



ILLINOIS EDUCATION RESEARCH COUNCIL

Degrees with Less Debt: Effective Higher Education Strategies for Underrepresented Student Populations

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Table of Contents

Table of Contents.....	3
Table of Tables and Figures	4
Underrepresented Student Populations.....	5
Original Population and Institutions Identified Through our Success Formula	7
Identifying the Five Highest Ranking Institutions Granting Degrees with Less Debt	8
Determining Successful Strategies and Practices	10
Converging Themes	13
University Leadership	14
University Investment.....	14
Goal Setting and Strategy Development	15
Engagement with Multicultural Students.....	17
Coordinated and Caring Community	18
A Family Approach.....	18
Caring Means Believing in Students	19
Wrap-Around Supports.....	19
Coordination of Care.....	20
Early College Experiences	21
Summer Bridge Programs	22
Orientation Programs	22
First-Year Programming	23
Flexible and Sufficient Financial Aid.....	24
Keeping Unmet Need Low	24
Flexibility to Adapt to Changing Circumstances	26
Financial Literacy and Knowledge of Financial Resources	27
Just-in-Time Academic Supports	28
Tutoring, Supplemental Instruction, and Writing Centers	29
Data-Informed Supports.....	30
Game Changers	31
Mentoring	33
Limitations	34
Implications for Institutional Practice	35
Engaged Leadership and Priority Setting.....	35
Early College Experiences for Smooth Transitions.....	35
Creating a Financial Aid System that Works for Students.....	36

Implementing Just-in-Time Academic Supports	36
Creating a Coordinated and Caring Community.....	37
State and Federal Policy Implications	38
Institutional Profiles	39
Maryville University	40
Missouri State University - Springfield.....	43
Southeast Missouri State University	45
University of Central Missouri	49
Webster University	52
References	55
Appendix	61
Determining Success Rankings	61

Table of Tables and Figures

Table 1. Population of Universities for this Study.....	7
Table 2. Description of Institutional Context and Outcomes.....	8
Table 3. Interviewees by University.....	10
Figure 1. Locations of population of universities and identified sample (starred sites).	9
Figure 2. Wordles of student interview data at each of the five institutions.....	11
Figure 3. The visual metaphor of the converging themes	13

Underrepresented Student Populations

In 2016, a higher education task force of St. Louis Graduates (STLG), a collaborative network whose mission is to increase degree completion for low-income students, first-generation students, and students of color¹ from St. Louis, commissioned this study from the Illinois Education Research Council (IERC). Through discussion, the following goals were established for this project: (a) identify those higher education institutions that are more successful in supporting and graduating underrepresented students from the St. Louis region, and (b) determine the strategies that institutions are using to graduate underrepresented students with less debt.

Postsecondary enrollment and completion rates for traditionally underrepresented populations continue to be disproportionately lower than for their more advantaged peers. While there have been gains in completion rates, a large completion gap remains. White students graduate in six years at a rate 11 percentage points higher than Black students and 22 percentage points higher than Hispanic² students (Yeado, 2013). Likewise, education completion gaps exist between first-generation students and those whose parents graduated from college (Attinasi, 1989; Billson & Terry, 1982; Chen & Carroll, 2005; Nunez & Cuccaro-Alamin, 1998; Warburton, Bugarin, & Nunez, 2001). Moreover, college access and completion varies substantially based on poverty levels. Only 30% of children from the lowest income quartile families are expected to attend college, compared to 80% for those from the top income quartile (Goldrick-Rab, Kelchen, Harris, & Benson, 2016) and completion rates are six times higher for students from high-income families than for those from low-income families

(Bailey & Dynarski, 2011). Unfortunately, there is a large overlap between poverty and minority status. For instance, the poverty rates in 2014 for Black and Hispanic persons were 26.2% and 23.6%, respectively, compared to only 10.1% for non-Hispanic White persons.³

These college completion gaps are further amplified by the nation's shifting demographic landscape, where the White majority population is expected to be the minority population in the U.S. by 2043, resulting in the current minority populations representing a larger portion of the workforce (Associated Press, 2013). At the same time, highly skilled workers are in increasing demand; it is expected that 65% of all jobs in the U.S. will demand some postsecondary degree by 2020 (Carnevale, Smith, & Strohl, 2013). Moreover, the nonpecuniary benefits associated with postsecondary degree attainment include better access to health insurance, increased civic engagement, more time spent with children, and healthier life choices (e.g., lack of smoking and obesity; Baum, Ma, & Payea, 2013). The implications of postsecondary degree attainment transcend the financial security of individuals and affect society as a whole. This has led to an increased focus on degree completion and affordability, especially among traditionally underserved populations who represent an increasing proportion of the United States' demographics.

Overall, completion rates have stagnated with 39% of 4-year and 31% of 2-year students graduating on-time (Institute of Education Sciences, 2015). College affordability, or lack thereof, is cited as the primary reason students are not able to

¹ Low-income students, first-generation students and students of color together are referred to as underrepresented students in this report.

² When the origin of Spanish heritage is unknown, we will use Hispanic; although we recognize this could identify individuals of Hispanic, Latino, or Chicano heritage.

³ According to the National Poverty Center at University of Michigan.

complete their degrees (Davenport, 2013). College unaffordability can further be understood as the product of both rapid increases of tuition and fees, and declining family incomes (Callan, 2008). The relationship between family income and student achievement has grown sharply and is now nearly as strong as the relationship of parental education to their child's achievement (Reardon, 2011). The importance of family income can also be illustrated by the proportion dedicated to tuition cost. From 1999-2000 to 2007-2008, families in the highest income quintile saw a 3% increase in the proportion of their income used to pay for college tuition, whereas families in the lowest quintile saw a 16% increase (Callan, 2008). Beyond tuition and fees, there are other costs associated with college attendance—housing, food, books, and transportation ramp up the actual “sticker price”. In a recent analysis of the affordability of college costs, a study from the Institute of Higher Education Policy found that for the lowest income students, only 2-3% of the higher education institutions provided an affordable route to a bachelor degree (Poutré, Rorison, & Voight, 2017). When taking into account student loans, still 70-78% of the institutions remained unaffordable to these students. Yet, many students turn to student loans to close the affordability gap (Brown, Haughwout, Lee, Scally, & van der Klaauw, 2013; Dynarski & Scott-Clayton, 2013). Within the last 10 years, the total amount of student debt in the United States has tripled, from \$304 billion to over \$900 billion. Further, the Project on Student Debt (The Institute for College Access & Success, 2016a) finds that 68% of undergraduates exit college with student loan debt averaging \$30,100 per borrower.

Further analysis reveals that Black students and students from low socioeconomic backgrounds have the highest likelihood of incurring student loan debt (Houle, 2014). Black students acquire larger amounts of debt (Jackson & Reynolds, 2013) and both Black and Hispanic students are more likely to default on student loans than White students (Hillman, 2014; Jackson & Reynolds, 2013). Also, students from families with less wealth are more

likely to default on their loans than students from middle- and upper-class families (Hillman 2014). Those most averse to borrowing are sophomores (21%), Hispanic students (27%), Asian students (27%), and those whose net cost of attendance is below the median (20%; Cadena & Keys, 2013).

A recent research study could only identify five colleges and universities in the U.S. that made reasonable efforts to provide an affordable degree to students who are from low-income families (i.e., University of North Carolina at Greensboro, CUNY Queens College, California State University – Fullerton, CUNY Bernard M. Baruch College, and California State University – Long Beach; Lynch, Engle, & Cruz, 2011). These institutions made college affordable by enrolling a percentage of low-income students that is proportionate to the national average, making tuition for low-income students proportionate to the average middle-income student, and offering all students a 1-in-2 chance of graduating. These institutions achieve these goals through intra-system initiatives and within-state policies that keep tuition costs low. They also offer substantial need-based financial assistance for these populations. More recently, it was reported that 3.6% of all U.S. colleges and universities ($n = 138$) held 75% of all postsecondary wealth (Nichols & Santos, 2016). Further, half of these institutions are in the bottom 5% at enrolling first-time, full-time Pell Grant recipients, and the tuition at the majority of these intuitions exceeds 60% of the annual family income for low-income students. A coalition of college and foundation presidents, state policymakers, college advocates, authorities on financial aid, and other leaders have proposed five principles to guide financial aid policies at postsecondary institutions including: (a) investing in access to student completion of a credential with value; (b) focusing resources on the neediest students; (c) developing new strategies for enrolling adult learners; (d) providing a clear picture of costs/repayment obligations; and (e) holding institutions accountable for completion

(HCM Strategists, 2013). These guidelines aim to make completion more affordable and the costs more transparent, with emphasis on traditionally underserved populations.

In this context, we undertook this study to determine successful college completion strategies for low-income students, first-generation students, and students of color. Our ultimate aim is to identify promising practices for graduating underrepresented students with less debt and to share those strategies and practices with other institutions so they can be adopted and adapted. This would ultimately create a broad network of colleges and universities that are using evidence-based strategies for affordable college completion for underrepresented students.

Original Population and Institutions Identified Through our Success Formula

The St. Louis Graduates Higher Education Recognition Task Force (hereafter referred to as the STLG Task Force), co-chaired by Greg Laposa, Vice President of Education Strategies for the St. Louis

Table 1
Population of Universities for this Study

1. Fontbonne University
2. Harris-Stowe State University
3. Lincoln University
4. Lindenwood University
5. Maryville University
6. McKendree University
7. Missouri Baptist University
8. Missouri State University—Springfield
9. Missouri University of Science & Technology
10. Saint Louis University
11. Southeast Missouri State University
12. Southern Illinois University—Carbondale
13. Southern Illinois University—Edwardsville
14. Truman State University
15. University of Central Missouri
16. University of Missouri—Columbia
17. University of Missouri—Kansas City
18. University of Missouri—St. Louis
19. Washington University
20. Webster University

Note. Blue font indicates Missouri institutions, green font indicates Illinois institutions.

Regional Chamber and Amy Murphy, Director of Scholarships and Donor Services for the St. Louis Community Foundation, derived a list of 27 institutions in which high schoolers from the St. Louis region were most likely to enroll. The list included seven predominantly 2-year institutions and twenty predominantly 4-year institutions. This study was delimited to 4-year institutions only. Of the twenty 4-year institutions, 17 are in Missouri and three are in Illinois (see Table 1). All 20 institutions are public or nonprofit private universities.

The lead author met with the STLG Task Force and STLG Project Director Laura Winter, three times between June and August of 2016 to fully develop the methodology for the project. During these meetings we reviewed existing institutional rankings, determined which metrics we wanted to use for deriving our own formula, and how we would weigh these different factors. We initially considered two metrics, one that measured Access and Cost and a second that measured Success. Through discussion, we decided to focus solely on a Success measure that included the context of the university in terms of the percent of low-income students, first-generation students, and students of color. Our Success metric evolved in these discussions from measuring retention, student debt, and graduation rates to one which just included student debt and graduation rates because graduation was the ultimate outcome of concern and retention is implicit to attaining a college degree. At the STLG Task Force August meeting, we decided that it was important to go beyond identifying institutions and also focus on determining those successful strategies being used at each institution to help underrepresented students graduate with less debt. At this meeting, we began the planning stage for a second phase to the project: to interview personnel at each of the identified institutions. MOHELA generously provided additional funding for this phase of the project.

Identifying the Five Highest Ranking Institutions Granting Degrees with Less Debt

Using a ranking calculation based on the median student debt at graduation and 6-year graduation rates compared to predicted graduation rates for similar institutional contexts, we created a Success Formula that identified the most successful institutions from our population. The STLG Task Force additionally created thresholds for serving a moderate amount of low-income students (i.e., at least 25% Pell students) and graduating a moderate number of students, (i.e., at least 50% 6-year graduation rate overall). A few institutions were omitted for falling below the thresholds, most notably the percentage of students receiving Pell grants, even though they may be successfully awarding degrees to underrepresented students (See [Appendix](#) for a complete description of the analysis methods for phase one.)

The five highest ranking institutions based on the Success Formula that were identified as graduating underrepresented students with less debt in alphabetical order were: **Maryville University**, **Missouri State University – Springfield** (MSU), **Southeast Missouri State University** (SEMO), **University of Central Missouri** (UCM), and **Webster University**.⁴ See Figure 1 for the locations of the five identified universities.

The institutional context, (i.e., percent Black and Hispanic students, percent first-generation students, and percent Pell recipients) as well as the outcomes examined in this study (i.e., graduation rates and student loan debt) are described in Table 2. The data are from the sources and years used in the analyses in this report⁷ and all are two-year averages (see [Appendix](#) for further details). The percent Black and Hispanic students ranged from 7% (MSU) to 44% (Webster University); the percent first-generation students ranged from 33% (Webster University)

Table 2
Description of Institutional Context and Outcomes

Institution	Institutional Context			Outcomes	
	Percent of Black and Hispanic Students ⁵	Percent First-Generation Students ⁶	Percent Pell Recipients ⁵	Graduation Rates ⁵	Student Loan Debt at Graduation ⁶
Maryville University	13	35	27	67	\$24,165
Missouri State University	7	37	37	54	\$22,250
Southeast Missouri State University	10	43	40	50	\$22,480
University of Central Missouri	9	38	42	54	\$23,225
Webster University	44	33	38	62	\$24,625
5 Institution Mean	17	37	36	57	\$23,349
20 Institution Mean (Min, Max)	19 (6 – 85)	34 (10 – 50)	37 (6 – 91)	53 (9 – 95)	\$23,360 (\$19,566– \$27,869)

⁴ Upon request from St. Louis Graduates, the actual ranking of the institutions is not provided.

⁵ Source: IPEDS, fall 2013 & fall 2014 average total enrollment Black students and Hispanic students; fall 2013 & fall 2014 average percent Pell enrolled; AY14 & AY15 average 6-year graduation rates

⁶ Source: College Scorecard, average of 2012 and 2013 student debt at graduation; fall 2012 and fall 2013 average first-generation enrollment

⁷ We recognize that more recent data are available at the time of the publishing of this report, however, we are reporting the data which were available in late summer and early fall 2016 and were used in the analyses for this project.

to 43% (SEMO); and the percent Pell recipients ranged from 27% (Maryville University) to 42% (UCM). The average percent Black and Hispanic students was two percentage points less than the average for all 20 institutions. The average percent first-generation students of the five identified institutions was three percentage points higher than the average for all 20 institutions. The average percent Pell for the five identified institutions was one percentage point less than the average for the full 20 institutions. The graduation rates ranged from 50% (SEMO) to 67% (Maryville University) with an average of 57% for the five identified institutions, four percentage points higher than the graduation rate for the full 20 institutions. The median student loan debt at graduation ranged from \$22,250 (MSU) to \$24,625 (Webster University) with an average of \$23,349 for the five identified institutions, just slightly below the average for the full 20 institutions.

Each of the five institutions had unique strengths among the metrics used in this report. Webster University had the highest percentage of students of color; SEMO had the highest percent first-generation students; and UCM had the highest percent Pell recipients. Maryville University had the highest graduation rates and MSU had the lowest

average median debt. Yet, the institutions have room to improve as well. All of the five institutions, except Webster University, were below the average percent of students of color for all 20 institutions. Yet, Webster University had less than the average percent first-generation students for all 20 institutions. All of the five identified institutions, were above the cut-off of 25% Pell and 50% graduation rates, set by the STLG Task Force. The average student loan debt for the five institutions was similar to the average for all 20 institutions. However, the variability of the 20 institutions was much greater than for the five identified institutions on all metrics. This was expected because the full population included open access institutions, e.g., Harris-Stowe University and Lincoln University, as well as a very selective institution, Washington University, with a wide range of institutions in between.

