Seeing it Through

Persistence and Completion of Low-Income Students at the University of Memphis

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Table of Contents

Executive Summary

Students from low-income backgrounds who enroll in college are less likely than their peers to ultimately graduate. For this reason, the University of Memphis, a public research institution with a large population of low-income students, proposed a mixed-methods study examining the factors that influenced its students from low-income backgrounds (as identified by eligibility for the Pell grant) to persist to graduation. Using a framework informed by Tinto (2012) and Braxton et al. (2014), the study addressed three primary questions:

> **1.** What factors influence Pell-eligible students' decision to persist at the University of Memphis?
> **2.** What factors did Pell-eligible students who are in line to graduate use to persist at the University of Memphis? Did these factors differ over the course of their four to six years to graduation?
> **3.** How do Student Affairs departments contribute to Pell-eligible students' persistence?

Study Design and Data Analysis

All students from the University of Memphis who applied for graduation by November of 2014 were invited to participate in the study and emailed a link to a 169 item survey. At the end of the survey, students were invited to sign up to be contacted for a qualitative interview. Survey responses were then separated into Pell-eligible and non-Pell-eligible populations based on information provided by the University of Memphis. Pell-eligible students who provided contact information were emailed to schedule in-person interviews. After cleaning the data, 426 final survey responses were recorded and eight students were interviewed. Quantitative data analysis was conducted from January-February 2015 and qualitative data was collected and analyzed in February 2015. Both the quantitative and qualitative analysis addressed all three study questions.

Findings

Question 1: What factors influence Pell-eligible students' decision to persist at the University of Memphis?

- Support is a key factor in enabling a low-income student to persist. Financial support in the form of grants and scholarships and academic support from faculty and staff were both common elements influencing student persistence.
- Similarly, low-income students who were about to graduate also were quite likely to have identified a mentor at the University of Memphis, with faculty, other students, and staff members all identified as important mentors.
- Students from low-income backgrounds who were about to graduate also rated high on expectations: they knew that someone in their lives expected them to graduate from college, whether that was a family member, friend, University of Memphis faculty or staff member, or themselves.
- Finally, these students tended to find involvement with peer groups comprised of others like themselves in some way, whether that was through an academic or major-focused organization, involvement in the classroom, or with students from a similar cultural or ethnic background.

Question 2: What factors did Pell-eligible students who are in line to graduate use to persist at the University of Memphis? Did these factors differ over the course of their four to six years to graduation?

- Enrollment in ACAD 1100, living in

on-campus housing, campus dining, the University Center, and Frosh Camp were the top five factors that encouraged a student to persist from the first year to the second year.

· From the sophomore to the junior year, no one program stood out as being the most important in helping students to persist.

· Moving from the junior to senior year, academic engagement and support played a stronger role in student persistence, with quality of teaching, family/peer relationships, and relationships with faculty mentors significantly increasing in importance for students at this stage.

Question 3: How do Student Affairs departments contribute to Pell-eligible students' persistence?

· While low-income students were involved in Student Affairs programs during their first year, listing them as key elements in their persistence to sophomore year, they were less likely to be involved in Student Affairs programs after their first year.

· Overall, low-income students found Educational Support/Tutoring, the University Center, On Campus Dining, Career Services, and Registered Student Organizations to be the most useful Student Affairs programs during their time at the University of Memphis although these services were still not used with great frequency by the study's participants.

· Low-income students needed to feel a connection with the other students they saw being served by a Student Affairs office or program and understand how the office will help them academically and in a career in order to continue to participate with that office.

· Finally, low-income students' cultural capital and level of perceived support and involvement are all related to their involvement in student affairs.

Recommendations for Further Research

· Conduct analysis of low-income students who did not persist at the University of Memphis.

· Perform longitudinal data collection and analysis on low-income students at the University of Memphis, looking at the same group of students as they move through the University.

· Research the sophomore year experience and the transition to the junior year at the University of Memphis.

· Analyze the staff and faculty experience at the University of Memphis.

Recommendations for Practice

· Student Affairs must work proactively with faculty to ensure the early warning system designed to provide academic support to students reaches those students.

· Increase partnerships with academic departments in order to promote students' academic engagement and improve academic support.

· Make alterations to Student Affairs' physical footprint to improve visibility, increase student involvement, and raise awareness of Student Affairs offices, programs, and resources.

· Invest Student Affairs programming dollars in scholarships, grants or incentives for participation to increase involvement.

