs for provisionally-admitted students. At one of the institutions, provisionally-admitted students are served by a program housed within a comprehensive learning center on campus. The learning center offers free academic support programs to all students, including tutoring, academic coaching, supplemental instruction, study skills workshops, and computerized selfpaced remedial instruction. The one-year program for provisional admits requires students to schedule regular meetings with advisors; students also meet regularly with their advisors who serve as their instructors in the required freshman success seminar. Provisionally-admitted students are also assigned to a learning community. If participants do not make satisfactory academic progress, they are referred to another program for students on academic probation also run by the center. The program and the center are highly regarded on campus by faculty, staff, and students.

The program at the other institution also involves a structured first-year experience for provisionally admitted students, which includes pre-orientation contact, orientation, advising, and academic and personal support services. Pre-orientation contact includes a welcome letter and information packet from the program director as well as a telephone call from an advisor before students arrive on campus. Parents are involved in pre-orientation and orientation activities; they are also provided with reports on students' progress throughout the first year. The program utilizes academic support teams that include a case manager, academic and personal advisors, and instructors to provide intensive and individualized advising. Support services include academic coaching or tutoring. peer mentoring, and career counseling. Program participants are required to enroll in the University 101 course; special sections are reserved for them. The director describes the program as "studentcentered" with an "achievement oriented, nonremedial approach." Program data show first-year retention rates that are higher than the university's overall rate.

in particular incorporated many of the "best practices" in the retention literature. Some of these programs were created at the Low-Lows (as well as at a number of other institutions in the sample) in response to recent increases in admissions standards that decreased eligibility among low-income and minority students. At one of the Low-Lows, more than 20 percent of students entered the institution through the conditional admission program, including nearly 50 percent of minority students. These programs provide an intensive level of support for students, particularly during the first year, through mandatory participation in academic and social support services and programs. Outreach to students begins with summer bridge and orientation programs. Intrusive advising helps students pursue a well-structured academic program while tutoring and skills development courses help them maintain adequate academic progress. Peer mentoring and learning communities provide social support systems to further bolster students' academic success.

However, the Low-Lows face barriers to campus-wide implementation of these successful practices and programs, similar to the problems encountered by the High-Lows. At one of the Low-Lows, a senior administrator relayed that the institution has neither the infrastructure, nor the resources necessary to build a system that requires advising prior to registration. Resources are but one of the barriers, however. At two of the institutions, there is hesitancy on the part of program directors to expand or make mandatory for all students the services, like supplemental instruction, that they offer to students who participate in special programs. This is due to what was described as "personal ownership" of the programs. There may be legitimate concerns on the part of directors that the budgetary and programmatic autonomy that they currently exercise within these large institutions is responsible, at least partly, for the success of these programs. Program directors fear the effectiveness of these programs could be "watered down" with full-scale implementation, particularly if no additional resources were allocated to them. However, the effect of keeping these successful programs small scale, particularly when the need for their services is so high, could be limiting their potential to improve overall retention rates at the Low-Lows.

Policy Environment

There are some administration-led efforts to improve retention underway at all of the Low-Lows; however, there is also a history of "failed" retention efforts at several of them. On one site visit, staff members showed us binders full of agendas and reports from numerous retention committees that had convened and consultants who had visited over the past 10 years. As they described, the retention plans that resulted were either not implemented or were implemented piecemeal, without enough funds, or for too short a time to be effective. As a result, faculty and staff at this institution were reluctant to participate in current efforts to improve retention. As one staff member said, "How many times can we sit on a committee and say the same things and nothing gets done?"

"Bureaucracy" was cited as the major obstacle to implementing previous retention efforts at one of the Low-Lows; although, the faculty and staff at this institution were optimistic about new programs being initiated under the leadership of the new president. At another institution, however, the faculty and staff were much less confident in their new Chancellor. There has been heavy turnover in leadership at the top level at this institution, as there has been at several of the Low-Lows and High-Lows. Some faculty and staff said they did not want to get involved in any retention efforts put forth by the new Chancellor because they did not expect him to stay. Others were less than willing to participate because they felt the initiatives were developed without their input. One faculty member suggested the Chancellor had merely "changed the name" of the university on his strategic plan from his previous institution to his current one.

Furthermore, the faculty and staff were not convinced that the Chancellor was in fact committed to retention. It was perceived as "not an accident" that improving undergraduate education was listed behind fostering faculty excellence, improving research capabilities, and increasing graduate enrollment as major goals in the Chancellor's strategic plan for the university. It was noted that associate dean positions that were focused on teaching and instruction were recently eliminated in most of the colleges at this university. It was also mentioned that there is a top administrative position dedicated to research and development at this institution, but there is not a similar administrative position dedicated to instruction or retention. In fact, none of the Low-Lows had a central person, office, or committee to coordinate their retention efforts.

Initiatives to improve retention were limited to executive-level involvement at the other Low-Lows as well. Support staff were viewed as committed to improving student retention, even going to "great lengths" to assist students; however, faculty commitment to and involvement in retention efforts was described as inconsistent. While many faculty members demonstrated concern about the retention problems at their institutions, they felt they had competing responsibilities with respect to research that limited their involvement. Moreover, the faculty members felt that they were not provided with adequate resources or compensation for focusing their attention on improving undergraduate student success. At one institution, for instance, an effort to recruit full-time faculty to teach introductory science courses in order to reduce class sizes failed, in part, because the faculty felt they would not be rewarded in terms of promotion and tenure for teaching "service" classes.