As described in detail in the *Appendix*, the analysis took into account the combination of the institution's context variables, and calculated a predicted graduation rate. The Success Formula was based on the institution's actual vs. predicted graduation rate, as well as median student debt.

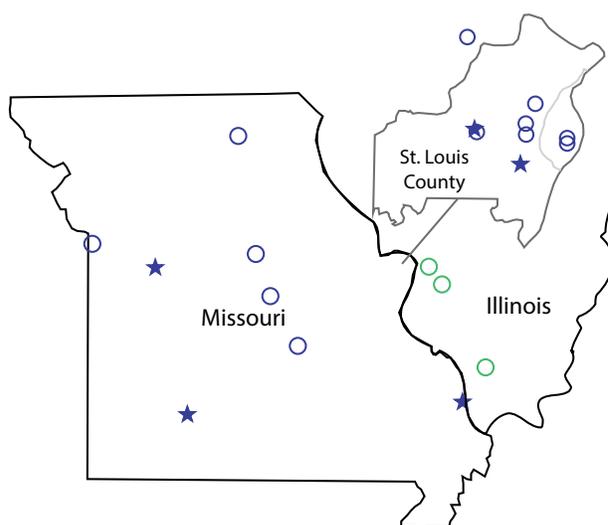


Figure 1. Locations of population of universities and identified sample (starred sites).

Determining Successful Strategies and Practices

In the second phase of the study, administrators and students from each of the five identified institutions were interviewed with the goal of determining successful practices and strategies they employ to help underrepresented students graduate in six years or less with lower debt. Accordingly, our goal was to interview at least one administrator from the offices of academic affairs/student success, student affairs or diversity and inclusion, enrollment management, and financial aid. STLG Task Force co-Chairs and the STLG Project Director provided site contacts at each university. The site contact helped us determine the appropriate administrators to interview and facilitated this process. The titles of administrators who oversaw these areas varied across institutions and sometimes overlapped across different offices. In fall 2016, we interviewed between three and five administrators at each institution, the

number varied based their responsibilities and recommendations made by our site contacts at each university (see Table 3). Administrator interviews were scheduled for an hour each and if possible, in person. In some cases, we conducted phone interviews.

We also interviewed one focus group of students at each institution. Our site contacts worked with other administrators at each institution to recruit students for these focus groups. Focus groups were comprised of 4-8 students representing some combination of first-generation students, low-income students, and students of color. Each focus group was conducted in person and lasted approximately one hour. Students received a \$25 gift card from St. Louis Graduates for participating, however this was not known to them before the interview. See Table 3 for the number of student

Table 3
Interviewees by University

Institution	# of Administrators / Titles	# of Students
Maryville University	5 Vice President for Student Success Vice President for Student Life Associate Vice President of Enrollment Assistant Dean for Diversity and Inclusion Executive Director of Student Service Center	8
Missouri State University, Springfield	5 Associate Provost of Student Development and Public Affairs Associate Vice President for Enrollment Management and Services Chief Diversity Officer Provost Fellow for Student Success Associate Dean, College of Arts and Letters	4
Southeast Missouri State University	5 Associate Dean of Students and Director of Student Retention Director of Academic and TRIO/ Student Support Services Assistant Director of Outreach Assistant Director of Educational Access Programs Scholarship Coordinator	6
University of Central Missouri	3 Associate Vice Provost for Student Experience and Engagement Assistant Vice Provost for Enrollment Management Director of Student Financial Services	7
Webster University	5 President Vice Provost for Academic Affairs Vice President for Enrollment Management and Student Affairs Associate Vice President of Diversity and Inclusion and Community Involvement Assistant Vice President for Enrollment Management and Financial Aid	5

perspectives to determine those that successfully help underrepresented students graduate with less debt. Interviews primarily were conducted by one of two seasoned researchers. In some cases a graduate student was present or conducted the interviews, however, a primary researcher was present in all interviews and directed follow-up questions as needed. All interviews and focus groups were recorded and transcribed for later reference. Additionally, after each series of interviews, the primary researcher produced researcher notes documenting initial themes that emerged from the interviews while they were still fresh to the researcher.

The themes emerging from the data were constructed by a grounded-theory approach (Glaser & Strauss, 1967). Using a constant comparative method, comparing incident to incident, incident to category, and category to category (Glaser, 1992), we developed a model of what strategies and practices these institutions employed and how they employed them to achieve higher graduation rates with less debt. Two separate analyses were conducted. First, we developed a series of institutional profiles that described the

practices and strategies employed within each of the institutions, limiting these to the top four to six themes that emerged. Second, we compared a broader listing of practices and strategies used across the institutions, which were derived from researcher notes, transcripts, and additional documentation, to develop a set of converging themes across the institutions. Each institution's profile, as well as other site-specific information in the report, was reviewed by an administrator at each site for member checking. Both the institutional profiles (pp. 39–54), which may contain some practices unique to an institution, and the broader converging themes (pp. 13–38), are presented in this report.

Converging Themes

Five themes emerged from the qualitative interview data that describe the practices or strategies that supported underrepresented minority students, to graduation with less debt. Two of the five themes reflected the overall organizational culture of the university. One of these themes was *University Leadership* and it was apparent that much of the underlying programs/initiatives, aspirational goals, and emphases would not be possible without substantial university leadership. We heard many references to the university presidents and to the university's strategic plans. It was evident that the administrators we spoke with believed that the presidents supported their efforts.

Another overarching theme was a *Coordinated and Caring Community*. As students leave home to go to college, many for the first time, it was clear from our student focus groups that family support and making their family proud was important to them. Many students also referred to an office at the university or the university itself as a “home-away-

from-home” or as a “family.” Students seemed to be finding refuge from the overwhelming experience of moving away from home to a novel and exciting, but sometimes stressful, environment by making connections with certain staff and faculty. From the administrative perspective, we often heard about the “intentional” efforts to provide student support and coordinate that support across departments to avoid referring students from office to office, and instead demonstrate a caring attitude toward students.

We believe that these two themes are central to student success so they are represented by book-ends in our visual metaphor (see Figure 3). The other three themes that emerged from the data were *Early College Experiences*, *Flexible and Sufficient Financial Aid*, and *Just-in-Time Academic Supports*, and are represented by the books in our visual metaphor (see Figure 3). Each of these themes has sub-themes and are described in detail, along with supporting quotations.

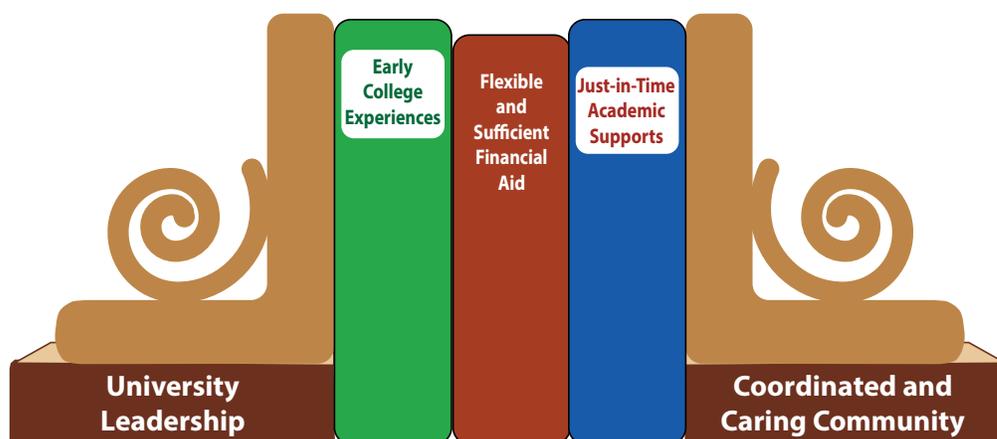


Figure 3. The visual metaphor of the converging themes as the two overarching themes as book-ends bracketing the other three themes, represented as books.

University Leadership

For each university, the leadership and mission set the course as to whether the institution has a global or more regional focus, whether they seek higher prestige rankings or the advancement of underrepresented students, or whether selectivity drives success or access and success are hand-in-hand. Although it is simplistic to think of universities being such either/or dichotomies, there are different emphases across universities. Keeping in mind that our Success Model elevated institutions serving a large number of underrepresented students with lower median debt at graduation, we were looking for strategies that supported this model of success. Regarding university leadership, there were three sub-themes that helped explain how these institutions support successful degree attainment for underrepresented students: (a) university investment; (b) goal setting and strategy development; and (c) engagement with multicultural students.

University Investment

There are multiple ways universities can invest in efforts to recruit and then support underrepresented student populations. Types of investment which surfaced in our study were personnel investment, scholarship investment, initiative investment, and investments in facilities and physical resources.

Personnel investment. In order to have the capacity to plan, develop, and implement strategies to support students, universities invest in personnel—for hiring administrative leadership, faculty, counselors, coaches, and other staff. At Webster University, President Beth Stroble invested a new leadership position in 2013, an Associate Vice President of Diversity and Inclusion and Senior Director of Community Engagement. One role

of this new position was to elevate minority hires given the importance of supportive role models and mentors that relate to students. This position also champions initiatives that support and showcase successful minority student experiences. According to Robert Parrent, Vice President for Enrollment Management and Student Affairs, Webster University,

Diversity is the cornerstone of effective human capital management in the 21st century. In order to be a high performing organization in this millennium, institutions must tap into the rich diversity of talent, skills, and perspectives of our increasingly global community. It is the goal of divisional leadership to have a workforce that looks like the face of America, drawn from all segments of society. Webster University proactively engages its hiring managers in recruitment outreach to cast a wide net when filling positions. All divisions, in association with the Office of Human Resources, are committed to the principle of achieving a qualified, diverse applicant pool. Each area has developed comprehensive plans in accordance with the university's commitment to diversity and inclusion in the workplace.

University of Central Missouri recently created a new higher-level administrative position, Assistant Vice Provost for Enrollment Management, to coordinate efforts to increase retention across the university.

In our interviews, we met with a fair number of individuals from TRIO⁸ and student success offices; these seemed to be fairly robust operations with ample staff and student hires and a large number

⁸ Federal TRIO programs are student services and outreach programs intended to assist students from disadvantaged backgrounds in attaining college degrees. TRIO programs originated from the 1964 Economic Opportunity Act and originally referred to the three programs, Upward Bound, Talent Search, and Student Support Services. Since this time, both number of programs under TRIO and the range of services have expanded.

of minority employees. For example, at SEMO, of the 13 Academic Support Center professional staff, nine are minority (69%) and seven are Black (54%). Showing a commitment to employing diverse faculty and staff conveys the importance of diversity to the campus community.

At MSU, President Clifton Smart currently provides leadership to increase the number of faculty and staff hires from underrepresented populations. This has increased the number of underrepresented staff and faculty from about 3–5% to 15% in 2016 according to Mark Biggs, Associate Dean of the College of Arts and Letters.

Scholarship investment. In order to secure funds for multicultural and first-generation scholarships, universities prioritize this focus in their capital campaigns and development efforts. We also heard about strategies to amplify those scholarship funds available to underrepresented students by coordinating with area access organizations to provide matching funds. There were also two notable instances of personal presidential investment that surfaced in the interviews. President Smart at MSU donated \$25,000 of his own funds to create the *first-generation student scholarships* program. Maryville University currently has a capital campaign with a major focus of funding multicultural scholarships to attract diverse students. Impressively, President Mark Lombardi at Maryville University donated \$500,000 of his own funds for diversity scholarships. These personal investments were sizeable and clearly signal the importance of these scholarship programs to the university community, as well as incoming and potential students.

Initiative investment. An institutional commitment was made this year at Maryville University to double the size of the *Multicultural Scholars* program to 24 scholarships and to further increase the number of scholars to 30 in 2017–2018. At SEMO, the budget for a very successful program, the *Academic Support Centers' Mentoring Program* (AMP; see *SEMO Institutional Profile*), was doubled in size three years ago and is now serving 53 students. In both

cases, these universities prioritized and invested in programs that were highly successful and associated with high retention or graduation rates allowing these institutions to broaden their support to more students.

Facilities and physical resources investment.

UCM recently invested in a new multicultural center that houses all diversity-related student organizations, such as the Prism organization for the LGBTQ students, the Association of Black Collegians, the Sisters of Ujima (an African American female student organization), the Saudi organization, and the Muslim Student Association. In its first signature event, called The Formation, students contributed to the center's vision. This will be an annual event in which students and staff revisit whether the center is true to its vision.

Goal Setting and Strategy Development

Strategic plans. The mission, vision, and strategic plans set by leadership of the university are of paramount importance in signaling the institution's direction for the next 5-10 years. Several of the interviewed administrators referred back to the university strategic plans and were aware of the plan's references to access, diversity, equity, and inclusion. For instance at Maryville University, their "Diversity and Inclusiveness" theme (one of four themes) of their current strategic plan drives their investment in the multicultural scholars. In addition, to further prioritize themes of diversity and inclusiveness, the university president and leadership can decide to elevate certain aspects of the strategic plan through their public comments and actions. At Missouri State University, institutional leadership has emphasized diversity and inclusion as one of six key areas in their strategic plan and Enhancing Campus Diversity and Inclusion is one of only two areas of the action plan for the 2016–2017 year. Further, beginning in the fall of 2014, university leaders recognized that their first-generation student population had approximately a 10% lower retention rate than non-first-generation students (R. Darabi & M. Biggs,

personal communication, November 9, 2016). To overcome this retention gap, they decided to begin what is now their 3-year odyssey of their first-generation initiative (see *Early College Experiences, First-Year Programming*).

Additionally, university leaders set the tone to develop yearly action plans that elevate certain initiatives to support underrepresented students. At MSU, university leadership has played a pivotal role prioritizing institutional changes. According to Wes Pratt, Chief Diversity Officer, the Board of Governors and President Clifton Smart have created a climate to support underrepresented students by adopting an inclusive excellence change model. This model goes beyond simply diversifying the campus and follows research-based recommendations from the Association of American Colleges and Universities (AAC&U) “that systematically leverages diversity for student learning and institutional excellence” (Williams, Berger, & McClendon, 2005, p. v). At Maryville University, leadership has guided the easing of bureaucratic restrictions for students. According to Nina Caldwell, Vice President for Student Life, Maryville University,

Our president has made it very clear to us that challenges for students need to be in the classroom in terms of their learning and their discipline and their major, but everything else outside that classroom should be easy, so to not put barriers or boulders in place that will inhibit them from having a very positive and meaningful experience and engaging outside of that classroom. So, we don't have a lot of red tape or hoops that students have to jump through to start a student organization or to make a complaint or to do things on campus that will make it more enjoyable and rewarding for them as a college student and for them to understand that we do see you.

Task forces. Another way in which campus leaders elevate certain topics is through the establishment of task forces that regularly meet around a topic and make recommendations to enact certain policies or practices. We heard about task forces

focused on diversity and inclusion, such as the *President's Task Force on Diversity Education* at Southeast Missouri State University, which was created to address campus unrest after the Ferguson, MO shooting. This task force, comprised of 34 members including students, faculty, and staff, were charged with devising strategies to strengthen diversity education and enhance the cultural competence of the university community. The task force envisions that “Southeast Missouri State University will be a campus community where individuals from all backgrounds will feel welcomed, respected and included; and where our campus community engages in best practices to promote cultural competence and inclusion in all aspects of our work.” (President's Task Force on Diversity Education). Some of the preliminary recommendations of this task force included developing college-level diversity action plans; adopting culturally responsive teaching methods; improving career development, mentorship and networking opportunities for underserved student populations; and using existing programs and organization and diversity initiatives to increase cultural competence of the campus community.