· Because we found that students who have the support of family and community members are more likely to persist, we recommend developing programs that encourage increased participation of family and community members.

Institutional Context

The University of Memphis is a large public research institution located in Tennessee's most heavily populated urban area. As one of only two doctoral research intensive public institutions in the state (State of Tennessee, 2014), the University of Memphis is comprised of eight undergraduate colleges: the College of Arts and Sciences, Fogelman College of Business and Economics, the College of Communications and Fine Arts, the College of Education, Health, and Human Services, Herff College of Engineering, Lowenburg School of Nursing, Kemmons Wilson School of Hospitality and Resort Management, and the University College which offers degrees in Interdisciplinary Studies, Liberal Studies, and Professional Studies. The University also offers three Independent Programs which include Orientation Programs for first time freshman (ACAD 1100) and students returning from academic suspension (ACAD 2200), Special Topics in Library Resources, and the University's Helen Hardin Honors Program (Undergraduate catalog, 2015).

The University of Memphis has an undergraduate enrollment of more than 17,000 students (Office of Institutional Research, 2013) representing a cross section of populations. While low-income students make up a significant number of students at the institution (more than 52%), and are a central focus of attention, the University of Memphis also enrolls a large number of students from other at-risk populations. Approximately 33% of students are nontraditional, defined as 24 years of age or older, and more than 44% of it undergraduates are students of color

(Office of Institutional Research, 2013a). The majority of students at The University of Memphis are commuters, with only 13% of its undergraduate students living on campus or in university residence halls (Office of Institutional Research, 2013a). The extant literature shows that both nontraditional and commuter students require unique support in order to be successful and both groups are less likely to persist without those supports (Bragg, 2013). Additionally, commuter students have specific needs with respect to institutional support and faculty connections that institutions of higher education must address in order for those students to persist and graduate (Braxton et al, 2014).

In a previous Capstone project, Vanderbilt University Ed.D. students Karen Lewis and Denise Miller (2013) studied the influence of Student Affairs activities on first-generation students' decision to persist at the institution from their first to second year. Lewis and Miller (2013) found that while residential students used Student Affairs to build social connections, commuter students were more inclined to seek out Student Affairs resources and services and were less likely to participate in social events held on campus. According to Dr. Dan Bureau, Director of Student Affairs Learning and Assessment and Special Assistant to the Vice President for Student Affairs at the University of Memphis, the next logical step was to look at the other end of the college experience - those students who had persisted through to their senior year and were preparing to file an intent to graduate - to determine what services and programs those students might identify as most helpful and beneficial in

supporting their efforts to earn a degree in that the vast majority of that population are commuter students. As the previous study focused on first-generation students, Bureau and his staff identified another at-risk group about which they wished to gain greater insight: low-income students (D. Bureau, personal communication, June 13, 2014). A review of the institution's Pell-grant eligible students (a proxy for "low-income" that relies on income information obtained from a student's Free Application for Federal Student Aid) revealed that only 38% of that population graduated within six years (Office of Institutional Research, 2013b). In that a majority (52%) of the University's student body is Pell-eligible, the low persistence and graduation rates among this group of students is of great concern to the institution making the population ripe for study (D. Bureau, personal communication, June 13, 2014). With that in mind, the University submitted a proposal for a second mixed methods Capstone project to explore the factors students used to graduate.

Overview of Study

The mission of the Division of Student Affairs at the University is "to foster student learning and promote student success through engagement and involvement in community, academics, diversity and leadership" (Division of Student Affairs, 2013). With an appreciation for diversity, student affairs administrators have identified and implemented a variety of programs and initiatives targeting its at-risk student populations in order to fulfill its mission. The Division, comprised of twelve departments, promotes a targeted goal to positively impact student retention and four and six year graduation rates (Division of Student Affairs, 2013). Each of the twelve departments has developed a "tactic" focused on student success, as measured by persistence and graduation. Our team conducted an in depth review of each department's tactics in support of this goal and used the information to help develop our quantitative survey instrument. Further, we employed a qualitative approach to elicit input from students who were preparing to graduate or who had recently graduated to determine which programs, initiatives, and factors contributed most to their ability to persist to graduation. Our team identified the goals and study questions addressed by this project during two video-conference meetings with the project's sponsor (D. Bureau, personal communication, June 13, 2014; July 22, 2014). During the initial meeting, we clarified conflicting statements in the original Capstone Proposal and narrowed down the focus to low-income students regardless of their first-generation student status. Further, we identified "low-income" students to be those who receive or are eligible to receive Pell Grant funds (D. Bureau, personal communication, June 13, 2014).