The Low-Lows are at a crossroads with respect to deciding how to move forward on improving student retention. Two of the Low-Lows appear to place responsibility for their "underperformance" on the students they currently enroll. At least at the administrative level, these two institutions want to move away from serving the local community and attracting more talented students and faculty from across the country. There are, however, conflicting opinions throughout the campus community about whether such a shift should occur. The other two universities, whether out of a sense of mission or realism, seem to want to chart a course to improve the level of service for their current students, thereby placing more responsibility on the institution to address the "underperformance" problem. In this respect, these two institutions were more like the High-Lows than the Low-Lows, since they too "strive" to perform better than expected in the face of numerous challenges. However, these institutions have a long road to travel before they can achieve at that level.



COMMON PRACTICES AND POLICIES ACROSS "HIGHER-PERFORMING" LARGE PUBLIC INSTITUTIONS

People and Place

STUDENT CHARACTERISTICS

As in the previous study, the majority of higher-performing institutions have moderately selective admissions and serve mostly full-time, traditional-age student bodies. Over half of the higher-performing institutions have residential student populations with the majority of students living on campus or in nearby campus-affiliated housing, while all of the lower-performing institutions are commuter campuses. However, all the institutions in this study, including the higher-performing ones, were selected because they serve large numbers of at-risk students. Furthermore, students at the higher-performing institutions are graduating at better than expected rates, even after taking their relatively strong academic backgrounds into account. Therefore, what these universities "do" in terms of policies and programs, not just who they "are" in terms of student and institutional characteristics, contributes to the success of their students.

It should be noted that while the High-Lows do not necessarily fit this profile, there was a strong determination to succeed among students attending these institutions, which was often credited for their ability to persist to graduation in the face of numerous challenges — even if it took them up to 10 years to earn their degrees.

FACULTY/STAFF CHARACTERISTICS

At most of the higher-performing institutions, students have a faculty or staff member who serves as a "first responder" to their needs. At the High-Highs and High-Lows, the first responders were primarily staff members who worked in special programs and/or student support services. Students said they are more likely to go to support staff than to faculty or advisors when problems arise at these institutions. At the High-Averages, faculty members were more likely to serve as "first responders." Students at High-Averages have high levels of interaction with faculty, whom they describe as approachable and accessible in small classes and in advising sessions. Many of the faculty at High-Averages also come from similar backgrounds as their students (e.g. first in their families to go to college), thus serving as important role models. At all of the higher-performers, first responders, whether faculty or staff members, serve an important role in helping students navigate these large, complex institutions.

INSTITUTIONAL CHARACTERISTICS

Relatively high levels of student engagement exist on campus (e.g. participation in extracurricular activities) at the High-Highs and High-Averages, due in large part to the residential nature of most of these institutions. However, the High-Averages with an entirely commuter population also made an effort to increase student involvement in campus activities and events through special programs aimed especially at first-year students. The High-Averages also had a "small school" atmosphere, despite an average enrollment of over 10,000 students. At the High-Highs and the High-Lows, high levels of student participation in special programs may have scaled down and personalized the college experience at these large institutions. A student-centered culture was widely credited for the success of the High-Averages.

Practices and Programs

Focus on the First Year

The higher-performing institutions placed a strong emphasis on improving the first-year experience in order to increase overall retention and graduation rates. Almost all of these institutions had well-developed first-year programs—such as freshman orientation programs, freshman success courses, freshman interest groups, and first-year learning communities—in which student participation was mandatory or high. The positive impact of these programs is reflected in first-year retention rates that are at or above the national average at all but one of the higher-performing institutions. First-year retention rates were at or above the national average even at the High-Lows, which may be a factor in the relative success of these institutions.

MONITORING STUDENT PROGRESS

Most of the higher-performing institutions had systems in place to monitor student progress and to intervene when student performance was low. At the High-Highs, strict academic progress and probation policies alerted students to problems at the end of the semester, although intervention was often voluntary and sometimes too late. The High-Averages took a more proactive and less punitive approach with early warning systems in place that alerted students and advisors to problems in time to develop a plan of action to improve performance. Students on academic probation at the High-Averages were often required to sign performance contracts that committed them to receiving advising, counseling, and tutoring and/or enrolling in study skills workshops/courses. The High-Averages also had strong advising programs, particularly for undeclared students. Advising was described as "the heart of our retention program" at one of the High-Averages. At the High-Lows, student progress was often only monitored for participants in special programs; however, such programs captured a sizeable percentage of incoming students.

IMPROVING INSTRUCTION IN INTRODUCTORY COURSES

A number of the higher-performing institutions have recently focused attention on "gatekeeping" introductory courses with low attendance and high failure rates, particularly in mathematics. In response, many of them have undertaken efforts to improve student success rates in general education and remedial courses by increasing opportunities for individualized instruction and interaction between faculty and students as well as among students. Despite the size of the institutions in our study, the majority of the higher-performing institutions offer relatively small classes taught by full-time faculty members, even at the introductory level. Most of the institutions also keep class sizes "small" in introductory courses by offering supplemental instruction. At several of the institutions, most notably the High-Lows, the initiatives to improve instruction in general education and remedial courses were funded by outside grants such as Title V and/or involved support from outside groups such as BEAMS.