Professional development. Interviewees at the majority of the universities where we conducted interviews mentioned professional development for training faculty and staff on inclusion and equity issues. Missouri State University provides diversity training for all new faculty. President Clifton Smart, the Board of Governors, and faculty are all part of these efforts and have requested and participated in diversity training, reinforcing its value to all. Additionally, MSU is making an effort to provide all the general education instructors and newly hired faculty with cultural consciousness professional development. They share issues regarding diversity, learn about valuing cultural consciousness and stereotypes, and how to negotiate these types of issues in the classroom. As the protests following the shooting of Michael Brown in Ferguson and subsequent campus unrest at the University of Missouri spilled over to other campuses in Missouri, including MSU, some faculty

did not feel comfortable discussing these issues with students. Now with this faculty training, “This has allowed us to expand the scope of folks who do feel comfortable, who feel equipped, that they can engage our students when there are challenges like that that happen in the larger community.” (Wes Pratt, Chief Diversity Officer, MSU).

Engagement with Multicultural Students

We expected that interviewed administrators would be aware of the influence that campus leadership has on many initiatives, but we were somewhat surprised by the connection many of the students felt toward their campus presidents. On a majority of the campuses, students mentioned the university presidents by name and often cited specific conversations they had with the presidents and how the president had remembered their name or a particular fact about them. University presidents connected with students through student organization meetings or planned events with students, e.g., *Diversity Dialogues* at Maryville University or Learning Walks at University of Central Missouri. Students at UCM mentioned that President Charles Ambrose connected with them through social media and students followed him on twitter. They noted that he was always around campus and they find him very approachable. As Student #1, UCM said “*Also, one thing that I can say about him, he really supports multicultural students. I really appreciate that. He’ll just come to events; or if something happens on campus, he’ll make sure that he’s there to address the situation....He’s phenomenal!*” Presidents also connected with students through student organization events, panels, and pre-freshman orientation events. Students at SEMO commented on how President Carlos Vargus is outgoing and attends panels and events to connect with students. According to a SEMO student,

That’s something that I take pride in saying that the president of my university takes the time out of all of his days to learn about the students and to make living at Southeast and being at Southeast student oriented. (Student # 4, SEMO)

It appeared as though the student interactions with their campus presidents led students to be more enthusiastic and promoted a stronger bond with their university.

Coordinated and Caring Community

Findings from prior studies indicate that when Black students attend predominantly White institutions (PWIs), they often report feeling socially isolated (Allen, 1992; Bennett & Okinaka, 1990; Feagin, Vera, & Imani, 1996; Smedley, Myers, & Harrell, 1993). This has stimulated research about how to foster a sense of belonging on campus (Hurtado & Carter, 1997; Strayhorn, 2012). Scholars now know that numerous factors contributing to the success of Black students are at play, including campus climate, faculty supporting engagement in educationally meaningful activities, and interactions with diverse peers (Hoffman, Richmond, Morrow, & Salomone, 2002–03; Kuh, Kinzie, Schuh, Whitt, & Associates, 2005; Strayhorn, 2008). Many higher education institutions strive to improve campus climate and create a supportive and engaging community for minority students. Research also indicates that first-generation students tend to have less acculturation and engagement in college and they perceive the college environment as less supportive (Pike & Kuh, 2005; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). It is likely that the same strategies for helping racial/ethnic minority students succeed in college would apply to first-generation students.

A parallel line of research demonstrates that relationships matter for racial and ethnic minorities who attend PWIs. For instance, faculty members who are warm, caring, and go beyond their normal responsibilities can have positive impacts on minority students' college experiences (Guiffrida, 2005; Hernandez, 2000; Jackson, Smith, & Hill, 2003; Nettles, Thoeny, & Gosman, 1986). Additionally, there are various advising practices that research suggests are more effective for enhancing the success of racial and ethnic minorities attending PWIs, namely: (a) humanizing the advising role so that the advisor is seen as caring about the student's success; (b) providing multifaceted, holistic advising in which the advisor recognizes that the student's academic, financial and other concerns are

intertwined; and (c) proactive advising in which the advisor connects the students to supports that they perceive the student will need (Museus & Ravello, 2010). This is encouraging because institutions can alter these practices with the right initiatives and investments.

In our research several sub-themes emerged within this area, including (a) a family approach; (b) caring means believing in students; (c) wrap-around supports; and (d) coordination of care.

A Family Approach

One of the sub-themes of a coordinated and caring community was using "A Family Approach." For instance, students often referred to staff in the academic support centers (or student support services and diversity and inclusion offices) as family. Students mentioned the importance of close connections to faculty and staff in reference to being away from home for the first time or in reference to being first generation, as this student did.

My first year, I was a "first generation" and an "undecided" student. I was in a special section that was a small amount of students. Connection with the teacher was encouraged, and she helped me in the path to deciding a major. She helped me work through those emotions you have initially, of a "lack of direction," when you don't have a family experience you can turn back to, and you don't have an inner direction yet. (Student #4, MSU)

Consistent with research on small class size (Beattie & Thiele, 2016; Chapman & Ludlow, 2010), students at some of the smaller institutions mentioned the importance of small class sizes and relatedly, being able to get close to the faculty. At several of the studied universities, students commented on the ease of getting to know their

professors. Students on these campuses also gave examples of how they had easy access to their professors and how the professors helped them beyond their classes, such as helping an ESL student learn English better during her freshmen year.

Caring Means Believing in Students

It was clear from our interviews that students were motivated by the confidence that the staff and faculty had in them. Students' self-efficacy or their beliefs in themselves are very important to success and can account for up to one quarter of the variance in academic performance (Pajares, 2006). Researchers who work with students from urban areas have found demonstrating a belief in students is a key factor in the students' success (Morrell, 2013). This was echoed in our interviews, as students mentioned how the staff and faculty believed in them and the student did not want to let them down. The confidence that faculty and staff placed in their students' academic performance seemed important to the students. Students at all the institutions we visited said that they appreciated the support from the Diversity and Inclusion, and TRIO offices.⁹ Some students emphasized the impact of these offices on their lives.

The advisors [in the multicultural scholars program] are amazing. [mentioned names of advisors in the Office of Diversity & Inclusion] made a huge impact on my life. I always go to them when I doubt myself, because I had a really bad problem with that. I will always stop in their office. They can deal with me crying or struggles in my life or whatever. . . . (Student #1, Maryville University)

I had my advisor who showed me where a job was, who told me it was okay to change my major a million times, and didn't ridicule me for it, who offered workshops to really help me do stuff. It just all falls back to TRIO. (Student #4, MSU)

Peer mentors were employed at several institutions to help with academic needs (*see Just-in-Time Academic Supports* section), but they also served other needs to provide role models and supportive assistance. Students seemed to appreciate having peer role models who understood their struggles first-hand as this student noted:

Wrap-Around Supports

Staff at the institutions we visited recognized the importance of providing support outside of traditional academic tutoring, mentoring, and advising but also the importance of being in touch with the students. They also commented on the importance of being available to the students when they needed the support. This, however, does not always neatly fall into the 8-to-5 work hours. At UCM, students commented on their academic resource coaches; a program that places trained students in the residence halls to live and stay in touch with students around the clock. This allows the academic resource coaches to direct students to needed resources at any time. Also, Maryville University has implemented a new advising model in which "life coaches" are responsive to students 24/7, including during evenings, week-ends, and breaks, to provide additional support all students and intentionally to underrepresented minority students. These life coaches serve in four main areas: learning diagnostics, academic advising, retention, and career coaching, and are partnering with faculty to offer personalized learning to students.

Investments in personnel who are available around the clock and provide holistic support to students demonstrate that university staff and administration recognize the need to provide students' academic and emotional/psychological supports in real-time and to have trusted staff and peers that students can confide in.

⁹ Although, in some cases the students participating in the focus groups were recommended by these offices.

Coordination of Care

Universities house many student support offices and it can be difficult for students to navigate the university bureaucracy. For institutions striving to increase student engagement and learning, one of the key concepts that multiple universities employed was to create seamless integration among student service offices. By integrating services, they hoped to reduce student frustration with university bureaucracies and the “run-around” from office to office (Bridges, 2008). At UCM, we found a strong effort to coordinate services and share data across offices, to minimize duplication and to break down inter-office silos so that students receive consistent messages. Prior to the UCM’s effort to increase coordination among their services, offices rarely shared student information and data, resulting in duplicative efforts and sometimes offices even worked at cross purposes for the students. Recently, UCM has implemented a student data dashboard that is consistent across offices and allows student service support staff to more seamlessly understand who is working with students at other offices. Currently, they are working on coordinating upper-level interventions for students across offices as well.

Additionally, the majority of the universities, including UCM, have an alert system that allows faculty to send notifications to the student support services or advisement offices to make staff aware of attendance or academic issues. In this way, the advisors/counselors can intervene with the students before it is too late for the student to rectify the situation. At SEMO, once faculty or staff trigger an alert, support offices intervene to help students develop an academic improvement plan. The support services office at SEMO has helped faculty learn about this referral process and this has led to a 40% increase in student referrals (T. Ball, personal communication, December 8, 2016).

Early College Experiences

Navigational capital describes the ability to make sense of and maneuver through social institutions, such as schools, the job market, the judicial system, or university systems, particularly for those who are traditionally disadvantaged participants of color (Liou, Antrop-González, & Cooper, 2009; Yosso, 2005). Students whose parents or other family members have not attended college have less information about the processes of preparing for, applying to, and succeeding in the college environment and this inhibits low-income and first-generation students from enrolling and persisting to graduation (Venezia, Kirst, & Antonio, 2003). Navigational capital is required for students to successfully obtain college admissions, financial aid, and other supports once on campus, and students with limited navigational capital are often confused about expectations for academic work, tuition costs, and college entrance and placement tests (Venezia et al., 2003).

Even for students admitted to college and intending to enroll, the “loose hand-off between secondary school and postsecondary institution” leads many low-income and first-generation students to fall out of the college pipeline during the summer after high school graduation; a phenomenon referred to as “summer melt” (Arnold, Fleming, DeAnda, Castleman, & Wartman, 2009, p. 23). Further, low-income and first-generation students often face additional challenges stemming from cultural differences between their home communities and the college environment, which can lead to strained relationships with family and friends who did not attend college (Engle & Tinto, 2008). This lack of early validation within the college environment inhibits success for many low-income and first-generation students (Kezar, 2001). As a result of these factors, first-generation students are less likely to attend college, less likely to get guidance about navigating college, less likely to engage with the college environment, tend to be less socially and

academically integrated with college, and perceive the environment as less supportive (Engle & Tinto; Venezia & Jaeger, 2013). This is especially damaging because research suggests that low-income and first-generation students benefit the most from these experiences (Engle & Tinto).

However, supports provided during the summer after graduation and first year of college can have a positive impact on low-income and first-generation students’ success. Focusing on this time period is important because evidence suggests this is when low-income and first-generation students are most vulnerable and when most college exits occur. As Engle and Tinto (2008) state, “[i]nstitutions must make a concerted effort to reach out to these tentative students as early and often as possible during the first year or risk losing them” (p. 25). Such supports can include summer bridge programs, pre-college orientation, new student advising programs, first-year seminars, and other similar efforts. This study did not encompass strategies for early college credit, such as dual credit, Advanced Placement (AP), and International Baccalaureate courses, however, we do acknowledge that research indicates these early college credit courses are related to shorter time-to-graduation and AP courses result in higher college performance (Godfrey, Matos-Elefonte, Ewing, & Patel, 2014). Strategies for providing early college support range from academic preparation to more psychosocial supports that create clear pathways for success, help students adjust to college, and develop appropriate habits (Engle & Tinto, 2008; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; Venezia & Jaeger, 2013).

Our study identified three early college experiences that contributed to the success of underrepresented students: (a) summer bridge programs, (b) orientation programs, and (c) first-year programming. These supports provided expert guidance and assistance with the college application

and admissions process, help in finding the right college, social and emotional support for both students and families, and intensive and consistent financial guidance.

Summer Bridge Programs

Summer bridge programs between high school graduation and the beginning of college are often targeted toward students identified as needing additional support transitioning to college academically, financially, and socially (Kezar, 2000; Sablan, 2014). Evaluations of the effectiveness of such efforts are limited and typically descriptive, but some studies have shown small impacts on college enrollment and retention (Sablan, 2014; Venezia & Jaeger, 2013), and larger effects for students in less selective colleges (Douglas & Attewell, 2014).

Webster University's *Transitions & Academic Prep* (TAP) program is an extensive summer bridge program designed to help conditionally admitted students learn to navigate campus. This 10-day experience allows students to earn two credits at no cost, while living on campus and participating in programs that includes study skills, time management, and financial literacy. TAP students receive orientation to campus services such as the library and financial aid, as well as opportunities to meet their professors and receive guidance on course scheduling (*see Webster University Institutional Profile*). As one student described the summer experience,

I did the whole summer program and I really, really liked it. . . . I'm a bio major, and we all know biology is hard. I got a chance to meet the professors first in the summer and talk to them about what it was going to be, what should I expect in the classes, so that was really nice. (Student #4, Webster University)

On average, 51% of TAP participants are first-generation students and about 62% are students of color (N. Hellerud, personal communication, April 13, 2017). The latest data from this program show that retention for TAP students is higher

(85%) than for regularly admitted students (79%), pointing to the effectiveness of this program (Stroble, 2015).

Southeast Missouri State's *Camp Redhawk* is a summer bridge program designed for students to begin their engagement with the campus community and campus life. This four-day leadership camp is offered throughout the summer and provides students with an introduction to campus life, including living in the dorms, meeting other students, and learning about the campus community. There is a modest charge for *Camp Redhawk* and some scholarships are available for those with financial need. One focus group student said of this experience,

This group of students came. 'Hey, welcome to SEMO. We're so glad you're here.' Just made you feel so welcome, and it made you feel like you were a part of this great institution. It was a family away from your own family. They [were] just there to make you feel like this is where you belong. I think a lot of freshman—especially when I was a freshman, really appreciate that experience. (Student #6, SEMO)

Orientation Programs

Orientation programs are widespread and generally geared toward all incoming freshmen. Research on orientation has been primarily correlational, showing associations between orientation and perceptions of support and student satisfaction, but with little effect beyond the first year (Burgette & Magun-Jackson, 2008; Perrine & Spain, 2008). Longer, more comprehensive orientation programs and those with a residential requirement are generally associated with stronger results (Kuh et al., 2006).

Students at several universities noted that orientation programs were helpful for preparing them to transition to college. Some general orientation programs had components that were specifically tailored for first-generation and low-

income students, emphasizing skills these students need to be successful. For example, Southeast Missouri State University's *Academic Support Center (ASC) Transition Camp* is a 2-day experience for freshmen who qualify for ASC services the week before college begins. During this program, students learn about campus resources, financial aid options, strategies for successful transitions, and college expectations. SEMO students cited these early college experiences as some of the most important for transitioning to and assimilating into the university environment.

The Student Orientation, Advising, and Registration (SOAR) program at Missouri State University is a voluntary experience occurring over two days before the first semester. Students come to campus prior to the beginning of freshmen seminar to do their schedules and participate in student orientation sessions. It also includes sessions designed especially for parents, which inform them about various programs, parent newsletters, how to look for mid-term grades, and resources available for students. There are also 2 one-day SOAR sessions to accommodate scheduling conflicts students may have and ensure that more students can attend. MSU's internal data suggest that the university is able to retain those students who attended the two-day SOAR program at higher rates than those who attend one-day SOAR, or do not attend at all. In addition, MSU's data show those who attend the one-day SOAR are retained at higher rates than those who do not attend at all (R. Darabi, personal communication, November 9, 2016), supporting the value of this early college experience.

First-Year Programming

First-year seminars are also quite common and can take a wide variety of forms, from academic skill-building to social development to general college orientation. Although, these programs have not been widely studied using causal methodologies, some results suggest they can impact credit accumulation, GPA, and retention beyond the first

year, and that they are especially effective for the least academically prepared students (Kuh et al., 2006).