> "to foster student learning and promote student success through engagement and involvement in community, academics, diversity and leadership."
>
> University of Memphis Student Affairs mission statement

Study Design

The team worked with Dr. Bureau to identify Student Affairs personnel with whom we wanted to meet during our first visit to the campus in September 2014. We also

confirmed the types of demographic data the University would be willing and able to provide to us as part of our study. Finally, we went over the proposed timeline and received Dr. Bureau's approval of our study design. During our first visit to the campus, team members met with Dr. Rosie Bingham - Vice President of Student Affairs, Dr. Stephanie Blaisdell - Assistant Vice President of Student Affairs and Student Development, and Dan Armitage - Associate Vice President and Dean of Students, as well as with representatives from Adult and Commuter Student Services, Multicultural Affairs, Residence Life, Disability Resources for Students, Career Services, Student Success Programs, Student Leadership and Involvement, and the Student Health and Counseling Center. The team used insight obtained during these initial informal meetings to inform and develop a survey instrument for the quantitative portion of the study. After reviewing our quantitative instrument with Dr. John M. Braxton of Vanderbilt University, we presented the instrument to Dr. Dan Bureau and received final approval to proceed.

Study Questions ⟨?⟩

The University of Memphis is interested in the success of students who, given current research, would be less likely to graduate with a bachelor's degree (Titus, 2006). Of their students, approximately 52% are Pell grant eligible (Office of Institutional Research, 2013a), which is the definition the University uses to identify low-income students. With current programs in place, such as federal TRiO programs, the administration seeks to understand whether such resources and others housed in the Division of Student Affairs have a significant impact on the success of low-income students.

Specifically, institutional leaders have asked:
• What factors influence Pell-eligible students' decision to persist at the University of Memphis?

• What factors did Pell-eligible students who are in line to graduate use to persist at the University of Memphis? Did these factors differ over the course of their four to six years to graduation?

• How do Student Affairs departments contribute to Pell-eligible students' persistence?

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Assumptions of the Project ✓

Differences between demographic groups in higher education performance and outcomes have primarily focused on access to college. Low-income students are faced with specific challenges with respect to access (Avery & Kane, 2004; Bowen, Kurzweil, & Tobin, 2005; Heller, 2013; Reardon, 2011). Knowledge about the college application process, how to complete the financial aid application and/or apply for scholarships (Avery & Kane, 2004), and finding resources to pay for courses and other expenses once enrolled (Bok, 2013) are all factors in how successful a student is at accessing higher education. In this regard, there remains one consistent explanation. Resources, such as parental education level, resources in the home, and family income all serve to build the level of cultural capital one has (Bourdieu, 1977; Bowen, Kurzweil, & Tobin, 2005; Lareau, 1987; Rothstein, 2004) and that cultural capital lends itself to access to opportunities.

Beyond the personal challenges a student can face due to a lack of financial support and cultural capital, students must also navigate institutional barriers to admissions and enrollment. Elite institutions have taken a new look at how they apply grants to students with institutional "no-loan programs". Once institutions began this trend, others followed suit so as to not fall behind in rankings and appeal (Heller, 2013). Titus (2006) looked at institutions with significant financial resources, those that can offer additional resources to low-income students, as models for how to increase persistence and graduation rates.

What, then, can an institution do if it lacks significant financial resources to offer students the support they require to be successful but continue to attract large numbers of students in need? Utilizing theories of student persistence as guidance, colleges and universities can set up academic and social support mechanisms to encourage success (Braxton, et al 2014; Tinto, 2012). In addition, it is vital to understand the unique needs of different student populations including nontraditional students (Bragg, 2013), low-income students (Heller, 2013), commuter students (Braxton, et al, 2014), and first generation college students (Avery & Kane, 2004). Once they understand the unique needs of these enrolled populations, administrators can establish a vision with focus areas, develop initiatives, assess implementation, and evaluate program success.

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Conceptual Framework

With the three study questions in mind, we looked for a framework that would describe the needs of low-income students in college, their experiences being retained and graduated, and the role of institutional support. The conceptual framework was designed to guide research for all three study questions. While a great deal of scholarship, policy, and programming has focused on helping low-income students access college, the evidence indicates these students are among the least likely to persist and graduate even after they have enrolled (Astin, 1997; Braxton et al., 2014; Thayer, 2000; Tinto, 2012). The gap in degree completion between students from low-income families and higher-income families is pernicious and widening (Cahalan & Perna, 2015). Once successfully recruited and enrolled, students from low-income backgrounds face a variety of barriers to their successful completion of college, including inadequate academic preparation, financial hardship, information deficits, and low levels of social and cultural capital.