SUPPORTING STUDENT SUCCESS

Ample academic and social support services, such as tutoring and personal and career counseling, were available at most of the higher-performing institutions, often through a "learning center" run by student affairs. Such services were operated on a "self-service" model at High-Highs, although one of them reported that at least half of the students interact with at least one support program. The support services were well-utilized at the High-Averages due partly to a high degree of coordination with the early warning and advising systems. The High-Averages were also proactive in advertising their services to students as well as training faculty members and advisors about available services in order to help them make appropriate referrals to students. At the High-Lows, the available support services were often more readily accessible, and in some cases limited, to students participating in special programs.

SPECIAL PROGRAMS FOR AT-RISK POPULATIONS

At almost all of the institutions in the study, including the Low-Lows, there were programs for at-risk student populations (i.e. low-income and minority students, conditionally admitted students, athletes) that incorporated many of the "best practices" in the retention literature. Such programs provide structured and intensive support to participants through bridge and orientation programs, intrusive advising with early warning systems, mentoring and tutoring programs, and in some cases, grant aid. As a condition of their participation in such programs, students are also often required to attend full-time, live on campus, enroll in freshman seminar courses, and/or join campus organizations. Internal program evaluations show that students who participate in these programs have much higher retention and graduation rates than the overall student population. Students often spoke highly of the importance of such programs in their decisions both to attend and stay at the institutions.

Thus, nearly every institution in this study, even the lowest-performing ones, already has a model of good retention practice in action on its campus that, if adopted university-wide, could improve student success rates. However, as exemplified by the High-Lows and the Low-Lows, there may be problems, such as lack of resources or "turf wars," that can limit the widespread implementation of such promising programs, thereby reducing their impact on overall retention and graduation rates.

Policy Environment

LEADERSHIP

Most of the higher-performing institutions have strong leadership from top administrators — albeit new ones at the High-Lows — who are concerned about and committed to improving retention and graduation rates. Informed by the research literature as well as by internal data, the best of these administrators have assessed the problem, set benchmarks, created an action plan, and allocated the necessary resources to achieve their retention goals. At several institutions, there is also considerable leadership and support from the state and/or system in terms of targeted programs, policies, and resources dedicated to improving student retention. As exemplified by the High-Averages, top administrators create an institutional culture that promotes student success by: using rhetoric that demonstrates their commitment to retention; providing adequate resources to fund retention programs; and offering rewards to faculty and staff for getting involved in efforts to improve retention.

Commitment

Commitment to and involvement in retention efforts is not limited to administrators at the higher-performing institutions. Commitment to improving retention is evident from various constituencies across campus, and reflects an overall dedication to undergraduate education as an important part of the university mission. The High-Highs and the High-Lows were characterized by strong administration commitment to retention with high levels of commitment and support from staff in special programs and student support services. The High-Averages were characterized by strong commitment from leadership with high levels of commitment from faculty as well as support from staff. Faculty commitment was lower at the High-Highs and High-Lows due to the multiple and competing missions (i.e. research vs. teaching) at these universities. Administrators encouraged faculty involvement in retention efforts by: making a case with sound research and data; including faculty in the process of identifying the problem and possible solutions to it; and rewarding faculty for their time and contributions. Administrators also often "hand-picked" faculty who were "motivated to make change" to participate in institutional retention programs.

COORDINATION AND COLLABORATION

At nearly all of the higher-performing institutions, a central person, office, or committee coordinates undergraduate education and/or retention efforts such as the Task Force for Transforming Undergraduate Education, the Recruitment and Retention Council, the First Year Task Force, the Office of Undergraduate Academic Programs, or the Office of Student Retention. The retention committees and/or offices were typically led by a senior administrator in academic or student affairs who reported to the top administrator at the institution. This top administrator was often the person responsible for creating the committee or office. The charge of the committees was usually to investigate the extent of and possible solutions to the retention problem on campus, while the role of the councils and offices was to offer programmatic and policy oversight and support to retention initiatives currently underway at the institution.

Retention programs and services, such as first-year programs and student support services, were generally run and delivered by student affairs staff. At the High-Averages, retention programs and services (with the exception of advising) were operated centrally and offered university-wide by student affairs in collaboration with faculty and advisors, each of whom delivered key program components. Individual colleges or departments typically provided retention programs at the High-Highs and High-Lows, which meant that not all students were offered the same options to participate in retention programs across the university. However, there was collaboration between academic faculty and student affairs staff at these institutions to develop and offer the department-based retention programs in subject-specific yet student-responsive ways. Retention programs, particularly first-year programs, were typically funded at the departmental or college level at the High-Highs and High-Lows as well.

DATA AND EVALUATION

The use of data and evaluation was not as prevalent as it could or should have been at most of the institutions in the study. In fact, most of the institutions could not provide us with persistence and graduation rates for low-income students, due to limited data capabilities. However, several of the higher-performing institutions, particularly the High-Highs, did have strong institutional research functions and were responsive to data in the decision-making process. Common uses of institutional research data at the higher-performing institutions were studies of retention and graduation rates by student characteristics (e.g. high school GPA, major, and race/ethnicity), studies of pass/fail rates in general education and remedial courses, and benchmarking studies that rank the universities relative to peer group institutions such as the National Study of Student Engagement (NSSE) and the Equity Scorecard. Several institutions, most notably the High-Averages, also placed an emphasis on evaluating new retention programs in order to improve the delivery of services and students' outcomes as well as to ensure the efficient use of limited resources.