Many of the early college programs observed in our study continued throughout the entire first year, offering additional counseling support, introduction to resources for students' seeking assistance on campus, and social activities. Several colleges also offered special first-year seminar sections explicitly for low-income or first-generation students. Missouri State University arranges special sections of their first-year General Education Program (GEP) seminar, specifically geared toward first-generation students, who self-identify on their applications. These special GEP sections helped introduce students to "the vocabulary of college" and faculty leading these sections received intensive training on best practices in supporting first-generation students. Focus group students from MSU reported that the guidance provided by GEP professors was especially helpful (*see MSU Institutional Profile*). In addition, MSU also recently established a campus organization geared toward supporting first-generation students called *MSU: I'm First*. The group provides workshops to teach first-generation students how to apply for internal scholarships, practice writing essays for scholarships, and guidance about how to talk to parents or friends from home about college, among other activities.

Southeast Missouri State's *Engage in 8* program takes place over the critical first 8 weeks of the first semester. The *Engage in 8* activities are designed to help students connect to campus programs including an introduction to student services such as the LGBT Resource Center and Student Recreation Center, extracurricular activities such as leadership programs and faith groups, and social activities, with many activities scheduled each week.

Flexible and Sufficient Financial Aid

Financial aid is more important than ever for students to successfully enroll and persist in college. Tuition at public 4-year colleges has more than doubled, after controlling for inflation, in the past three decades; federal Pell grants only cover about 30% of the cost of four years of a college education; and 68% of graduates from public and nonprofit colleges in 2015 had student loan debt averaging \$30,100 per borrower (The Institute for College Access & Success, 2016a; U.S. Department of Education, 2017). Therefore, low-income students pursuing a 4-year degree who have not been able to save for college must rely on additional scholarships, grants, or have burdensome student loans. Student loans can be a way to finance college if students can attain a well-paying job after graduation. Otherwise, loan debt can be a burden that may hinder economic mobility for many years. Moreover, many students do not graduate college, but still owe significant student loan debt. Although student loan defaults are down from recent years, to 11.3% in 2015 from a recent high of 14.7% in 2010 (U.S. Department of Education, 2016), the total number of borrowers in default is at an all-time high of 8.1 million (The Institute for College Access & Success, 2016b), more than the total population of nine states.

The importance of financial aid and in particular, need-based scholarships, came through very clearly in our interviews, particularly our student interviews. The sub-themes that emerged are: (a) keeping unmet need low; (b) flexibility to adapt to changing circumstances; and (c) financial literacy and knowledge of financial resources.

Keeping Unmet Need Low

In the U.S., students from the highest family income stratum are much more likely to complete college than those from the bottom income quartile (Alon, 2009; Haveman & Wilson, 2007). In fact, an Illinois Education Research Council study of

Illinois college students found that students in the highest income quartile who did not meet any of the four college readiness benchmarks were more likely to attain a bachelor degree than students from the lowest income quartile who met two of the four college readiness benchmarks (Lichtenberger & Dietrich, 2012). Analyses at the University of Kentucky (UK) demonstrated that unmet financial need was the single best pre-matriculation predictor of retention in college, even more predictive than high school GPA and ACT scores combined (Rudick, 2016). They determined that an unmet need of \$5,000 was the financial tipping point, even for students with GPAs over 3.0. Consequently, in fall 2017, UK is radically changing its financial aid distribution formula from 12% need-based aid to 68% (Editorial, 2016). We also know from the 2004 National Postsecondary Student Aid Survey that unmet need is highest for minority students: 60% for Asian students, 58% for Hispanic students, and 56% for Black students, as compared to 40% for White students (Long & Riley, 2007). When students have unmet need they drop out, stop out, work more, which can defer their degree, or take on more student debt. Student loan default rates reached 35% for students at low research public universities during the Great Recession (Eaton, Kulkarni, Birgeneau, Brady, & Hout, 2017). Further, research findings from a quasi-experimental study of the distribution of financial aid in a national sample indicate that need-based grants prevented students in the bottom two income quartiles from dropping out, whereas aid distributed to affluent students made no difference to college persistence. In addition, in stunning findings from a simulation of redistribution of aid from the highest income students to those in the low-middle income quartile, the gap in first-year persistence based on income was entirely eliminated by this redistribution (Alon, 2011). These research findings were echoed in our student interviews. Students in this study often cited their overall financial package

as a primary reason for attending an institution and this was a key determinant of where they attended college for many of the students in our sample.

Multicultural scholarships and institutional aid.

Recognizing the need both to diversify campuses to reflect the communities they serve, and to provide financial support to make college affordable, we found that several college campuses were offering multicultural scholarships that were primarily, but not wholly, based on need. For instance, the Multicultural Scholars program at Maryville University provides student awardees with a half-price tuition waiver. Eligibility for the program is based on an essay describing how the applicant will contribute to the diversity of the university and a campus interview, as well as financial need. Students continue in the program for four years, as long as they remain in good standing. Students spoke highly of the *Multicultural Scholars* program (see *Maryville University Institutional Profile*) and retention rates for students in the program have been 83-100%.¹⁰

Webster University stands out among the five institutions because 95% of full-time beginning undergraduate students received institutional grants or scholarships in 2014-2015. Additionally, all of their Pell recipients received additional aid through the Webster Grant program and/or other institutional aid in an amount approximately double of their Pell award¹¹ (see *Webster University Institutional Profile*). All five of the students we interviewed at Webster University were receiving the Webster Grant.

At SEMO, the Academic Support Centers will provide extra funds in the range of \$500 to \$2,000 if the qualified student reported unmet need after their scholarship funding.

Students explained the importance of need-based multicultural scholarships in making the decision to attend a particular institution:

When I first applied here, it was within the second year of what is called the Multicultural Scholarship program. I believe they offered half tuition. Then that was a big factor, because I didn't know any other way in which I was going to be able to pay for school. (Student #3, Maryville University)

...scholarships were another reason why I chose to come here. It was the MLS [Multicultural Leadership Scholarship] Scholarship here at Missouri State University. It was renewable; and, I believe, it's \$6,000.00 a school year. I was like, "That's a big chunk of money I don't really want to pass up." (Student #4 MSU)

Keeping tuition and fees modestly priced. For the public 4-year institutions in the sample, unmet need is kept low in part because tuition is tied to the consumer price index (CPI), in accordance with Missouri's Higher Education Student Funding Act (HESFA). However, net tuition and fees have increased per full-time equivalent (FTE) student an average of 3.8% per year, higher than the average CPI of 1.8% per year due to (a) tuition increases not covered by HESFA (graduate, nonresident, and international student tuition), (b) increases in supplemental fees (growth of 112% per FTE student over this period), and (c) waivers in 2012 due to reductions in state appropriations. (State appropriations in Missouri have declined 9% over this same period even though enrollments have increased 12%; Galloway, 2016.) Excluding Lincoln University, which was an outlier with a substantial decrease in net tuition and fees over this period, the remaining Missouri 4-year public institutions' net tuition and fees grew an average of 22%, ranging from 5% to 51% from 2009 to 2015. The three public institutions in our sample group of five also had an average net tuition and fees growth of 22% over this period, but was less variable, ranging from 17% to 26% (Galloway, 2016).

¹⁰ Information provided by T. Mullins, October 18, 2016.

¹¹ Information provided by B. Stroble, March 9, 2017.

Nonetheless, a public 4-year education in Missouri is still affordable; according to Galloway, in-state, undergraduate tuition growth rates in Missouri's institutions are the lowest in the nation since the enactment of HESFA, and in-state undergraduate tuition levels in Missouri are less than the national average.

Students expressed the importance of affordability at public institutions in our sample:

I ended up deciding to come here to SEMO because they also gave me the biggest award package with the fewest amount of loans, which, every other college, it would've been . . . crazy, ridiculous amount of loans. (Student #4, SEMO)

Originally, I was going to go to [an out-of-state institution]. When I looked at costs, this was the best place for me to go. . . . UCM was really fast about getting my financial aid package and accepting me. (Student #2, UCM)

Flexibility to Adapt to Changing Circumstances

A parent loses their job; a family member has health concerns; a source of income falls through; high-income students, or even some middle-income students are likely to have alternative sources of revenue to help compensate for an unplanned financial gap. However, students without secondary resources are more likely to stop out or drop out. Research indicates that financial aid has differential effects among students, and grant aid is most effective in increasing persistence for low-income students and minority students (Chen & Des Jardins, 2010; Hu & St. John, 2001; Paulsen & St. John, 2002).

Research on emergency financial aid and persistence in community colleges, found that emergency aid helped students remain in college (Geckeler, Beach, Pih, & Yan, 2008). However, many financial administrators in their study expressed concern

about the university's fiduciary responsibilities and the importance of students being strong stewards of any financial aid. This research implied that this emphasis toward fiduciary responsibilities led, in some cases, to overly burdensome policies and instances when the available emergency aid was not exhausted, yet likely could have increased student retention. This implies that universities may need to work toward developing more nimble financial aid policies to provide aid, as needed, for emergency situations.

In our study, we found evidence of financial aid nimbleness in the majority of the institutions we visited. At Webster University, students receive a reconsideration of their aid award on a case-by-case basis (*see Webster University Institutional Profile*).

In the Academic Support Centers at SEMO, there is some flexibility for providing emergency aid when needed. According to Trent Ball, Associate Dean of Students & Director of Student Retention, "Our philosophy is that if a student has worked closely with us and we are aware of the situation, we are not going to let a student lose an entire semester for a \$500 bill."

We also heard about the impact that financial aid flexibility had on the students we interviewed. As described by a Maryville University student,

My advisor made it possible for me to be a Multicultural Scholar for a fifth year in order for me to graduate, because they knew the struggles I had. They knew what it took for me to get here, all the things that happened within these years, and all the hard work I put in, that they saw it fit for me to be able to come back here and make sure I finish strong and I graduate and I'm able to graduate with my degree as well as getting me recommendations to apply to graduate school. (Student #3, Maryville University)

Financial Literacy and Knowledge of Financial Resources

Financial literacy, defined by the Department of Education (2017) as “an understanding of how to earn, manage, and invest money” is critical for students to make good decisions about college and how to finance college. These decisions can have a profound effect on a student’s financial future. Unfortunately, U.S. high school students lag other Organization for Economic Cooperation and Development nations’ average in financial literacy. According to the Programme for International Student Assessment, 18% of U.S. students could not perform basic financial literacy tasks. Further, studies have indicated that people absorb financial information most when it is most relevant for their lives (Jumpstart for Youth Financial Literacy, 2006). In this context, higher education institutions have begun to heed this opportunity by providing educational finance curricula (The U.S. Financial Literacy and Education Commission, 2016) to help prepare college students to make effective decisions regarding postsecondary institutions, student loans and debt, and financial choices they make in college.

There were financial literacy programs in the majority of the universities we visited and two of the more well-developed programs are described. Webster University is in its 6th year of offering a financial literacy program, *Money Talks*, with a grant from the Missouri Department of Higher Education. The program aims to prevent loan defaults through educating students about financial literacy and management. Webster University’s loan default rate is 4.3%, compared to 6.5% for the national loan default rate for nonprofit private 4-year institutions.

Missouri State University offers a financial literacy program called *Real L.I.F.E.* (Literacy in Financial Education) to provide all first-year students with basic financial knowledge and encourage responsible borrowing. A specific presentation is given within all first-generation GEP 101 sections for first-year first-generation students. Some indication of success is that the loan default rate at MSU has declined to 6.5% in FY13 from 7.3% in FY12, with the introduction of the program. Comparatively, the national loan default rate for 4-year public institutions was 7.3% in FY13.

Just-in-Time Academic Supports

Academic Support Centers and Divisions of Student Success are an integral part of most college campuses. Some of these are institutionally funded, however many of the academic student support services that underrepresented students participate in are funded as part of the federal TRIO programs. The TRIO programs funded under the Higher Education Act (which include Upward Bound, the Upward Bound Math/Science, Student Support Services, Talent Search, Educational Opportunity Centers, and the McNair Scholars program) are among the most widely utilized college access and success programs and are intended to “form a continuum of support for low-income, first-generation, and disabled students that extends from middle school through college” (Engle & Tinto, 2008, p. 7). According to Swail and Perna (2002), surprisingly little is known about the impact of these programs, although some studies indicate that students in these programs are more likely to persist in college and earn 4-year degrees than non-participating peers (Kuh et al., 2006).

Student Support Services (SSS) is targeted toward first-generation and low-income students as well as students with disabilities. At 4-year institutions, these programs are used to increase college retention and graduation among eligible students and to foster an institutional climate supportive of success for these populations. Although academic advising is an essential component of all SSS programs, other services that vary across sites include counseling, tutoring, workshops laboratories, cultural events, special services for disabled students, and instructional courses solely for SSS students.¹² Chaney (2010) conducted one of the largest scale evaluations of student support services in an evaluation of federal SSS programs and other similar supplemental supports

that students received. They found that the most prevalent services provided, besides academic advising, were professional counseling (80%), peer tutoring (45%), instructional courses (32%), and workshops (31%; Chaney). Peer tutoring was most commonly offered for mathematics and English, and supplemental instructional courses were most often offered for study skills, writing, and developmental mathematics. In a third-year follow-up evaluation, it was found that SSS had a small but statistically significant effect on students’ GPA, number of semester credits earned, and retention (Chaney, Muraskin, Cahalan, & Rak, 1997). The greatest effect generally occurred during the first year, however, some SSS services received in the first year showed persisting effects to later years. The program had stronger effects for more disadvantaged students, likely attributable to greater levels of participation in services. Retention to year two was seven percentage points higher for students participating in SSS than comparable students not receiving services, and retention to year three was nine percentage points higher for students participating in SSS. Specific programs and program-types that had positive effects on retention and degree completion were home-based programs, in which there was a home base on campus that served the whole student by providing a broader range of services; blended programs, in which SSS support services were integrated with other campus services; peer tutoring; and services for disabled students (Chaney, 2010).

In our study, important topics that surfaced within Just-in-Time Academic Supports were: (a) tutoring, writing centers, and supplemental instruction, (b) data-informed supports, (c) game changers, and (d) mentoring programs.

¹² Source: <https://www2.ed.gov/programs/triostudsupp/index.html>

Tutoring, Supplemental Instruction, and Writing Centers

Although tutoring instruction has been present in U.S. colleges and universities since the 1600s, it was not until the post-World War II era that tutoring and other supplemental academic supports became federally mandated for priority groups: first-generation students, economically-disadvantaged students, and students of color (Arendale, 2002). Now, tutoring and other academic supports, are a layer of developmental education initiatives, the goal of which is to help underprepared students succeed in college (Boylan, 1999). For myriad reasons, such as inequities in college preparation opportunities, variability in the rigor of secondary school courses, and achievement gaps, many students graduate high school, yet enter college unprepared. Estimates of the lack of college readiness range from 60% of entering students at open-access institutions to 10% at highly-selective institutions. In broad-access institutions, such as those investigated in this study, an estimated 30% of students enter college unprepared (Southern Regional Education Board, 2010). Besides taking remedial courses, other initiatives to help entering students get on a level playing field with their more college-ready peers include study skills courses, tutoring services, academic resource centers, and extra help within a lab setting.