Academic Preparation

Low-income students who enroll in college tend to be less academically prepared than their upper-income peers, even at the same institution (Tinto, 2004). High school preparation affects where students choose to enroll (Ellwood & Kane, 2000), the type of financial aid they receive (Heller, 2013), and their ultimate success in college (Hossler, Dundar, & Shapiro, 2013). Even when low-income students have access to high school coursework that would prepare them for college, the fact that few people in their lives expect them to attend or graduate from college discourages them from taking advantage of a college-preparatory curriculum (Rothstein, 2004).

Lack of Financial Support

While low-income students do have access to a range of financial aid resources to help pay for college, they are still faced with financial barriers to continuing (Bok, 2013; Bowen, Kurzweil, & Tobin, 2006). For instance, merit grants, which have been shown to have positive effects in enrollment, are disproportionately awarded to higher-income students (Heller, 2013). While financial aid levels overall are rising, loans are rising faster than grants (Dynarski & Scott-Clayton, 2012). This is problematic because the type of financial aid available to a student influences his decision to enroll in college and this influence varies depending on a student's demographic characteristics (Flores, 2010).

Information Deficits

Students from low-income backgrounds tend to have less access to information about how to enroll in, pay for, and be successful in higher education (Ellwood & Kane, 2000). Additionally, the schools that are more likely to graduate students are also more likely to enroll students with higher levels of family income (Cahalan & Perna, 2015)

Cultural Capital

While academic preparation, financial hardship, and information deficits are significant factors in the retention and success of low-income students, the most pernicious barrier to a low-income student's graduation seems to involve his lack of social and cultural capital (Berger, 2000; Tinto, 2004). Cultural capital refers to the

"general cultural background, knowledge, disposition, and skills that are passed from one generation to the next" (MacLeod, 1995, p. 13). Advanced by sociologist Pierre Bourdieu, cultural capital has four main components. First, each social class has its own unique cultural components. Second, schools encourage upper-class capital and discredit lower-class capital. Next, academic achievement translates into economic wealth. Finally, the school legitimates this process by making social hierarchies seemingly based on merit or skill, including the levels to which students assign themselves blame and credit for mistakes and successes (MacLeod, 1995). As Bourdieu writes,

> it would seem that the action of the school, whose effect is unequal…among children from different social classes, and whose success varies considerably among those upon whom it has an effect, tends to reinforce and to consecrate by its sanctions the initial inequalities. (Berger, 2000)

By contrast, social capital exists within relationships and facilitates actions. Sociologist James Coleman describes it by saying that, "Unlike other forms of capital, social capital inheres in the structure of relations between actors and among actors" (Coleman, 1988, p. 98). Social capital can be the way that other forms of capital are transmitted (so, for example, a child whose parent has a high degree of cultural capital will not themselves inherit that cultural capital unless the parent-child relationship also has a high degree of social capital). Social capital refers to the strength of relationships among actors (for example, a parent and a child) as evidenced in three forms: obligations and trustworthiness,

information channels, and norms and effective sanctions. Capital grows best in a closed system where all players can establish relationships and begin holding debts to each other. Coleman (1988) argues that the types of social capital in a family holds a direct bearing on the educational attainment of the children.

Both of these types of capital mean that students come to college with advantages or disadvantages predicated on far more than ideas of inherent intelligence or talent but with capital built up from their families and backgrounds (Berger, 2000). While college is an opportunity for students to acquire cultural and social capital (Barratt, 2011; Berger, 2000), it is difficult for them to do so when they begin at a deficit (Barratt, 2011). However, a student's ability to build social and cultural capital when on a college campus is an important key to that student's ultimate persistence and graduation (Berger, 2000).

Institutional Actions

Given that the third study question addressed the role of Student Affairs in the graduation of low-income students, we felt that it was important that the conceptual framework describe the ways in which institutional actions influence student persistence. While the challenges faced by low-income students are significant, research shows that institutions can play a role in helping low-income students remain in college and ultimately graduate (Berger, 2000; Braxton et al., 2014; Thayer, 2000; Tinto, 2004, 2012). Many researchers consider this more of an obligation than an opportunity. Tinto (2012) noted, "we must recognize that a college or university, once having admitted a student, has an obligation

to do what it can to help the student stay and graduate" (p. 6).