DOES WHAT WORKS FOR ALL STUDENTS WORK FOR LOW-INCOME STUDENTS AT LARGE PUBLIC UNIVERSITIES?

In the previous section, we discussed the retention practices and policies that were observed as working to improve overall graduation rates at large public universities. In this section, we consider whether "what works" for all students also works for low-income students on these campuses. In our previous study, low-income students (as defined by Pell Grant recipient status) were in the majority at nearly all of the institutions. Thus, we concluded that the outcomes and experiences of low-income students at these institutions were not likely to differ substantially from the rest of the student body, given their representation on campus.

While all of the institutions in the current study serve large numbers of low-income students, they are in the majority on only two of the campuses. Furthermore, most of the universities could not provide us with separate retention and graduation data for low-income students due primarily to limited data capacities. Therefore, we cannot conclude with as much certainty in this study that overall graduation rates also apply to low-income students.

In fact, it was observed that low-income students attending large public universities differ from their peers in terms of the resources they bring with them to college, as well as the experiences they have once on campus. Both factors likely affect their chances of earning a degree. As described by faculty and staff, as well as by students themselves, the profile of the low-income student was one of risk. Low-income students were described as lacking sufficient preparation for and exposure to the college experience. Due to inadequacies in their K-12 preparation, many low-income students have not mastered the subject content or study skills necessary to perform well in college and/or in particular majors, even if they completed a college-preparatory curriculum in high school. As one faculty member said, "It's not that they are not trying. They study a lot, but not well." At this moderately selective institution, the faculty members considered low-income students to be "academically talented but not academically savvy" due to the lack of college-going experience in their families. Faculty at this and other institutions further describe low-income students as lacking self-confidence and being acutely afraid of failure, even when they are academically prepared for college.

At the universities studied, many, if not most, of the low-income students were the first in their families to go to college. As such, low-income students often lacked support from role models in their families or communities who had earned a college degree. While some students had family members or friends who were unsupportive or even hostile about them attending college, many students did have the moral support of their families and friends. Many of them did not, however, have much financial support from their families. Most of these students must work to support themselves financially and to pay for college; some of them must also work to provide financial support for their families. In order to help defray the cost of going to college, many low-income students live at home with their families and commute to campus, some traversing long distances on public transportation to get to class.

The academic, social, and financial resources (or lack thereof) that low-income students have available to them affects the extent to which they can interact with and succeed in the college environment, including the extent to which they can utilize or participate in retention programs and services. According to faculty, staff, and students themselves, there are a number of ways in which low-income students' access to such resources and services are limited, some of which are discussed here.

Students do not know about the services that exist

Due largely to their lack of exposure to college, low-income students frequently told us that they either weren't aware of the programs and services that existed on campus, or they didn't understand the function these programs served or how they could benefit from them. As one student said, "I know what offices there are, but I don't know what they do." As a result, low-income students often did not know where or who to turn to when they needed help. When students do find out about the programs and services that are available, "it's awesome" as one student said. In fact, a by-product of our focus group interviews was that students informed one another of on-campus resources, such as the availability of emergency short-term loan aid programs in case of financial hardship.

Students' "financial aid literacy" was particularly low. We were told that too many low-income students fail to apply for aid because they believe they will not qualify, they and their parents cannot understand the forms, or they cannot get their parents to provide them with the necessary information to complete the forms. Low-income students and their parents were generally described as "loan averse." Some of them did not apply for aid because they did not want loans and did not know they might be eligible for grant aid. Some low-income students at these institutions declined the financial aid offered to them, including scholarships, because they did not understand the difference between grants and loans. We were told that when low-income students receive a notice that they are not making satisfactory academic progress or when they incur unexpected financial hardship, they often believe they have to drop out because they are not familiar with the resources available that could help them improve their performance and/ or secure emergency aid. In addition, a number of students said they found the staff and service in the financial aid office to be less than helpful.

The exceptions were low-income students who were involved in support programs like SSS and students who worked on campus in work-study jobs. Work-study students, particularly those who worked in the financial aid office, felt they had "inside knowledge" about the campus and how to navigate it. Students who worked as peer mentors were also extremely knowledgeable about the campus and its services due to extensive on-the-job training. Unfortunately, the number of work-study positions available on all of the campuses was low and declining due to stagnant funding for the federal program.

Students cannot afford the services

A number of programs and services, such as orientation and tutoring, available on the campuses in our study charge a fee for participation. With regards to summer orientation in particular, students often reported that they could not afford the cost of participating in the program and/or they and their parents could not afford to take time off work in order to participate. While a number of institutions offered fee waivers to participate in orientation, students said they were unaware of the waivers or did not believe they would qualify. In addition, there were other costs associated with attending the orientation program (e.g. related to travel) that were not waived that low-income students could not afford. When low-income students do not attend orientation, they miss an important opportunity to learn about the programs and services the institution has to offer, which only compounds the problems associated with their lack of exposure to college. When low-income students do attend orientation, we were told they often attend the last summer session or the session offered right before the term begins, which causes them to "miss out" in terms of the course scheduling and housing options that are still available. They also miss the chance to take placement exams early enough to enroll in remedial courses over the summer, which can put them behind in their studies before they even start.