Tutoring is a popular campus service that can be an effective learning support for students. Research indicates that students using tutoring services earned higher grades, withdrew from courses less, and performed better when retaking a course (Colver & Fry, 2016; Vick, Robles-Piña, Martirosyan, & Kite, 2015). Moreover, first-generation students attempting a course retake received better grades with tutoring services than first-generation students who did not participate in tutoring (Colver & Fry). Peer tutoring has been in existence since ancient times in the model of the teacher who transmits knowledge to the tutor who then transmits knowledge to the tutee; current thought of peer tutoring realizes the qualitative difference between peer tutors and teacher tutors. Some of

the advantages to peer tutoring include benefits to the tutor. Experimental studies demonstrate that those that learn material with the intent to teach or tutor learn better than those who are learning for their own sake (Annis, 1983). Additionally, from the tutee's perspective, it is often less threatening to engage with a peer about the material, particularly if the tutor has been a tutee him or herself. Research has shown that tutees with peer tutors have lowered anxiety, more participative learning, and higher self-disclosure, among other motivational benefits (Greenwood, Carta, & Kamps 1990; Topping, 1996). An institutional advantage is having a relatively low-cost, large workforce for tutors, although this is balanced by the disadvantage of having to provide training for this workforce.

Within the institutions examined, there were several examples of peer-tutoring services. Specifically, Maryville University offers a peer-tutoring program in which students are assigned tutors for any subject for which they request assistance. The university provides a tutor within 24 to 48 hours if one is not already available in the subject needed. This is a popular program and is available to the students from 8:00 a.m. to 8:30 p.m. Monday through Friday and 11:00 a.m. to 2:00 p.m. on Saturdays. They also have one-on-one appointments and online assistance for papers. Their peer-tutoring workforce is 60-person strong. Jennifer McCluskey, Vice President for Student Success, reports that this program has increased retention for participating students and that students view this program positively. The *Learning Assistance Program* at SEMO also offers peer-tutoring services. Students requesting tutoring assistance are given a one-hour appointment with an assigned peer-learning assistant to answer questions and provide general academic assistance. They make the distinction from tutoring because the peer learning assistant goes beyond problems in the classroom and helps the student with study strategies, effective note-taking, faculty communication, and more general areas of learning assistance. A primary goal is to help the tutee become a better student and provide whatever assistance is needed to accomplish that.

Another effective strategy includes using peers to review and explain coursework in a structured setting through supplemental instruction (SI; Dawson, van der Meer, Skalicky, & Cowley, 2014; Drake, 2011). Instead of focusing on students that are high risk, supplemental instruction focuses on high-risk courses that students often struggle with. For instance, because college algebra can be challenging for many students, a peer supplemental instruction leader may attend the college algebra class and then provide supplemental instruction to students requesting this service. Supplemental instruction was related to outcomes such as a higher GPA, a higher level of course completion (Dawson et al., 2014), and particularly benefits underrepresented students (Preszler, 2009). Additionally, students' participation in SI contributed to increased retention and graduation (Dawson et al., 2014). In our interviews, we heard about Southeast Missouri State University's *Learning Assistance Program*, which provides supplemental instruction for students. This peer-led program provides extra help and guidance to students in specific courses. Moreover, the peer instructors are faculty approved and are often first-generation students, low-income students, and students of color, and were tutored or received supplemental instruction themselves (see *SEMO Institutional Profile*).

Writing centers are another commonly provided academic support center within universities. These centers provide students assistance with writing assignments from small homework projects to more extensive term papers and theses. Writing center assistance has demonstrated effectiveness in improving specific assignments for underprepared students (Bodnar & Petrucelli, 2016), and first-year students who used writing centers received higher grades than their peers who did not seek this assistance (Yeats, Reddy, Wheeler, Senior, & Murray, 2010). Interviewees at several of the universities mentioned that their institutions provide assistance via writing centers. For example, Maryville University provides a writing lab where students can meet with peers for help with writing. The center

also allows students to submit papers online for peer tutors to read.

When asked about academic supports that were beneficial to them, students in our focus groups mentioned these academic supports (i.e., tutoring, writing centers, and supplemental instruction) frequently. Students were excited that tutoring was available free of charge at several of the universities. Students summarized the effects these services can have:

I do believe that all those can make the difference . . . when you're looking at a resume or a job—an employer is looking at different candidates . . . [a] person who didn't really take advantage of them, versus [a] person who probably did take advantage of them, you can see the difference in that person. (Student #4, SEMO)

I would say the ARC [Academic Resource Center] helped me transition, because they had tutoring, the Tutoring Center and the Writing Center. You can just always go in there and get help. I graduated from a St. Louis Public School. Yeah, it was just hard making the transition to here from there. (Student #4, Webster University)

Data-Informed Supports

Learning analytics. With advanced predictive modeling techniques and the availability of a wide array of student data, postsecondary institutions have moved toward data mining for academic or learning analytics. Analytics is described as “mining institutional data to produce ‘actionable intelligence’” (Campbell, DeBlois, & Oblinger, 2007). Academic or learning analytics can be used to improve teaching, learning, and student success. Often advising units mine student data to identify at-risk students for the purpose of providing interventions to improve student success (Kraft-Terry & Kau, 2016). Various data can be used for these purposes. Advising units may examine test scores or GPA, other times they may combine

measures of many academic indicators, leading to a risk profile. Data are used to help tailor academic advisement, to adapt interventions based on risk profiles, or to provide alerts to students to “nudge” them toward a certain behavior, such as enrolling in courses or filling out their Free Application for Federal Student Aid (FAFSA; Castleman, 2013; Castleman & Page, 2014).

Within our sample, the most common reported use of data was for early alert systems, in which faculty would contact advising or student support offices when students received a failing grade, had poor attendance, or other early indicators of possible academic problems in a class. This would trigger a meeting with student support staff, or in some cases, a more extensive response. This is the case at SEMO, in which the alert goes to the Academic Support Center where counselors work with the students to develop an eight-step academic improvement plan.

At the Office of Institutional Research at UCM, data are being used extensively to develop student pre-enrollment risk profiles and provide as-needed mentoring and outreach support. Their goal is to be proactive, rather than reactive so students get supports early on, before ending up on academic probation or suspension. Those students with certain risk factors that are good prospects for interventions are contacted in the first week of classes with a “care call.” These students are asked about any challenges they have encountered so the staff can provide needed supports. Staff continue to monitor these students closely for the first 21 days and then regularly throughout the first year to help guide students toward just-in-time academic supports as needed (*see UCM Institutional Profile*).

Stratified supports. Through the *First-Generation Targeted Support* initiative at SEMO, Academic Support Center staff use a multi-tier approach to provide support services based on the student’s GPA and overall academic performance. Such a tailored approach both equips students with needed services and is efficient, in that students are only provided

with the services that will help them the most (*see SEMO Institutional Profile*).

Game Changers

Many of the student academic supports that were described fall under the umbrella of Complete College America’s (CCA) Game Changers (CCA, 2013), a list of evidence-based best practices to enhance college completion rates. Currently, only 19% of students enrolled at 4-year non-flagship universities and 36% enrolled at flagship universities graduate on time (CCA, 2014). CCA has highlighted the following practices as research-based student supports that increases the success of on-time college completion: (a) performance funding (initiated at the state level), (b) corequisite remediation, (c) full-time is 15, (d) structured schedules, and (e) guided pathways to success. We heard evidence that universities were using at least three of these strategies from our interviews.

Corequisite remediation. Nationwide, 42% of all students and 55% of Pell recipients come to college unprepared in some subject, usually mathematics or English, and need to take non-credit bearing remedial courses. Traditional remediation is failing because only 22% of those in remediation complete the associated introductory gateway course in math and English (CCA, 2016). Students still need to pay tuition for remedial courses, even when they do not get college credit and often exhaust their Pell or other financial aid and end up borrowing more for credit-bearing courses, accruing more loan debt. One promising alternative is corequisite remediation, in which the student enrolls both in the remedial course and in the associated gateway course in the same term. Students receive real-time support for their gateway course in the remedial course in which they are concurrently enrolled. With this model initiated in four states for math and five states for English, the completion rate of the gateway courses has improved to 44 percentage points for math and 25 percentage points for English (CCA, 2016).

UCM has been using a corequisite program for math for the past two years and MSU plans to launch a pilot math corequisite program in the fall of 2017. Students enrolled in general education math will also be enrolled in a supplemental lab experience and tutoring to support the work they are doing in the general education math course. Both institutions plan to implement a similar program for English.

15 to Finish. Complete College America reports that only half of the students at 4-year institutions are taking 15 or more credits per term, the amount needed to be on-track to graduate in four years without summer session (CCA, 2013). However, students only need to take 12 credit hours to be labeled as full-time for federal financial aid. If colleges want students to graduate in four years, they need to incentivize taking an increased course load. UCM is doing just that with their *15 to Finish* program. They award \$1,000 to students who take 15 credit hours each term for four years (with time prorated for full-time transfer students; *see UCM Institutional Profile*). Anyone who starts as first-time full-time freshman or a full-time transfer student has the ability to earn the scholarship. Initially advisors expressed concerns about overwhelming students with heavier course loads, but they have not seen any negative effects. Both the number of hours attempted and completed have increased since the program's inception.

We instituted fall of 2013, a 15 to Finish scholarship, that if a student graduates in four years they get \$1,000 their last semester. We saw our credit hour production go up into the high 14.7 per semester to try to push the students. The fact is, if you take the right classes, we'll get you out of here in four. That's less debt. . . . (Angela Karlin, Director of Student Financial Assistance, UCM)

Guided Pathways to Success. Despite not taking enough credits per term, many students also accumulate excess credits that are not applicable to their degree. For most bachelor degrees in the U.S., 120 credit hours are required, yet, the average graduate with a bachelor degree has earned 136 credits. This represents both time and money to the student (CCA, 2012). Consequently, CCA has created the Guided Pathways to Success (GPS), another one of the Game Changers designed to help students achieve their degrees without accumulating unused credits. Most institutions in our sample have implemented components of GPS, such as whole programs of study and intrusive advising. For example, staff members in the Educational Access Program (EAP) office at SEMO oversee the students in their caseload to ensure that they are working closely with their academic advisors and the EAP counselors to develop degree maps with the students and ensure on-track degree completion.

Institutions in our sample are also using intrusive advising, a type of proactive advising in which the advisor monitors the student's academic progress and holds them accountable. Through early warning systems, advisors/counselors are alerted when a student has attendance or academic problems. These alerts may trigger certain requirements for students, such as regular meetings with the advising staff or grade improvement plans. Intrusive advising practices are associated with higher GPAs for probationary students (Kirk-Kuwaye & Nishida, 2001; Vander Schee, 2007) and research indicates advisors and students of color believe that intrusive advising is a contributing factor to those institutions with higher retention and graduation rates for this population (Museus & Ravello, 2010). Complete College America reports strong success rates at universities using this practice. For instance, by more intentionally using degree maps and intrusive advising, Georgia State University has increased its graduation rates by more than 20 percentage points over a ten-year period (CCA, 2012). Three of the five universities in this study reported using intrusive advising practices for certain groups of students. At SEMO, students below a 2.75 GPA

receiving targeted first-generation support also receive intrusive advising and academic coaching; at MSU, students in the TRIO programs receive intensive intrusive advising from staff advisors; and at Webster University, students earning a D, F, or I grade receive intrusive advising services and if needed, academic counseling.

Mentoring

Mentoring focuses on an experienced individual advancing the knowledge and skills of a less experienced individual (Campbell & Campbell, 1997). Mentoring can take many forms within a college setting, such as peer mentoring, faculty/staff mentoring, or alumni mentoring. Some of the positive academic effects of faculty to student mentoring may include a higher GPA, more credit hours completed, and a lower dropout rate (Campbell & Campbell). As far as motivation and non-cognitive outcomes, mentoring is associated with a more positive attitude and higher motivation for involvement in one's field (Eby, Allen, Evans, Ng, & DuBois, 2008).

Faculty and Staff Mentors. Mentoring by faculty/staff was a common initiative within many of the institutions interviewed. As a component of Webster University's TAP program (*see Webster University Institutional Profile*), conditionally admitted students receive help with various areas of campus life including academics, time-management, and financial information. Southeast Missouri State University offers a paid student-mentoring program. Through the *Academic Support Centers' Mentoring Program* (AMP; *see SEMO Institutional Profile*), students are employed by faculty/staff, many in their own fields, who act as their mentors. In addition, first-generation students receive academic counseling from EAP staff, akin to mentoring (*see SEMO Institutional Profile*). In addition to academic advising, MSU staff advisors provide advice on the student's social life and culture. Maryville University

is initiating a unique program of life coaches to provide both academic and non-academic supports to students around the clock (*see Maryville University Institutional Profile*).

Peer Mentors. Peer mentoring is also commonplace on college campuses. Studies have found that programs in which older students mentor first-year students produce positive outcomes for the new students (Leidenfrost, Strassing, Schütz, Carbon, & Schabmann, 2014). The first-year students produced better grades in their courses and completed more classes successfully than students who were not mentored. In addition, peer-mentoring relationships can lead to first-year, low-income students exhibiting increased knowledge of resources on campus, increased ability to work through difficulties in college, and increased self-esteem (Zevallos & Washburn, 2014). Overall, both faculty and peer mentoring produce favorable and influential results for students.

Among our sampled universities, Maryville University implements a form of peer mentoring within its *Multicultural Scholars* program. Specifically, sophomores in this program are assigned a freshman Multicultural Scholar to mentor for the student's first-year on campus. There is specific training that mentors in this program must complete. Although the program only requires one year of mentoring, many of the mentoring relationships continue throughout the students' college careers. University of Central Missouri also has an extensive system of peer mentors known as Academic Resource Coaches (*see UCM Institutional Profile*).

Limitations

A limitation of this study is the quality and representativeness of publicly available data for identifying institutions that were graduating students with less debt. The primary concern is that the most accurate graduation rates reported on Integrated Postsecondary Data System (IPEDS) are for cohorts of first-time, full-time entering students. For open-access institutions and even some broad-access institutions, this may not represent their student body well. We are looking forward to the reporting of part-time and not first-time students' graduation rates, data which IPEDS are now collecting, as well as to the availability of more institutional data through state longitudinal data systems. This limitation may have led to underreporting of graduation rates, particularly for open-access institutions. Another data limitation is that the downloadable data from IPEDS and College Scorecard (CS) were a few years old. For the regression analyses, the years of data varied from AY12 and AY13 for CS data and AY13 and AY14 for IPEDS data (*see Appendix* for more details). Additionally, according to technical support at College Scorecard, the graduation rates by income level were not accurate, so we opted to use the total graduation rate for first-time, full-time freshmen cohorts, according to our Success formula.

Our interviews were conducted with administrators with different titles across the universities. We requested to interview administrators overseeing academic affairs/student success, student affairs/diversity and inclusion, enrollment management,

and financial aid, but due to different organizational configurations across the universities, we may have received overrepresentation of some of these offices on the different campuses. Our aim was that by interviewing three to five administrators at each campus that we triangulated the information we received across these offices. We also followed up with each institution, to conduct member checking and ensure accurate summaries. We do recognize that our student focus groups could not have been representative of all underrepresented minority students at each university, given the limited size of the focus groups and that only one focus group was conducted per university. We also recognize that the administrative staff recruited the student samples for us, which may introduce some bias, although students spoke frankly to us in the focus groups. Overall, in phase two of the study we highlighted those strategies and practices, which were emphasized in the interview data. We did not do a comprehensive assessment of all of the initiatives at each university, this was beyond the scope of this project.