While classic student retention theory has focused on the factors that cause students to leave an institution, more recent literature has focused on the elements that allow them to stay and be successful (Braxton, et al, 2013; Tinto, 2012). While these institutional actions look very different between residential and commuter institutions (Braxton et al., 2014), there are broad categories that help students succeed. In particular, this study is grounded in Tinto's (2012) four factors that institutions can address to ensure student success and graduation: expectations, support, assessment and feedback, and involvement.

Expectations
Students need consistent and clear information about what it takes to be successful in the institution, in a particular area of study, and in a specific class. Tinto (2012) argues that successful institutions are ones that convey expectations to students and help them clearly understand what is needed to move through the program. Low-income students are less likely to come to college with the cultural capital to know what is expected of them in the college environment. As a result, the institution must provide resources (for example, orientation programs) for students to acquire this capital and learn these expectations.

Support
Inasmuch as institutions must set and communicate expectations for student success, they must also convey support to those students. Tinto (2012) argues that institutional support for students takes two primary forms: academic, including things

such as developmental courses, tutoring, study groups, and supplemental instruction, and social, which eases the transition to college, enables students to more easily access informal knowledge, promotes a sense of self-worth that leads to academic accomplishment, and increases the student's attachment to the institution. For some students, a third form of support, financial, is also vital to success. Tinto (2012) argues, as well, that support looks different for students as they progress through college with the support a first-year student needs varying greatly from that which a senior needs.

Assessment and Feedback
Next, Tinto (2012) maintained that students need to know how well they are doing at meeting expectations and progressing through college. They need to know if they are doing enough academically to complete each class as well as their course of study, or if adjustments need to be made. Assessment must be frequent, early, and formative as well as summative in order to be beneficial, with the most effective form of assessment being faculty monitoring of student performance in the classroom so that immediate feedback can be delivered.

Involvement
Finally, students need to be involved in their institution in order to be successful. Involvement happens both inside and outside of the classroom and is one of the strongest predictors of student success (Kuh et al, 2005). Especially important is involvement in a student's first college year, which serves as a predictor of success throughout college (Tinto, 2012).

Figure 1 (below) shows how Tinto's core areas fit into the conceptual framework used

to guide our study questions. Items in gray are related to study question one, items in blue relate to study question two, and gold items relate to study question three.
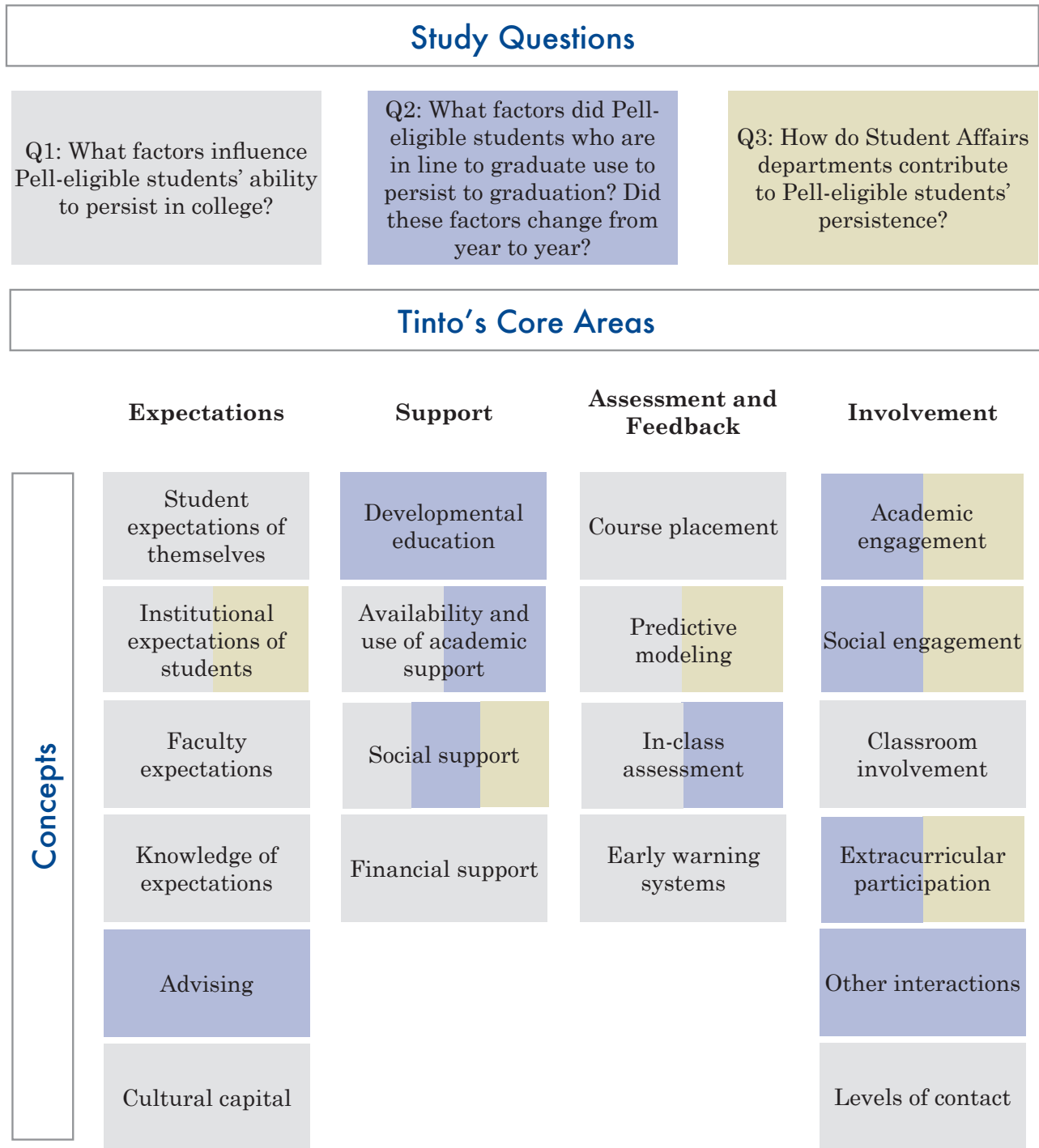