The services are not offered at convenient times

Low-income students who live and work off-campus often told us they cannot take advantage of services or programs available at their institutions because these are not offered at times that are convenient for them. Students described the offices on one campus as "shutting down at 4:00 pm," even though many courses are offered in the evening to accommodate students' work schedules. Students at another institution said they relied on the services offered by the ethnic programs because these were open until midnight, while other offices on campus closed at 5:00 pm. Low-income students also said they are often unable to attend events or join organizations on campus due to time constraints. At least one institution was making an attempt to increase the availability of services to its commuter student population by extending the hours of operation at the learning center to include evenings and weekends. This institution also offers events during a scheduled "free hour" between morning and afternoon classes twice a week to help its students connect with campus life. Institutions might also try to incorporate or coordinate more services or events with classroom activities in order to make use of the only time that some low-income students spend on campus.

There is a stigma associated with using the services

In our site visits, program staff members who work with at-risk populations often told us that low-income students face difficulties with seeking and asking for help. As the director of a provisional admissions program said, "Students need help dealing with their anger about being in a special program." Students at this and other institutions expressed anger that their high schools did not adequately prepare them for college, even when they received good grades in college-preparatory courses. Staff members also said that low-income students do not ask for help because they fear exposing or stigmatizing themselves as failures. Staff in several Student Support Services programs told us that they "provide students with scripts" or "conduct role plays" in order to help students get over the intimidation factor of asking faculty and others for assistance.

Furthermore, students and staff said that the services targeted toward at-risk populations may be stigmatized because the programs that offer them operate "on the margins" of campus. Separate programs for at-risk populations can also segregate low-income and minority students, which can make it more difficult for them to integrate into campus life at the conclusion of the programs, many of which only support students through the end of the freshman year.

The services are not offered to all students

At a number of the universities in our study, not all students were offered the same options to participate in programs and services that may improve their chances of success. At some of the institutions, such programs and services may only be available in certain departments or colleges or these may only be offered to students participating in special programs. At other universities, the services or programs may not be aligned with the advising systems, for instance, which limits the number of students who are referred to them. Some institutions also lack adequate resources to provide the services to all students who need them. As we observed, low-income and other students "fall through the cracks" when services and programs lack centralization, coordination, or resources. We were also told that low-income students are less likely to participate in "voluntary" or "self-service" programs than their peers. At one institution in particular, staff estimate that almost 90 percent of freshmen attended the voluntary summer orientation program. However, when asked, they said that the 10 percent who did not were likely low-income students who could not afford to travel to or take time off work to attend it, which the students confirmed for us. Thus, programs and At one of the institutions in the study, a Low-Low, students who apply late and/or attend the last orientation session often "get stuck" in the least desirable dorm on campus. According to student affairs staff, these late enrollees also often have more risk factors for early attrition, including poor academic preparation or inadequate financial resources. The effect is that there is an entire *dorm on campus with a large population of at-risk* students. In response, the institution plans to implement a program to provide extra resources, such as tutoring and computer and writing labs, in this dorm. The institution also plans to use "an *intrusive advising model" to track the progress* of dorm residents. Students will be asked to sign a waiver allowing instructors to contact their advisors as well as their parents about their course attendance and grades. The staff involved in the project hope that offering additional services and support to the entire dorm will reduce the stigma that students may experience when asking for and receiving extra help.

services intended to improve retention are most likely to reach low-income students when they are offered to and/or mandatory for all students. However, it is important to recognize and remove the barriers that limit the participation of low-income students before making it mandatory.

Thayer (2000) has said that retention "strategies that work for first-generation and low-income students are likely to be successful for the general student population as well. By contrast, strategies that are designed for general campus populations without taking into account the special circumstances and characteristics of first-generation and low-income students will not often be successful for the latter." We found that the institutions in our study were generally focused on improving overall retention rates rather than addressing retention gaps. They implemented strategies that addressed the needs of the overall student population rather than focusing specifically on the needs of at-risk students. As previously mentioned, most of the institutions did not currently have the capacity to examine retention and graduation rate data separately for low-income students. Those who were able to had not done so prior to our visit.

Thus, the institutions in our study were often not able to readily identify low-income students nor focus on addressing their special needs. As one faculty member said, "I can't see who is low-income. I can only see poor performance." We were told that some faculty and administrators were apt to attribute students' failure in the classroom, as well as their failure to use the resources available to them like office hours and tutoring, to internal factors such as motivation or ability rather than external factors related to their economic circumstances. As one faculty member said, "Lots of [low-income and first-generation] students initially flounder as freshmen, but many of those students do well in the second year. Some faculty and administrators think those students are a lost cause, but they need to understand that the first seeming failure is not one because these kids can figure this out and they are going to be successful." This faculty member went on to say, "It's counterproductive when financial aid is taken away from these students if they don't do well initially because they will recover." As these comments illustrate, low-income and other at-risk populations might be better served by "need-conscious" programs and policies that recognize and remove the barriers that limit their participation in institutional efforts to improve retention, rather than the practices currently in place at most of the institutions in our study that operate without regard to students' financial need. As the director of the SSS program at one of the institutions said, "You have to take it to the students."