Implications for Institutional Practice

Although, institutional missions and priorities, student bodies, and constraints vary, these implications highlight the practices and strategies that surfaced across institutions in our study, which helped to create a positive environment for fostering postsecondary success of underrepresented minority students. We believe these recommendations are applicable in a broad array of institutional settings and if adopted, would further the persistence and completion of underrepresented students

Engaged Leadership and Priority Setting

Institutional leadership from the president and other campus leaders is central in creating an environment in which there is strong engagement with underrepresented students. A university's priorities around diversity, inclusion, and equity are typically embedded in the strategic plans of the institution. Beyond that, presidents can elevate these issues with short-term action plans and goals. Presidential leadership in making investments in personnel, initiatives, and facilities, and the creation of panels and task forces focused on diversity issues are also positive practices that help foster a welcoming and engaging climate for diverse students, faculty, and staff. Other campus leaders tend to reflect statements and priorities from the president's office and presidential leadership on these issues can give other leaders the backing they need to prioritize programs and practices promoting the success of underrepresented students. The students we spoke to were very aware of and generally spoke highly of their campus presidents. They had communicated with their presidents in structured dialogues, campus activities, or unstructured settings (e.g., playing pick-up soccer), and clearly felt valued by their campus leaders. This positive engagement establishes trust, which is foundational for strong engagement with students, especially in the aftermath of racial unrest or violence in the community or on the campus.

Early College Experiences for Smooth Transitions

As noted in our discussion of *Early College Experiences*, many underrepresented students need additional academic or study skills preparation before entering college, and summer bridge programs can help narrow this knowledge gap so that all students can enter college ready to learn. Further, first-generation students often lack the navigational capital to successfully transition to the college environment. These students may need more assistance understanding where to get the resources they need or even understanding that academic resources are available to them. By offering summer bridge programs to conditionally admitted students or fall orientation programs targeting students qualifying for student support services, campuses can reach students early and make them aware of available supports before they encounter challenges that they are not equipped to handle. Additionally, offering orientation events during the first eight weeks or the first semester helps students adjust to campus and the college lifestyle more quickly. Many first-generation students and low-income students may have not previously travelled far from home and orientation can help these and all students adjust to living away from their family and familiar communities, while helping students adapt to campus life. One promising practice is reserving special sections of freshmen seminar for first-generation students, taught by self-identified first-generation professors, so students new to the campus environment can ask questions and learn about college resources, practices, and expectations in a safe environment.

Creating a Financial Aid System that Works for Students

As discussed previously, college affordability is a major concern for many students. It can be called a crisis for low-income students who can only afford 2-3% of the higher education institutions (Poutré, Rorison, & Voight, 2017). Striving to keep college affordable is essential to attracting and retaining low-income students. A concerning trend among public universities is to raise fees when tuition cannot be raised further. Efforts to keep supplementary fees low and reduce all costs to students, including the use of online texts, paying for metro passes, or other means, are needed to ensure college access for low-income students.

For private institutions, having sufficient financial aid awards, such as multicultural scholarships, are critical for underrepresented, low-income student populations. Institutional inefficiency can also contribute to higher institutional costs and translate to higher fees for students.

Disbursing proportionally more institutional aid based on financial need rather than on merit has the most dramatic effect on retention and graduation rates (Rudick, 2016). Low-income students often stop or drop out of school due to small amounts of unmet need (Rudick) because they operate on the margin and do not have family resources to call upon in times of financial distress. Several of the institutions that we visited were aware of this issue and have implemented policies to help bridge students' unmet financial need, and provide flexible and nimble systems for students to receive small amounts of extra aid in extenuating circumstances.

These practices were beneficial for low-income students and we believe other institutions would benefit by adopting similar practices. Unfortunately, bureaucracy often gets in the way of nimbleness, particularly at bigger institutions; therefore, we recommend creating an awareness of the need for flexible and sufficient financial aid and developing institutional processes that allow aid officers to cut through the institutional red tape to provide needed emergency financial aid.

Students are increasingly relying on loans as an essential component of their financial aid packages. If the student loans help propel college completion and subsequent job attainment, this can be an asset. However, about 1 in 10 students default on their student loans, and minority, low-income, and dependent students have higher odds of default than their peers (Hillman, 2014). To address these concerns, institutions can implement financial literacy programs that prepare students to make sound decisions about financing their college education. Institutions in our sample that had such financial literacy programs had lower cohort default rates than their sector averages.

Implementing Just-in-Time Academic Supports

First-generation students and students from low-income families are often not as academically prepared for college as their more college savvy and affluent peers. Beyond the early college experiences, it is also key for these students to have timely academic supports to make up for any gaps in study skills or knowledge. Putting in place a robust system of academic supports (e.g., tutoring, mentoring, supplemental instruction, and writing labs), that is available free of charge and has strong availability is an important step to help these students move ahead. Most of the students we spoke with were aware of these services and cited them as some of the most important academic supports helping them succeed. It is equally important to implement a rigorous education campaign to make students aware of these resources.

Employing peers as tutors and mentors is another promising practice, which has the advantages of (a) promoting leadership among students who serve as mentors or tutors, (b) providing positive role models who have similar backgrounds and experiences, and (c) enhancing the capacity of programs at a relatively low cost. It was important to the students that we interviewed that tutoring services were widely available for almost any class on a drop-in basis or with 1-day notice.

Complete College America's evidence-based practices known as "game changers" which can speed on-time completion rates, are gaining popularity on college campuses. We saw evidence of several of these practices such as incentivizing a 15-credit-hours semester course load, instituting corequisite remediation programs, and practicing intrusive advising. The game changer we saw used the most was intrusive advising, in which students are more proactively monitored than they would be in typical advising practices. Based on early warning indicators from faculty and counselors, students may be required to meet regularly with their counselors or develop academic improvement plans. Given the research regarding these practices and our observation of their use among institutions successfully serving underrepresented students, we believe it is worthwhile for institutions to continue to invest in these strategies.

Creating a Coordinated and Caring Community

Campus leadership clearly plays a role in setting the tone for a coordinated and caring community for students. Initiatives such as freshmen seminars for first-generation students, putting academic resource coaches in residence halls, or employing life coaches, available for students around the clock, emanate from the values and mission set by the leadership of the institution. This philosophy of meeting the students where they are rather than expecting all students to have the same amount of readiness and knowledge of college is a new way of thinking for many institutions and takes directed effort from the top to accomplish. Yet, we believe that the investments in personnel and initiatives, as well as extensive professional development and training, needed to transform to a student-centered institution is a paradigmatic shift for many institutions. Such shifts could spur strong graduation growth, particularly among underrepresented student populations.

Although some of the programs we highlighted had very high retention and graduation rates, most of these programs were only able to support a small number of students. However, learning analytics is a promising strategy that is potentially more scalable. It is possible, for instance, to develop a pre-enrollment profile for all students or to monitor faculty alerts on a large scale. By sharing data across support and instructional units, providing easy-to-understand student dashboards, and developing early warning systems, the use of new technologies can move from predictive to prescriptive and could be the first step in providing tailored supports to more students in need. Although the use of learning analytics on college campuses is underdeveloped, its use for providing feedback to instructors and students, as well as personalizing instruction is expected to increase (Beimiller, 2017). Early adopters who use learning analytics more frequently see a positive difference (Biemiller). We expect that those institutions that can employ these technologies on a wide scale and use the data to tailor academic supports are going to have a strong advantage in increasing graduation rates and meeting performance funding metrics.

State and Federal Policy Implications

Beyond the changes that institutions can make to facilitate the success of underrepresented students, state and federal policy also play a role in fostering the success of underrepresented students. This section describes some policies that institutions can advocate for to promote successful degree completion by underrepresented students with less debt.

Financial aid is administered by federal Title IV programs (e.g., Pell Grants, subsidized and unsubsidized student loans, federal supplemental education opportunity grant and federal work study), and by state grants (e.g., the MAP grant for Illinois residents and the Access Missouri grant for Missouri residents), as well by institutions themselves. Illinois and Missouri are two of the states that have need-based grants and although many states are shifting to more merit-based aid, evidence shows that need-based aid can make the largest difference in overall retention rates because low-income students are more responsive to tuition and fee increases. Specifically, merit-based aid has increased the racial gap in college enrollment and promotes more inequity in college access (Dynarski, 2002). Of the two states in the pool of universities for this study, Illinois, in a typical year,¹³ spends close to \$3,000 per Pell recipient on state aid, while Missouri spends less than \$1,000 per Pell recipient on state aid (Eaton et al., 2013).

In times of shifting financial aid policies, it benefits higher education institutions to advocate for need-based aid programs in their states to help bridge the gap between federal student aid and net college costs for low-income students. Need-based state grant aid programs can provide an important policy tool to

propel completion for low-income students, as well as to promote access and equity.

Many of the practices that led to successful results were funded, at least in part, through federal TRIO programs. If federal funding for these programs were to decrease, our research and prior research indicates that it would be damaging for underrepresented students. Further, it would be worthwhile for states and/or institutions to determine a means to sustain these programs if federal funding were reduced, particularly for some of the more successful programs (e.g., multi-year multicultural need-based scholarships, peer tutoring, and faculty/staff mentoring programs).

In the context of Missouri's HESFA rules, which limit the tuition and fees that the state's public institutions can charge, and the proposed reductions for higher education funding in Missouri, and Illinois' lack of budget and state financial distress, colleges and universities may be forced to scale back programs. Careful attention should be paid to those programs and personnel that are producing good returns for the most marginalized students to protect these from further cuts. As "administrative bloat" is often targeted for budgetary cuts in higher education, institutions should prioritize those personnel and programs critical to supporting underrepresented students and improving student outcomes. Therefore, we recommend that higher education institutions strongly advocate for full funding of these programs.

¹³ Illinois has been in a budget impasse at the time of this report since FY15 and have not provided regular funding for the Illinois state grant program, the MAP program since that time.

Institutional Profiles





Maryville University

Maryville University is one of the oldest private institutions in the region, founded in 1872, by the Religious of the Sacred Heart as an academy for young women. In 1972, it was turned over to a lay Board of Trustees and in 1991 transitioned to university status. It is located in Town and Country, 22 miles from downtown St. Louis. Its enrollment is 6,414 with 2,795 undergraduate students, most of whom are traditionally enrolled. Students come from all 50 states and 55 countries, and are enrolled in more than 90 degree programs at the undergraduate, master's, and doctoral level.

Maryville University is committed to increasing the diversity of its student body and faculty. In the Diversity and Inclusiveness theme of the current strategic plan, it states that by 2022 Maryville will “have a student body that reflects the racial and ethnic diversity of the American experience (African-American, Asian-American, Hispanic-American) and recruit and retain a faculty and staff population that reflects that diversity.” <https://www.maryville.edu/strategicplan/strategic-plan/>

Multicultural Scholars

Maryville University’s *Multicultural (MC) Scholars* program, founded in 2007, reflects those values. In the 2016-2017 year Maryville has 24 Multicultural Scholars and they plan to offer 30 scholarships in the 2017–2018 year. Their Multicultural Scholars boasts a freshmen to sophomore retention rate between 83% and 100% since 2010.¹⁴ This scholarship program is open to all domestic and international students and is awarded based on a student essay and campus interview, as well as financial need. The student scholars receive a half-

price tuition scholarship and for these funds, they agree to participate in a four-year program to build inclusive leaders. The curriculum varies across the years: year one focuses on personal identity, in year two they explore culture, year three teaches how to have difficult conversations about social justice, and by year four they are actively involved in diversity issues campus wide. Sophomores in the program mentor incoming freshmen and many of these relationships continue through senior year and beyond. This has helped foster leadership among the students, who become campus, regional, and national leaders by the end of the program. For example, Multicultural Scholars have hosted presentations on campus about social justice and have had the opportunity to attend and engage in national conferences on student leadership and social justice. As noted by one student scholar,

I’ve been able to go to leadership conferences. I’ve been able to go to Washington, DC, in order for—to just find out what it means to be a leader and that builds confidence for me. It gave me an opportunity to be able to just speak for what I believe in and what I stand for. With that, not only has it been great for academics, but it’s also great for just opportunities for—just endless opportunities.
(Student #8)

Another Multicultural Scholar, a student from Mexico describes how receiving support from a professor and being a part of different cultural organizations on campus gave her the background to be able to write a book as a freshman at Maryville University. In this student’s words,

¹⁴ Information provided by T. Mullins, October 18, 2016.

What really, really made me really happy is the fact that I could write a book . . . Just because a lot of people said that I would never do it and I, myself, would've never ever thought in a million years I would even write a book. Because English is not my first language. It's my second. (Student #5)

The *Multicultural Scholars* program has garnered an Innovative Program Award from the regional chapter of the Student Affairs Administrators in Higher Education organization. Other institutional aid includes the *Multicultural Deans* program, which provides additional partial tuition assistance for multicultural scholarships. University leadership is taking a strong interest in the Multicultural Scholars program as President Mark Lombardi recently donated \$500,000 of his own funds toward diversity scholarships.

Further, the *Maryville Grant*, which is based on student need and merit, helps make up the difference where scholarship funds are not sufficient for students to attend the university and the Supplemental Grant bridges the gap between aid and tuition for students. In the 2015-2016 year, 313 students received an average award of \$4,060, for a total of \$1,270,625, from the Maryville grant and 123 students received an average award of \$3,560, for a total of \$437,925, from the Supplemental Grant program to help defray the cost of attendance at Maryville University (S. Elfrink, personal communication, October 21, 2016).

Fostering a Tolerant Worldview

An exhibit on campus for the past seven years is Maryville's Tunnel of Consciousness, modeled after Western Illinois University's concept of the same name. This immersion experience, designed by the Division of Student Success, aims to raise awareness of privilege, power, and oppression. On the day we went through the tunnel, it focused on the oppression of LGBTQ persons, xenophobia, poverty in Black communities, and persons with disabilities. One leaves this exhibit with a deeper and more personal understanding of the struggles of oppressed individuals and groups. Although the Tunnel is open to all on campus, the freshmen seminar classes all engage in this experience and undoubtedly leave with more awareness and tolerance.

The *Diversity Dialogues* created by President Lombardi are hosted twice each semester. According to a student in our focus group the Diversity Dialogues talks focus on diversity topics in the community, the nation, and worldwide.

Everybody that lives on campus, anybody can come. They're definitely reaching out to people to actually talk and say how they're doing with certain topics. Because of that, it makes me feel like I can say what I want to say and I can feel comfortable. (Student #8)

This type of effort to reach out to students, along with Maryville University's extensive student success services have helped create a positive and supportive atmosphere on campus for diverse students from St. Louis and across the world.

Tutoring Services

Students were very positive about the peer tutoring that occurs at Maryville University. A focus group of students mentioned how important and helpful the tutoring services were and how they were especially excited that it is a free service. Tutors are provided for any class and tutors often attend the same class to understand the students' needs. This program is helping the retention of students.

It's an extremely popular service that is a constant buzz on campus. If we don't have a tutor in a particular area, we find one within 24 to 48 hours by reaching out to faculty. For the large majority of subjects, we already have tutors available. (Jennifer McCluskey, Vice President for Student Success)

Strong Campus Connections

Maryville University's theme this year is *One Team One Family* and students agree that at Maryville there are strong connections between students and faculty/staff. Faculty and staff intentionally follow-up with students to keep in touch and will intercede when students experience personal struggles, including extenuating circumstances that may make it difficult for a student to finish their degree. The university has stepped in to help bridge financial gaps and provide other support. In addition, the small class sizes help facilitate good access and support from professors. As one student commented,

If they [professors] are feeling that the class isn't maybe grasping a concept that they're trying to teach and it's just not clicking, they will go out of their way and schedule review sessions with students outside of class. They'll be happy to meet with them later one-on-one. (Student #1)

Recent Initiative

New to Maryville last year is the Life Coach program; each student is assigned a life coach in the spring before school starts in August. This program offers students a personalized, tailored experience based on their own specific needs. Coaches serve in four main areas: learning diagnostics, academic advising, retention specialists, and career coaching. The life coaches utilize learning diagnostics and partner with faculty, as well as with the Admissions Office and the Office of Diversity and Inclusion to offer students a personal educational experience based on data and analytics about their individual strengths and learning styles. In addition, the program gives extra intentional support to underrepresented minority students. Life coaches are responsive to all students 24/7.