Study Questions

Q1: What factors influence Pell-eligible students' ability to persist in college?

Q2: What factors did Pell-eligible students who are in line to graduate use to persist to graduation? Did these factors change from year to year?

Q3: How do Student Affairs departments contribute to Pell-eligible students' persistence?

Tinto's Core Areas

Concepts

Expectations	Support	Assessment and Feedback	Involvement
Student expectations of themselves	Developmental education	Course placement	Academic engagement
Institutional expectations of students	Availability and use of academic support	Predictive modeling	Social engagement
Faculty expectations	Social support	In-class assessment	Classroom involvement
Knowledge of expectations	Financial support	Early warning systems	Extracurricular participation
Advising			Other interactions
Cultural capital			Levels of contact

Figure 1

Design of the Study

The Capstone team designed a mixed methods approach to explore the study questions including a survey and in-person interviews. A survey was first used to address each of the study questions.

Survey Development

The Capstone team developed a survey instrument (see Appendix A) with consideration of both the study questions and Tinto's four frames for student success (see Appendix B). The instrument asked students to respond to one hundred sixty-nine separate items, including questions addressing expectations, support, assessment and feedback, and involvement (Tinto, 2012). In addition to these areas, the team utilized the cultural capital scale from Braxton et al. (2014) as well as questions regarding student background and academic preparedness. In order to address study question 2b, whether factors used changed at different points in time, the survey required participants to rate the importance of various Student Affairs offices and resources in their return from year to year from their first year to graduation.

With respect to survey layout and design, care was taken to ensure that the number of questions on each page did not overwhelm participants. Aforementioned questions addressing the impact of numerous resources over different time periods were broken into sections. The team then varied the order in which each section was presented in the survey. This was done both to make the survey seem less overwhelming on those pages and to avoid automatic responses from repetitive ordering. REDCap, the online survey system used for the study, allowed the team to sample multiple approaches prior to finalizing the survey design.

Participant Recruitment

The population of interest for each study question included low-income, undergraduate students who had applied for graduation in either December 2014 or May 2015. Because we sought to reach findings and offer suggestions of how to best serve low-income students, we surveyed all undergraduate students who applied for graduation as of November 2014. This method allowed us to compare responses from students who were and were not low-income, which aided in forming conclusions that may be unique to low-income students.