IMPACT OF STATE AND SYSTEM POLICIES ON LOW-INCOME STUDENTS AT LARGE PUBLIC UNIVERSITIES

As previously stated, one of the purposes of this study was to determine whether the conditions for improving graduation rates that we observed at the smaller public and private institutions in the previous study are present or even possible to create at larger public institutions, which serve much greater numbers of low-income students. As we will discuss in detail at the conclusion of this report, many of the same conditions for success are in fact present in both the small and large higher-performing institutions.

However, the contexts within which the conditions for success operate are considerably different. A major difference was the greater impact of state and system higher education policies on retention efforts at the large public universities than at the smaller public and private institutions. State and system policies related to admissions, financial aid, and mission definition in particular complicated efforts to improve retention at large public institutions, especially for low-income students.

Admissions

All of the institutions in this study have recently increased their admissions standards and most have undertaken efforts to further increase recruitment and enrollment of more academically-qualified students by establishing or improving Honors programs and by offering more merit-based financial aid. At most of the institutions, the drive to increase selectivity is motivated by a desire to improve institutional reputation and rankings as a means for increasing revenues and resources (e.g. attracting research funding). At some of the institutions, the impetus for increasing admissions standards also comes from the system or state, often in the form of bans or restrictions on remediation, which were in effect at half of the institutions in the study. At one institution, a recently enacted state-wide ban on affirmative action also forced a change in their admissions policies.

Although many of the institutions in this study have outreach programs to recruit at-risk populations, the trend toward higher admissions standards may have a negative impact on access to public four-year institutions for low-income and minority applicants, who tend to be less well-prepared academically than their peers. In fact, some of the institutions saw decreases in the racial and economic diversity of applicants and enrollees after increases in admissions standards went into effect. As a result, nearly all of the institutions now have provisional admissions programs or co-admissions with local community colleges. These programs allow "under-prepared" students (according to the new admissions standards) to enroll on the condition that they participate in a structured program with intensive monitoring and support during the first year. At one institution, more than 20 percent of incoming students enrolled in the university through the provisional admissions program, including nearly 50 percent of minority students.

On the one hand, provisional admissions programs may be beneficial to low-income and minority students who may not have received much-needed support upon entry under less stringent requirements for admission. On the other hand, however, the more stringent admissions requirements may serve as a form of "sticker shock" that discourages at-risk students from applying to public four-year universities at all. At several of the institutions, the number of students admitted as first-time freshmen has been decreasing, while the number admitted as transfer students has been increasing. These trends are likely due to higher admission standards, as well as recent increases in tuition at four-year institutions, both of which make it necessary for more students to begin their studies at community colleges.

As previously mentioned, most of the provisional admission programs, as well as many other programs for at-risk student populations, have evaluation research which shows that participants have the same or higher persistence rates as the overall student population. At one institution, a study conducted by the institutional research office demonstrated that low-income, first-generation students participating in the federally-funded Student Support Services program graduated at rates similar to their peers, despite entering with lower high school GPAs and SAT scores. However, the study also showed that these students were unlikely to be admitted to the institution under the new, more selective admissions criteria.

Funding and Financial Aid

All of the institutions in this study were negatively affected by steep declines in state funding for public higher education over the past five to 10 years. At several universities, the budget problems have been made worse by system and/or state funding policies that do not work in these institutions' particular interests. For example, system policies that financially reward increases in enrollment growth hurt those institutions with low or no enrollment growth, and state policies that establish institutional funding levels every two years hurt those institutions with fast enrollment growth. In response to budgetary constraints, all of the institutions in the study have raised tuition in recent years, in some cases dramatically. At one institution, tuition has increased 100 percent over the last decade with double-digit hikes in the last several years.

As a result, many of the institutions report high and increasing levels of unmet financial need. Stagnant funding for federal aid such as the Pell Grant and Work-Study programs, as well as federal loan limits have only exacerbated the problem by increasing the work burden on students. Several institutions also report a dramatic increase in the number of students with private alternative loans. The impact on low-income students is obvious. Students told us that they are working more hours each week than they spend in class and/or studying, with predictable effects on their engagement and achievement on campus. Students also said the more they earn, the less aid they get because they "supposedly make too much money," although not enough to pay the costs of attending a four-year institution. According to one financial aid administrator, this is due to "the negative incentive to work" in the federal financial aid methodology.⁴ The severity of this problem may be under-recognized on the campuses we studied, according to one top administrator, because many faculty and staff attended college at a time when it was financially possible to "work your way through."

The processes by which institutions award financial aid also place low-income students at a disadvantage. Most of the institutions have "need-blind" admissions, and financial aid is awarded on a "first-come, first-serve" basis. Students who apply and/or enroll early receive better packages, with more total aid as well as more grant and less loan aid, than students who apply late, even at institutions with "rolling" admissions. However, faculty and staff at a number of institutions said that many late enrollees are low-income students (with other risk factors as well), which means the students with the most financial need get the least attractive financial aid packages. Furthermore, most of the institutions are attempting to attract more academically-qualified students by offering even more merit-based scholarship aid. States are also increasingly offering merit-based scholarship programs, like the new lottery-funded scholarship program offered to students at one of the institutions in our study.

⁴ For more information, consult the work of the Advisory Committee on Student Financial Assistance (2002, 2005) on the negative consequences of the "student work penalty" in the federal financial aid formula.

The trends toward greater selectivity and lower affordability, both of which are directly and indirectly affected by system and state policies, raise important questions about the mission of the public four-year university.