Missouri State University - Springfield

Missouri State University (MSU) is a public, comprehensive university and is the second largest university in the state, enrolling 22,273 students on its Springfield campus, 18,980 of which are undergraduates. MSU was founded in 1905 as a normal school charged with preparing teachers, and was formerly known as Southwest Missouri State University. Now the institution has students from all 50 states and 85 countries. Thirty-five percent of first-time freshmen at MSU in fall 2015 were first-generation students and the retention rate for these students was 79%.¹⁵ MSU has an array of programs serving first-generation students, embraces an Inclusive Excellence model, and has strong ties with their local community.

First-Generation Student Engagement

Several years ago, MSU analyzed the National Survey of Student Engagement data and found that first-generation students were less likely to interact with faculty or to form study groups, and that retention rates for first-generation students were about 10% lower than for the rest of their student population (R. Darabi & M. Biggs, personal communication, November 9, 2016). In response, they started several programs targeting first-generation students, particularly around improving retention. First-generation students self-identify on their applications and MSU arranges special sections of their first year General Education Program (GEP) seminar, specifically geared toward first-generation students. These sections are currently organized by both first-generation status and college to ensure students have common academic interests as well. Sections are based after a model used at the University of Texas-Austin, and help introduce students to the vocabulary of college (e.g. what

is a bursar?). The faculty for these GEP sections receive intensive training on serving the needs of first-generation students, and students from our focus group report that the guidance provided by GEP professors was especially helpful. As one student said, “[My GEP professor] helped me work through those emotions you have initially, of a lack of direction when you don’t have a family experience you can turn back to, and you don’t have an inner direction yet.” (Student #54) About 30 students enroll in each GEP section and MSU has increased the number of first-generation GEP sections each year. MSU data show that retention rates for students participating in these special GEP sections have increased to about 79% in 2015-16,¹⁸ such that now these students have higher retention rates than other GEP sections. Many faculty that were first-generation students themselves are taking an active role in this program.

You’ve got a percentage of the faculty who are first-gens themselves. They totally get it. They’re the ones that are stepping up to the plate and saying, “I want to do one of these sections because I was in their shoes. I know what they’re going through” and they want to be a role model. They come to us and say, “Listen, I want them to know that if I could do it, they can do it.” (Kelly Wood, Provost Fellow for Student Success)

Along with these GEP sections, students enrolled in one of the first-generation sections formed *MSU: I’m First*. The organization provides workshops to teach first-generation students how to apply for internal scholarships, practice writing essays for scholarships, and guidance about how to talk to parents or friends from home about college, among other activities.

¹⁵ Information provided by K. Wood, November 14, 2016.

MSU also has a very active TRIO program that provides specific, intrusive advising opportunities for about 200 students, including tutoring, social connections, and cultural supports. Students from our focus group spoke very highly of the support they received from TRIO and gave the program much of the credit for their successful academic and socio-cultural transition to the university.

Model of Inclusive Excellence

MSU uses a *Model of Inclusive Excellence* (Williams, Berger, & McClendon, 2005) to focus and integrate their inclusion efforts campus-wide. This research-based initiative includes courses focusing on cultural diversity, a welcoming environment for all cultures and ethnicities on campus, opportunities for students to learn about different cultures, and a diverse student population and faculty. Rachele Darabi, Associate Provost for Student Development and Public Affairs, explains, “We’ve been working very hard to try to diversify our student body, our faculty, and our staff, so, our percentages have gone up in recent years.” President Clifton Smart, the Board of Governors, and faculty are all part of these efforts and have requested and participated in diversity training. Their efforts around creating cultural competence in the classroom have included shared reading about first-generation students, faculty meetings focused on diversity, and “sharing about issues in diversity, and valuing cultural consciousness, and understanding stereotypes and how do you negotiate these types of issues in the classroom,” according to Wes Pratt, Chief Diversity Officer. MSU also offers an *Inclusive Excellence Leadership Scholarship* (<https://www.missouristate.edu/financialaid/scholarships/mlsappinfo.htm>) to incoming freshmen who have demonstrated a commitment to becoming a leader in an inclusive society.

Engagement with the Broader Community

Finally, MSU also boasts strong engagement with the broader community of Springfield to promote diversity and inclusion, including partnerships with the local chamber of commerce, the workforce development board, and the local chapters of Brother 2 Brother and NAACP. Many of these relationships were facilitated through a recent Lumina Grant, which partnered the university with the local school district and community college, and another local 4-year college. For example, the Bridge Springfield: Brother 2 Brother Program works to improve retention and completion and reports an 86% graduation rate for Black students compared to the national rate of 42%.¹⁶ MSU also hosts a *Youth Empowerment Summit* with the local school district and NAACP to bring Black high schoolers to campus to learn about financial aid, career counseling, and college preparation.

Moving Forward

Future plans include expanding many of the successful programs and initiatives described here. For example, Kelly Wood explained that a group of faculty and staff, after participating in an Association of American Colleges & University’s summer institute on high-impact practices, promoted the idea that MSU needed a second high-impact practice for first-generation students in their sophomore year. Therefore, MSU has recently introduced a sophomore year service-learning requirement for first-generation students in a few colleges. Faculty and staff are exploring other high-impact practices for different majors and programs to enhance these opportunities for all students. MSU also plans to expand the number of first-generation GEP sections from 15 in 2016 to 18 in 2017 bringing the program to fully 80% of their first-generation freshmen. Moreover, in fall 2017, MSU will host a conference for other Missouri colleges to share their strategies for supporting first-generation students.

¹⁶ Source: <https://www.missouristate.edu/MulticulturalPrograms/Bridge-Springfield-Brother-2-Brother-Program.htm>



Southeast Missouri State University

Southeast Missouri State University (SEMO) is a public institution in Cape Girardeau, MO overlooking the Mississippi River. Founded as a teacher's college in 1873, it is now a comprehensive university with more than 150 academic programs in five colleges. SEMO has a total student enrollment of 11,987 (10,587 undergraduates) with residential students accounting for one quarter of the total. Thirteen percent of the student population is from St. Louis County and 44% of the students are from the top quarter of their graduating class. One of four key values of SEMO is *Access and Diversity* with a commitment to high quality, affordable education.

Student Support Services

At Southeast Missouri State University, students who meet certain requirements can access programs through the Academic Support Center (ASC). The TRIO programs, offered through SEMO's Office of Student Support Services (SSS), assists 200 students per year who are traditionally underrepresented because of income, family education background, disability, or other criteria in completing a postsecondary education. Students in the TRIO program have access to coaches who provide guidance and mentorship to help them choose a major that is a good fit and provide activities to help students graduate. Some of their other services include providing financial information, assisting with graduation/career planning, free tutoring services, and for those who apply and qualify, supplemental financial assistance. All students in the program get intrusive advising, designed to monitor students and provide just-in-time support and guidance to facilitate academic success. The TRIO staff has a philosophy of providing strong student support while expecting students to put in effort to

achieve their goals. Students in our focus group also mentioned the importance of doing their best and realized when they needed to "up their game".

All students who qualify for SSS receive information about the available services including college success seminars, financial literacy and responsibility seminars, information about tutorial services, FAFSA completion workshops, and more. Additional services are provided in a multi-tier fashion so that students receive *First-Generation Targeted Supports* that match their needs. Students in SSS with a college GPA between 2.75 and 3.25 additionally are connected with an ASC staff member to develop a college success plan and meet with the students biweekly to discuss class assignments, outside activities, and preparing for second semester advising. Whereas students with a GPA below 2.75 are targeted for the most intense outreach and intervention. These students are also assigned to meet with an ASC staff member on a weekly or biweekly basis and their academic progress is closely monitored using an academic alert system. Beyond, the academic monitoring and coaching that occurs, students and their assigned ASC staff member appear to develop close and productive relationships. This gives the students someone to turn to when they have additional financial, emotional, or other needs. As Tameka Randle, Assistant Director of Outreach, noted,

I still work with a caseload of students. We follow them from beginning to end, so the students I had two years ago, they're juniors now. We keep that relationship with them and rapport, so that helps with retention. It helps with graduation rates.

Tutoring Services and Supplemental Instruction

The support services most mentioned by students in our focus group were the free tutoring services and supplemental instruction. The SSS hires 50 peer learning assistants who are sometimes students starting college with AP or dual credit. Students needing tutoring services make requests for appointments in almost any content area. Each appointment is an hour long so the peer learning assistants have time to also help students with class preparation and management skills, such as developing good study habits, notetaking, how to correspond with faculty, and like issues. They strive to help the student as a whole, not just improving their grades. As of December 2016, the office already had 1,200 requests for assistance from 845 students for the year. Another popular program available to all students, and heavily utilized, is Supplemental Instruction (SI), in which peer leaders are hired to attend courses they have already completed and provide review sessions specific to covered course content.

According to Trent Ball, Associate Dean of Students, Educational Access Programs, “We’ve always talked about the three reasons why these students aren’t successful. One is institutional fit. Two is too long in the wrong major. Three is not developing help seeking behavior.” Staff in SSS are addressing all of these issues and helping students foster healthy help-seeking behaviors to fit their individual needs. According to 2013-2014 statistics provided by TRIO staff, the retention goal for TRIO students was 70% and the TRIO program attained 85% retention rates. During this year, they far exceeded their goal of having 75% of their students in good academic standing by achieving 96%, and the 6-year graduation rate goal for TRIO students was 50% while the actual rate was 56%.¹⁷ These are very healthy results. In the words of one student,

“. . . it was actually a really good decision to get involved with TRIO because I’ve gotten so much assistance, financially, personally, in so many different ways. It’s definitely been a blessing for me.” (Student #6)

Academic Mentoring

The Educational Access Programs (EAP) at SEMO were very extensive and innovative. One program that has achieved great success, as cited by both staff and students is the *Academic Support Centers’ Mentoring Program* (AMP). There is an application process to join the program and students must meet academic requirements (have at least a 2.75 GPA, extensive high school and community involvement experience, and interview for the program). The staff strives to match the student to their major and department if possible. The unique aspect of this program is that students are actually employed for twelve hours by their mentor. The EAP office pays two-thirds of the salary and the mentor’s department pays the remaining one-third. This mentoring program has been in place for 20 years, and three years ago the budget was doubled so they can now serve up to 53 students. Students seek academic and career advice from their mentors and mentors report staying in contact with their students even after graduation. As a student in our focus group stated,

“It gets you a job on campus with your mentor as well as just a mentor that you can go and talk to. I know I wore my mentor out with advice about, not just academics, but everything in life.” (Student #2)

As a testament to the success of the program, students in the AMP have a 5-year graduation rate of 95% (T. Ball, personal communication, February 13, 2017).

¹⁷ Information provided by T. Ball, December 9, 2016.

Early College Experiences

Students from underserved backgrounds may have less tacit knowledge about campus life and if they are first generation are less likely to have visited college campuses or to understand the college environment and expectations. Early college experiences provide a roadmap to college for these students and serve as an important entrée to campus life. At SEMO, there are various pre-college and early college experiences that occur to provide this experience. *Camp Redhawk* is a summer leadership camp offered throughout the summer for four days and provides students with a taste of campus life, including living in the dorms, meeting other students, and learning about the campus community. There is a modest charge for *Camp Redhawk* and some scholarships are available for those with financial need. In addition, the ASC has its own *ASC Transition Camp*, which is a 2-day experience for freshmen who qualify for ASC services the week before college begins. Students learn about campus resources, financial aid, strategies for successfully transitioning, and college expectations. Once the semester begins, another program, *Engage in 8*, hosts activities to help students acclimate to campus during the first eight weeks. Activities include an introduction to student services (e.g., LGBT resource center, rec center activities), extracurricular activities (e.g., leadership programs, instrumental and choral groups, faith groups), and social activities (e.g., ice cream socials, quiz bowls, outdoor games), with many activities scheduled each week. Students cited these early college experiences as some of the most important for transitioning to and assimilating into the university environment, which likely aid in student retention.

University Leadership in Diversity and an Affordable Education

Students and staff alike brought up university leadership as important to the campus environment and success. In 2014, in response to the racial tensions in Ferguson, MO, and the spillover of racial conflict to university campuses, including SEMO, the previous president appointed a Task Force on Diversity Education, comprised of 34 members including faculty, staff, and students. The Task Force's 2015 final report and recommendations include a vision that

Southeast Missouri State University will be a campus community where individuals from all backgrounds will feel welcomed, respected, and included; and where the campus community engages in best practices to promote cultural competence and inclusion in all aspects of its work.

The Administrative Council has endorsed the report and the current president is leading the implementation of these reforms. Moreover, the focus on *Access and Diversity* with a commitment to high quality, affordable education is one of four key values at SEMO. Both the university leadership and the commitment to affordability were themes discussed by SEMO students in our focus group. The low cost and availability of scholarships was cited by five of the six students that we interviewed with several students stating that the financial aid package that SEMO awarded and the net cost to students was one of the primary reasons for initially enrolling at SEMO. Further, students were well aware of President Carlos Vargus and described a student-centered president who engages the students on a personal level.

Moving Forward

The 2014 SEMO strategic plan highlighted the four most important values of the university: student success, excellence, access and diversity, and community. To enhance student success in the future, the university is focusing on strong student support from initial enrollment on campus to graduation to instill a strong sense of confidence and lay the foundation for future achievements. Additionally, President Vargus has laid out aspirational metrics that the university will strive to achieve including targets of an 80% retention rate for first-time, full-time students and a 6-year graduation rate of 60% for these students.¹⁸

¹⁸ Source: Draft Retention Report Fall 2016 provided by T. Ball, December 9, 2016

University of Central Missouri

The University of Central Missouri (UCM), located in Warrensburg, is a comprehensive public, four-year university founded in 1871 and attracts students from around the world. Currently there are 14,395 students (10,001 undergraduates) attending UCM from 61 nations and 42 states. In addition, UCM offers a study abroad program in a vast array of countries. The University of Central Missouri reports that about half of their current students are first generation.

Data Analytics

The University of Central Missouri has embraced the use of data analytics to help them be proactive rather than reactive in providing assistance through several programs, including a well-regarded suspension waiver program and an innovative *15 to Finish* initiative. These components are complemented by supports for entering probationary students, a large TRIO program, and peer coaching, coordinated through the university's Mentoring, Advocacy and Peer Support office.

The University of Central Missouri's Institutional Research office develops a pre-enrollment risk indicator for each student, based on factors such as students' high school GPA, high school characteristics, socioeconomic backgrounds, and ACT scores. They contact all high-risk freshmen during the first week of class to check in and determine if they are encountering challenges or need any supports. They continue to monitor identified students closely for the first 21 days of freshman year and additional monitoring throughout the year, and interventions such as mentoring and outreach are triggered as soon as any red flags are detected. Associate Vice Provost for Student Experience and Engagement, Corey Bowman, said,

We've been very purposeful in trying to use analytics to identify students at risk, to look for early warning signs, and to connect the dots between the two . . . As soon as we get an indicator – whether it be that they didn't show up to the first day of class, they got an academic alert, they're getting in trouble in the residence halls—that guides or informs our decision about what we're going to do early on, as opposed to waiting until that student is suspended or on probation. We want the interventions in that first semester. . . . Let's do some kind of outreach to them before they get knocked off track.