Based on the criterion of graduation application and undergraduate student status, we acquired names of 2,873 students. Of that list, we determined 2,265 were eligible for participation in this study, having undergraduate student classification. The University's Office of Institutional Research created a database of the names, Pell eligibility, university identification numbers, and email addresses for each student. We worked with the Vice President for Student Affairs to send an electronic link to the survey instrument sent from her name as an attempt to increase response rate. As a second means by which to increase the response rate, incentives were offered including a wood frame for the University of Memphis diploma, a Columbia University of Memphis jacket, a University of Memphis throw blanket, a Gatorade sweatshirt (courtesy of Pepsi), and three twenty-five dollar gift cards. After the survey closed,

a random number generator was utilized to select a recipient for each incentive. Incentives were distributed to students by Dr. Dan Bureau, Director of Student Affairs Learning and Assessment.

Data Collection

Our survey became active on November 17, 2014. An electronic mail message from the Vice President for Student Affairs included a survey link inviting the population members to participate. The invitation came directly from the REDCap survey application, which allowed us to monitor message receipt and activation of each student's survey. We also immediately began tracking response rates, completion rates, and any survey items resulting in non-responses. As we did not observe any common omissions survey questions were not altered after the initial launch.

likelihood of response. Those reminders, referred to as waves two and three, served to increase the response rate and were analyzed for any significant differences between waves.

After closing the survey, six hundred twenty-three individuals participated in the survey for a 27.5% initial response rate. The team then identified responses with usable data. After cleaning the data to include only undergraduate students who submitted completed surveys, four hundred twenty-six responses were identified for analysis for an 18.8% final response rate. Thus, the analytical sample obtained consisted of 426 undergraduate students. Once all data was imported into SPSS from REDCap, we began analysis to determine how representative the respondents were of the population surveyed. Table 1 compares the characteristics of the sample of 426 undergraduates with the

Table 1. Profile of the Sample Compared to the Population (Represented in %)

	Sample	Population*
	(N=426)	(N=2265)
Male	27.5	35.4
Female	72.5	64.6
Pell-Eligible	55.9	55.2
White	39.9	34.3
Black	26.8	27.4
Hispanic	.7	.6
Asian/Pacific Islander	1.4	2.1
American Indian	.2	.3
Unavailable	31.0	35.3
*Population includes all students who applied to graduate in December 2014 or May 2015.		

After the survey launched, we sent two additional reminders to those individuals who did not respond to the initial invitation. Each reminder was sent from the Vice President of Student Affairs to increase the

population of December 2014 and May 2015 graduates at the University of Memphis.

In order to determine how representative the sample was, we conducted an independent

Table 2. Mean Comparisons between Respondents and All Graduation Applicants

| | | Levine's Test for Equality of Variances | | T-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	Lower	Upper
Independent Samples Test										
Male	Equal variances assumed	53.981	.000	-3.160	2689	.002	-.079	.025	-.128	-.030
	Equal variances not assumed			-3.310	622.38	.001	-.079	.024	-.126	-.032
Pell eligible	Equal variances assumed	.292	.589	.259	2689	.795	.007	.026	-.045	.058
	Equal variances not assumed			.259	596.15	.795	.007	.026	-.045	.058
Race	Equal variances assumed	5.361	.021	-2.040	2689	.041	-.236	.116	-.463	-.009
	Equal variances not assumed			-2.064	602.36	.039	-.236	.114	-.461	-.011

samples T-test to compare means of the sample and the population (See Table 2). Tested at .05 significance levels, our sample includes responses from Pell-eligible students at rates that are statistically similar to the population. However, gender and race did differ significantly from the population. As our central study questions are most concerned with the experiences of Pell-eligible students, the representativeness of Pell-eligible respondents to the overall population is of most concern.

The team also performed wave analysis to determine any significant differences between those respondents who submitted completed surveys after the first invitation and subsequent invitations. A mailing wave variable was created to divide respondents into two wave groups depending on the date on which they submitted their responses. Table 3 (see Appendix C) includes crosstab statistics including chi-square statistics for race, sex and Pell-eligibility. As illustrated in Table 3 (see Appendix C), there are not

significant differences between respondent waves along race, gender or Pell-eligibility.

In addition to crosstab analysis for race, sex, and Pell eligibility to determine any substantive differences between wave respondents, analysis of variance was also conducted to determine any significant differences between waves with respect to their measure on the expectation, support, and involvement scales. As seen in Table 4 (see Appendix D), there were not significant differences observed in measured for the three scales between the three waves. Because the groups did not differ significantly between waves submitted, we assess the sample as representative of the population from which it was drawn.