Mission

A strong teaching mission was a defining feature of the smaller public and private institutions with high graduation rates in our previous study. However, the institutions in this study often serve multiple, and at times conflicting, constituencies and missions, especially at the doctoral/research universities. The central conflicts revolve around the "research" and "teaching" functions and the "access" and "excellence" missions of large public institutions. Whether and how institutions resolve these conflicts has an effect on programmatic and policy decisions, particularly those related to admissions and financial aid. This, in turn, can have a major impact on low-income students' access to and success in large public universities.

The conflict between research and teaching was most acutely felt at the doctoral/research institutions, especially by faculty who felt that they would not be rewarded in terms of promotion and tenure for focusing on teaching. Faculty also felt that they did not have the necessary resources, such as small class sizes and teaching assistants, to put additional effort into improving students' academic performance in the classroom, particularly the time and attention needed to help at-risk students achieve success. One faculty member said he felt pressure to either "hold endless office hours" or to "lower expectations" of his students without additional support from the institution. As a result, some faculty said it was not possible to provide access to and serve a diverse student population while maintaining high standards and promoting excellence in teaching and research.

However, the majority of the institutions in this study were selected because they were performing better than expected in terms of graduation rates, despite serving academically and demographically diverse student populations. Yet most of the higher-performing institutions were concerned about improving their reputations and rankings given their current performance by "objective" graduation rate standards that fail to account for student inputs as we did in our analysis. As the President of one of the institutions said, "The national rankings should acknowledge differences in inputs and measure the quality of outputs in terms of the value added." Few of the higher-performing institutions in this study recognized, or were recognized by others for, their success with economically and racially diverse student populations. As a result, many of the higher-performing universities were focused on "who they were not" rather than "who they were" as institutions.

Thus, a number of the institutions in this study felt the need to compete with more highly regarded institutions, often in the same system, by recruiting the most academically-qualified students rather than serve as an access point for the population they are already serving, and in some cases, serving well. In this respect, systems and states need to revisit how distinctive missions for different institutions are defined and assess institutional success accordingly. Otherwise, systems and states are allowing, and to some extent, encouraging universities in the same system to duplicate missions as research-focused institutions. Alternatively, systems and states may need to create better incentives to reward universities for serving both access and excellence missions. This is increasingly important given rapidly changing demographics and labor market demands. As one administrator said, "Why do we want to be like [the flagship university] anyway? They are going to become irrelevant if they aren't careful. We can be the research institution of the 21st century – the research university with a heart."



CONCLUSIONS AND RECOMMENDATIONS

A major purpose of this study was to determine whether the conditions for improving graduation rates that we observed at the smaller public and private institutions in our previous study are present or even possible to create at large public institutions, which serve much greater numbers of low-income students. As we found in our research, many of the same conditions for success are, in fact, present at both the small and large higher-performing institutions:

- A personalized educational experience. Despite much higher enrollments than the institutions in the first study, many of the higher-performing large public universities in this study were able to "personalize" the undergraduate experience by: making early contact with students through first-year programs; closely monitoring student progress through advising and early warning systems; limiting class size and/or reducing the negative effects of larger class sizes through supplemental instruction programs; and offering students individualized services and support in special programs. Furthermore, many students could name a faculty or staff member who serves as a "first-responder" to their needs and helps them navigate these large institutions.
- A commitment to undergraduate education. A strong teaching mission was a defining feature of the smaller public and private institutions with high graduation rates in our previous study. The large public institutions in the current study serve multiple missions and constituencies, which conflict at times. However, a commitment to teaching and serving undergraduates was still an important part of the mission at all of the higher-performing institutions in this study. Some of the higher performing institutions intentionally recruit and hire faculty who support the teaching mission of the institution as well as acculturate new faculty to it through orientation programs. Some of them also reward faculty in terms of promotion and tenure for focusing their time and attention on teaching undergraduates.
- A sense of shared community. The smaller institutions in the previous study served more homogeneous student populations and were much more geographically isolated than the large universities in the current study. These characteristics were cited in the previous report as fostering a sense of shared community at the smaller colleges and universities. Despite their diverse populations and locales, many of the higher-performing large institutions were also able to create a sense of "community" on campus by promoting student involvement in campus activities and events, even at the institutions where the majority of students live and work off-campus. Participation in special programs also gave students a greater sense of belonging on campus, as did involvement in college- and/or department-sponsored programs and events, by scaling down and personalizing the college experience at these large institutions. Some of the large institutions were actually described as having a "small school" and "family-like" atmosphere.

An institutional culture that promotes success. In both studies, the higher-performing institutions were explicitly concerned with retention and graduation, setting goals and measuring institutional performance with data. In short, there was an institutional culture promoting success at these colleges and universities. Given the size of the institutions in the current study, however, creating a success- or improvement-oriented culture required much stronger leadership and higher levels of coordination than in the previous study. The higher-performing institutions in this study were characterized by: key administrators who articulated a centralized vision and commitment to retention; support for and involvement in retention efforts from all members of the campus community; and campus-wide coordination and/or collaboration in retention programs, even when offered by separate offices or departments. Some of the higher-performing institutions in this study also had strong support and resources from the state or system to focus on retention.