Suspension Waiver Program

UCM also has a longstanding suspension waiver program, which has twice been awarded a Lee Noel-Randi Levitz Retention Excellence Award. The program is offered to about 30-40 students each semester who have demonstrated ability but whose performance would have led to suspension. As Bowman described it,

What this program allows us to do is that we interview those students and we develop . . . [an] academic recovery plan for them. We waive the suspension, which would normally mean they have to sit out at least one semester. They work with us on a weekly basis to get back on track academically. . . . We develop an academic plan for them to get back on track that next semester. Then we continue to offer those resources to that student even after they're back on track until they graduate. If you're in the suspension waiver program for one semester, you get back on track, you can still come meet with somebody on a weekly basis for the rest of your time here.



UCM reports that about 70% of students in the suspension waiver program go on to graduate—a higher rate than the general student population (C. Bowman, personal communication, November 29, 2016).

Incentivizing Full-Time Enrollment

UCM's *15 to Finish* program awards \$1,000 to all students who enroll in fifteen credit hours per semester every semester for four years. UCM's Assistant Vice Provost for Enrollment Management, Karen Goos, explained,

I think the 15 to Finish has probably had one of the greatest impacts for us and particularly with the population you guys are trying to learn about. . . . It has provided an expectation, a culture of completion, which is what we really wanted to set forth and we do have the numbers to support that that's working.

Student Support Programs

The university's *Advantage Program* for entering probationary students serves about 170 entering each year, meeting weekly with UCM's Director of Developmental Education and providing a full year of high impact, wraparound services, such as personal learning plans, tutoring, study skills, and service learning opportunities.

The *Mentoring, Advocacy and Peer Support* (MAPS) program was originally designed solely for scholarship students, but has expanded to general population because it was so successful according to Bowman, "It was not uncommon at all for us to have 100% retention year after year after year from that small population." MAPS now serves 30-40 students per semester and is supported by a full-time graduate assistant and about 70 faculty and staff mentors. As described by one student,

I found support in the people around me. I feel like UCM is really good on that peer leadership and mentorship. A lot of the staff are graduates or current students. You can

always get that real life example and that real life mentee relationship. The conversation is like "real life," because they've been in the same shoes. (Student #7, UCM)

UCM's TRIO program serves about 80-100 students per cohort, or about 300 total in the university. TRIO provides access to additional student resources, such as lower advisor-to-student ratios, financial literacy workshops, and a college orientation course.

Peer support is provided by Academic Resource Coaches (ARCs), student outreach specialists who have received a week-long training that includes information about campus services and resources. Academic Resource Coaches are assigned to support students in their dorms, so they are nearby if needs arise. University advisors can also contact ARCs if they notice a student having a problem (e.g., missing class or failing grades) and the ARC will make an in-person care call to check on student needs and direct them to appropriate university resources. Faculty can also submit academic alerts to the data system, which triggers an alert to the MAPS office and leads peer mentors to reach out and facilitate support.

Affordability and Leadership

Focus group students noted that UCM's low tuition and scholarships factored into their decisions to enroll. The University offers no need-based aid but emphasizes affordability-- tuition is only \$7,300 for 30 credits, and will stay low because their tuition (like all Missouri public colleges) is tied to the Consumer Price Index. The university awards \$109M in aid from all sources annually, and approximately 90% of all students receive some financial aid (A. Karlin, personal communication, November 29, 2016). Each student is assigned a financial aid counselor, and emergency aid is also offered for students in need. Students in our focus group had high praise for university leadership, especially UCM President Charles Ambrose, noting that he is very visible on campus, and especially helpful to multicultural students, and emphasizes

the need to connect students with scholarship opportunities.

Moving Forward

Many of the programs described above are relatively new to UCM, so much of their work moving forward will consist of fine-tuning current programs and making sure they are well coordinated. At UCM, a new higher-level administrative position was recently created, Assistant Vice Provost for Enrollment Management, to coordinate efforts to increase retention across the university. The ARCs have been in place for a few years, and outreach efforts will continue to increase, with more milestones being added and more colleges participating regularly.

Additionally, UCM has been using a corequisite model for math for the past couple of years and plans to add similar program for English Language Arts next year. The university also recently expanded their St. Louis recruiting efforts, moving from three days a week to a full-time position.

Webster UNIVERSITY

Webster University

Webster University, a nonprofit private institution with its home campus located in Webster Groves, MO, serves many St. Louis high school graduates. Founded in 1915 as Loretto College, it was one of the first Catholic women's colleges west of the Mississippi and in 1924 became Webster College. It began with a progressive mission for its time, providing higher education to women, and has continued to embrace a progressive culture. Webster University became co-educational in 1968 and since the 1970s, Webster University has expanded its campuses across the United States and in Europe, Asia, and Africa. Its Webster Groves' campus is its largest with more than 7,005 students, with 3,607 undergraduates, and serves a largely commuter population. Webster has excelled in educating non-traditionally-aged learners and has been involved in educating military personnel for many decades.

Administrators at Webster University recognized the challenges retaining underrepresented students who may have certain disadvantages in completing college. They see challenges for underrepresented students in three areas: academic preparation, affordability, and transportation, and they are providing services to target these challenges.

Academic Supports

For incoming students who are conditionally admitted due to academic challenges and needs, Webster University has an extensive summer bridge program to help them succeed. These students are freshmen and transfer students with fewer than 30 credit hours and are part of the university's transitions program. They are expected to attend the summer bridge program, which is called the *Transitions and Academic Prep* (TAP) program. Students in the TAP program are on average 51%

first-generation students and 62% students of color (N. Hellerud, personal communication, April 13, 2017). They come to campus during the summer for a 10-day residential program for which they earn two credit hours at no cost to the student. During the program, students live on campus, hone their writing and study skills, and engage in a financial literacy program. Additionally, they learn about campus services, such as the Academic Resource Center, the library, the multicultural center, and financial aid and meet some of their professors. Another key component is that students are given guidance on time and financial management and class scheduling. As they continue into their first year, their counselors closely monitor them, meeting with them weekly during their first semester. The program has had success in retaining students. In fact, the TAP participants now have a retention rate (85%) higher than regular admits (79%; Stroble, 2015). However, perhaps one of the greatest strengths of the TAP program is that students develop a sense of belonging on campus. According to Nicole Roach, Associate Vice President of Diversity and Inclusion and Senior Director of Community Engagement, “. . . once all the students at large arrive to the campus, they have already developed relationships to prevent them from feeling lost. There's a feeling of inclusion. Again, really great things are birthed out of this program”. As a student in our focus group explained,

We came here and was here [sic] for about a week of school. You kind of get a head start with learning what's on campus, knowing your way around, get [sic] familiar with some of your teachers. You do your schedules. You're here for about a week and you can just see the city a little bit. That's what helped me make my decision to come was the TAP Program. (Student #5)

Students noted that they also appreciated the academic support services offered through the Academic Resource Center, where students can get a peer tutor or a writing coach to provide needed academic support. In addition, the small class size and strong connection between students and faculty gives students unique opportunities.

College Affordability

To address college affordability, 95% of full-time beginning undergraduate students received institutional grants or scholarships in 2014-2015 at Webster University.¹⁹ Robert Parrent, Vice President for Enrollment Management and Student Affairs, stated, “Natural to our inclusive culture, diversity [and] inclusion, this means providing access to our students—and I love this—whose talents and dedication are greater than their economic resources.” Webster gives an average of \$9,979 in institutional aid to low-income students, more than double their Pell award, to help make college affordable. One of these programs is the *Webster Grant*, a need-based grant, which awarded students over \$7.5 million in institutional aid last year, to help fill in the gaps of students’ other financial awards and meet students’ unmet financial needs. This program is available on the St. Louis campus only.

Webster University is in its 6th year of offering a *financial literacy program* that helps to reduce loan defaults from their graduates and offer a *Money Talks* program based on grants from the Missouri Department of Higher Education for default prevention. These funds help students and graduates develop financial literacy, management knowledge, and skills. Funds have also been used to develop a financial resources center, to support one-to-one counselor sessions regarding financial aid, and to raffle book scholarships and other incentives for attending students. Webster University does have a lower loan default rate at 4.3% compared to 6.5% for nonprofit private 4-year institutions.

¹⁹ Information provided by B. Stroble, March 9, 2017.

Another unique aspect of Webster University’s financial aid policy is their willingness to be flexible with financial aid. Financial aid counselors use their professional judgment and take the dynamic nature of each student’s circumstances into account. About 50% of the 2015-2016 incoming freshmen class (200 students) had appealed and received a reconsideration of their aid award on a case-by-case basis according to James Myers, Associate Vice President for Enrollment Management and Director of Financial Aid.

Transportation Costs

To address students’ needs in the area of transportation, Webster University provides all of their St. Louis campus students with a Webster Metro pass, allowing students to ride both Metrobus and Metrolink for free. Students reported that the Webster Metro pass helped them stay connected to their family by allowing them to return home on the weekends. Additionally, the Metro pass is important to Webster’s commuting student population.

Inclusive Environment

There is a commitment at Webster University to recruit and retain a diverse population of students, faculty, and staff. In fact, diversity is a metric in the first theme of their strategic plan, *Global Innovation Through Inclusive Leadership*. President Beth Stroble created a new position, the Associate Vice President of Diversity and Inclusion and Senior Director of Community Engagement, and there is an institutional commitment to increase the representation of minority populations among employees and students across Webster University. University leadership recognize the importance of role models and mentors that reflect the student population they serve. As noted by Vice President Robert Parrent, “The president of this university is absolutely phenomenal in terms of understanding who Webster University is and maintaining, if not further inspiring, its commitment to access and opportunity for students.”

Webster University students in our focus group commented on the caring community at Webster where they feel that the professors take a personal interest in them and are very accessible. The personal connections run deep; students cited specific advisors and faculty who helped them in many ways. Overall, students in our focus group described Webster University as a welcoming community to all students.

Student Voice to Improve Campus Life

A uniquely Webster initiative that has been in place for almost 20 years at the Webster Groves campus is the *Delegate's Agenda*, although the model is starting to be replicated on Webster University's international campuses. This process gives students a voice to impact campus in the ways the university can improve campus life. Each year residential students get together in a town hall discussion to determine the top five issues that they think would improve campus life. They form five teams, each co-chaired by a student and a faculty or staff member, appointed by the president. Although the topics are often around pragmatic matters (e.g., a perennial favorite is parking), social justice issues and diversity and inclusion topics are inevitably on the list. For instance, a topic that is being studied this year is ways in which students can indicate their preferred name in the university system; a topic with great importance to transgender students, among others. The teams will research the issues and report back with recommendations for improvement in the spring. This is the type of organic, systemic, and student-centered way in which Webster University evolves to meet the needs of their changing student population.

New to Webster

Webster University has recently begun participating in the *Raise.me Micro-Scholarship* program. This unique program allows high school students in 9th grade through early senior year to earn scholarship money based on their academic and service benchmarks achieved during high school. For example, students may earn certain scholarship dollars based on their high school grades, attendance, advanced courses, leadership roles, participating in extracurricular activities, or doing community service, etc. Once the student is accepted at Webster, the institution provides a financial award that includes the student's *Raise.me* amounts. This program was implemented at Webster University in June 2016, so it is too soon to determine its effects on recruitment and retention. However, early indicators suggest that it is a promising program that rewards students for college-ready behavior in high school. Although all students will be able to access awards from this program, the intent at Webster University is to provide another avenue for students to receive financial aid more aligned with financial need and for low-income students to see that they can afford and attain a college education.

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Appendix

Determining Success Rankings

Methods

For the initial phase of this project, we reviewed existing institutional ranking systems and categorized them into three types: (a) Prestige, which is concerned with the reputations and perceptions of institutions. (e.g., U.S. News and World Report College Rankings); (b) Economic Mobility (value-added methodology), which assess the colleges/majors that will have the best financial return on future salary (e.g., Niche College Ranking); and (c) Access and Social Mobility, which are based on macro-level questions about how institutions of higher education educate underserved populations, while helping lower income families overcome financial burdens (e.g., Washington Monthly's College Rankings). The Access and Social Mobility rankings focus on the outcomes that were most of interest in this study: educational access, postsecondary completion, and low student debt. We evaluated 14 ranking systems, across these three categories for our list of institutions. Yet in the end, we decided to develop our own college ranking to emphasize those factors most important to this project. Furthermore, most ranking systems did not have complete data across the universities that we evaluated.

To begin to create our own ranking system we acquired publicly available data from two sources, the Integrated Postsecondary Data System²⁰ (IPEDS) produced by the National Center for Education Statistics, and the College Scorecard²¹ (CS) data from the U.S. Department of Education. We recognize that there are anomalies in one-year data points, particularly for smaller institutions or when data are stratified by student demographics. Therefore, we averaged the two most recent years of data for each metric.

Metrics: Outcomes. The completion metric we used was graduation in 150% time or 6-year graduation rates for first-time, full-time student cohorts through IPEDS. Graduation rates by low-income status and other demographic variables, available through CS, were not used due to inconsistencies in reporting across universities (CS technical support, personal communication, August 22, 2016). The National Student Loan Data System (NSLDS) provides the financial data in the CS. In this study, student loan debt was assessed as the median debt at graduation; a better measure of college affordability than the median debt of all student borrowers (U.S. Department of Education, 2017). The median debt at graduation averaged over AY12 and AY13 equals \$23,349 for the five institutions. Broken down by sector, the private institution average equals \$24,165 and the public institution average equals \$22,225 (see Table 2 for specific institution information).

²⁰ <https://nces.ed.gov/ipeds/Home/UseTheData>

²¹ <https://collegescorecard.ed.gov/data/>

Metrics: Underrepresented students. The variables used to define underrepresented students were percent minority students, percent low-income students, and percent first-generation students. Minority students were defined as Black and Hispanic students for purposes of this study. The percent enrolled of each Black and Hispanic students, as reported by IPEDS, was averaged for each year of study. The percent of students receiving Pell aid, as reported in IPEDS, served as a proxy variable for low-income students. First-generation status was attained from the NSLDS data base in CS and was defined as having neither parent attain a college degree (as collected through the FAFSA).

Years of data. For the success metric calculation, data needed to be available in downloadable form, which limited the recency of the data. Data retrieved through IPEDS, 6-year graduation rates, percent Pell, and percent minority, were averaged for AY13 and AY14, the most recent years of data available for download in late summer/early fall 2016. Data retrieved through CS, median debt at graduation and first-generation status, were averaged for AY12 and AY13, the most recent years of data available for download in late summer/early fall 2016.

Analysis. The quantitative analyses were conducted in two stages. In the first stage, the predicted graduation rates were obtained and in the second stage, the Success Formula was calculated and the institutional rankings were obtained.

To determine the predicted graduation rates a larger sample was used to ensure the predicted values were robust and not due to sampling error. For this purpose all 4-year institutions in Missouri and Illinois in IPEDS that were public and nonprofit and primarily 4-year degree or higher granting institutions were utilized ($N = 127$; $n_{MO} = 55$, $n_{IL} = 72$). Multiple regression analyses were conducted according to Equation 1, in which Y_i = 6-year graduation rates and

$$Y_i = \alpha + X_i'\beta + e_i \quad (1)$$

X_i = percent first-generation, percent minority, and percent low-income students. The residuals, e_i , (res) indicated the actual graduation rate minus the predicted graduation rates based on the proportion of underrepresented students enrolled. In stage two, these residuals were merged back to the original list of 20 institutions in this sample. To calculate the Success Formula, the residuals were standardized among the 20 institutions and the standardized median debt (debt) at graduation was subtracted (see Equation 2).

$$SF = Z_{res} - Z_{debt} \quad (2)$$

Thresholds. In order to ensure that the five identified institutions had reasonably high graduation rates overall and were admitting at least a modest number of low-income students, institutions with a 2-year average of percent Pell < 25% or 6-year graduation rates < 50% were omitted from consideration, based on thresholds set in discussion with the Task Force. Other reasons for omitting universities included, not having a standardized predicted graduation rate greater than the average, and offering primarily 2-year degrees.

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