Another similarity we found was that the institutions in both studies were primarily focused on improving *overall* retention rates by implementing strategies that addressed the needs of the general student population rather than focusing specifically on the needs of at-risk students. In the previous study, we concluded that low-income students were as likely to benefit from these retention efforts as other students since they were in the majority on campus. In the current study, however, we found that low-income students differ from their peers in ways that limit the extent to which they can interact with and succeed in the college environment, including the extent to which they can utilize or participate in retention services and programs. Thus, we conclude in this study that large public institutions need to focus on the special characteristics and circumstances of low-income students when developing and implementing retention policies and practices on their campuses. In doing so, these institutions may be able to dramatically increase the graduation rates of their low-income populations, not to mention their overall graduation rates.

Although low-income students were not the majority of students at the institutions in this study, the majority of lowincome students who attend four-year institutions are enrolled in large public universities like them. Therefore, this sector serves a crucial role in providing postsecondary access to low-income student populations, especially to the increasingly important bachelor's degree. However, the trends toward greater selectivity and less affordability that we observed at the institutions in this study raise important questions about which "public" is being served. In this era of college rankings, a number of the institutions in this study felt immense pressure to compete with more highly regarded institutions, often in the same system. The ready answer to some of these institutions seems to be recruiting the most academically-qualified students rather than continuing to enroll the population they are already serving, and in some cases, serving well. Given the high stakes, there were actually concerns from some faculty and staff at these institutions that our study with its focus on graduation rates might intensify the external pressure to prioritize "excellence" over "access" at public universities.

However, we did not select institutions for this study based solely on whether they had high or low graduation rates. We selected institutions based on whether their graduation rates were higher or lower than expected after taking the academic and demographic diversity of their student populations into account. Unfortunately, few of the institutions in this study recognized, or were recognized by others for, their success with economically and racially diverse student populations given "objective" graduation rate standards, which fail to account for student "inputs" (i.e. demographic and achievement characteristics) as we did in our analysis. This needs to change. As the President of one of the study universities said, "The national rankings should acknowledge differences in inputs and measure the quality of outputs in terms of the value added." Several efforts to revise ranking systems are currently underway. For example, an alternative ranking system developed by the *Washington Monthly* (2006) magazine ranks colleges and universities based on how well they promote social mobility among low-income students. According to the editors, "Rankings reflect priorities and they also set them. By enshrining one set of priorities, such as those set by *U.S. News*, colleges neglect the ones

we think are most important." While such efforts are laudable, the real impetus for change must come from the state and university systems. Large public universities are more likely to re-align their priorities toward access if systems and states provide better incentives and rewards for serving and graduating under-represented populations. Given the rapidly changing demographics of higher education, such realignment is imperative. If our research is any indication, though, it is indeed possible for such institutions to serve as both a point of access and an exemplar of excellence.

Recommendations

While the findings we present here identify a number of promising practices and policies that aid student retention at large public institutions, we also identify improvements that need to be made in order to increase access to and success in these institutions, particularly for low-income students. Based on our research, we offer the following recommendations to be implemented at the institutional, state, and/or federal levels:

- Develop retention programs with low-income students in mind. The institutions we visited were primarily focused on improving overall retention rates by implementing strategies that addressed the needs of the general student population rather than focusing specifically on the needs of at-risk students. However, we found that low-income students differ from their peers in ways that limit the extent to which they can utilize or participate in retention services and programs. Thus, institutions need to focus on the special characteristics and circumstances of low-income students when developing and implementing retention policies and practices on their campuses.
- Increase the use of disaggregated data in retention decision-making and program

evaluation. While many promising retention practices were identified in the study, the use of data and evaluation was not as prevalent as it could or should have been at many of the institutions we visited. In fact, most institutions could not provide persistence and graduation rates for low-income students due to limited data capabilities. Institutions need to improve their ability to collect disaggregated data in order to inform programmatic and policy decisions about retention. Institutions also need evaluate new retention programs in order to improve the delivery of services and students' outcomes as well as to ensure the efficient use of limited resources.

- Implement provisional admissions programs to increase economic diversity. Given the trend toward greater selectivity in public colleges and universities, institutions should consider implementing provisional admissions programs like those described in this report in order to maintain economic and racial diversity on campus. Many of the institutions in this study have evaluation research that shows that participants in such programs have the same or higher persistence rates as the overall student population despite entering with lower high school GPAs and/or SAT scores. However, institutions that choose to implement such programs will also need to increase their recruitment efforts among low-income and minority students because more stringent admissions requirements may be discouraging these students from applying at all.
- Reward institutions that provide an excellent education for all while maintaining access for low-income populations. Systems and states need to revisit how distinctive missions for different institutions are defined and assess institutional success accordingly. Otherwise, systems and states are allowing, and to some extent, encouraging universities in the same system to duplicate

missions as research-focused institutions. Alternatively, systems and states may need to create better incentives to reward universities for serving both access and excellence missions. This is increasingly important given rapidly changing demographics and labor market demands.

Require institutions to report retention and graduation rates by income. Postsecondary institutions are not required to disaggregate and report six-year graduation rates by student income level or even Pell Grant recipient status. As a result, few colleges and universities analyze and report such information, which makes it unlikely that institutions will identify or address retention gaps between low-income students and their peers. This needs to change. A national system of student-level data, based on the statewide systems currently in place in more than 40 states, could address this and other limitations in the available data. The U.S. Department of Education could further strengthen support for this proposal by providing the incentive of federal money to institutions that participate in the system and address achievement gaps that are identified as a result.

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