Composite Scale Development
In order to best address the study questions utilizing Tinto's theoretical framework, survey questions were arranged to develop scales for three of the four areas: expectations, support, and involvement. The

expectations scale consisted of seven items addressing self-reported expectations for undergraduate completion. A Cronbach's alpha of .741 was found after performing reliability analysis, allowing us to utilize the scale in applying Tinto's expectations frame to our study questions. See Appendix E for a complete listing of expectations scale items and their associated Cronbach's alpha.

The second scale, measuring support, included eight items including enrollment in the institution's college success course, feelings of support from family, friends, faculty, and staff, knowledge of where to turn for help with concerns or questions, and having identified a mentor on campus. This scale resulted in a Cronbach's alpha of .751 indicating a strong reliability of the questions in measuring support. Appendix F presents items included in the support scale as well as reliability statistics.

The involvement scale, with nineteen items, included use of college social media, involvement in registered student organizations, living on campus and participation in select student affairs activities. In measuring the reliability of this scale, a Cronbach's alpha of .847 resulted. See Appendix G for a complete list of items included in the involvement scale with associated reliability statistics.

Limitations

Data collection and analysis were impacted by the following limitations:
- Population lists attained from the Office of Institutional Research included students who filed graduation applications for both undergraduate and graduate degrees. As a result, initial data output as the survey closed included responses that had to be omitted prior to analysis.

- Some initial respondents did not complete the survey in full. In order to attain the best results possible, incomplete surveys were discarded.
- The final 18.8% response rate was lower than desired. Because wave analysis did not indicate significant differences between survey waves, we view the sample as representative of the population from which it was drawn. However, our comparison of sample characteristics to student characteristics in the population indicate that the sample was not representative of the population along sex and racial demographics.

In-Person Interviews

Qualitative research requires that the researcher invest his time in order to understand the situation from an internal or emic perspective. Qualitative research provides a framework, but at the same time allows for greater flexibility to understand people and experiences in a more nuanced manner (Patton, 2002). As Patton (2002) noted, "Qualitative findings in evaluation illuminate the people behind the numbers and put faces on the statistics, not to make hearts bleed, though that may occur, but to deepen understanding" (p.10). For this study, we sought a better understanding of what programs, resources, and factors students who had recently graduated or who were preparing to graduate found most useful in supporting their persistence at the University of Memphis. The data obtained during the quantitative portion of our study were used to inform our qualitative interview protocol (see Appendix H). Peshkin describes qualitative research by concluding that "there is no prototype qualitative researchers must follow, no mold we must fit in, to ensure that we are bound for the right track" (Peshkin, 1993, p. 28). This implies

that each study requires its own planning effort, with significant consideration given to the conceptual framework. The student interview protocol we developed included both semi-structured open-ended and closed-ended questions also spanning Tinto's (2012) four core areas of student persistence: expectation, support, assessment and feedback, and involvement. These interviews were used to gain greater insight into the data obtained from our survey instrument for each of the three study questions.

Methodology

Students who participated in the electronic survey were asked at the conclusion of that instrument to consider participating in a follow-up in-person interview to provide more information about the factors, services, and resources that helped them reach graduation. Students who were interested in participating were asked to enter their email address with the assurance that their email addresses would be removed from the survey data and that all interview data would remain confidential. Of the two hundred thirty-nine Pell-eligible undergraduate respondents who completed the survey, one hundred twenty-two expressed an interest in participating in the qualitative part of the study by providing their email address for a volunteer response rate of 51%. Using random sampling, we reached out to eighty-one of the one hundred twenty-two students who volunteered for interviews using SignUp Genius, an online interview scheduling program, and asked them sign up for one of thirty half-hour time slots. The first request for interview signups was sent eight days prior to the interview date, with two reminders sent to those who had not yet signed up five and two days before the interview date. Seventeen individuals signed up for a one-on-one interview for a

response rate of 21%. On the morning of the interviews, those seventeen were sent an email reminder as to the location and time of their scheduled appointment. Of the seventeen, nine presented for interviews and two were interviewed via telephone due to schedule changes that prevented them from participating in person. Of the eleven students interviewed, three were graduate students who had not been filtered out, leaving us with a total of eight participants for a final response rate of 9.8%. Although interviews were conducted with the graduate students, the results of their interviews were not included in our qualitative analysis.

On-site interviews were held in private interview rooms within the University Center on February 12, 2015. Telephone interviews were conducted over the following three days. Each interview lasted twenty to thirty minutes and was digitally recorded for reference during coding.

Analytical Approach

Using recommendations made by Dr. Claire Smrekar (2013) of Vanderbilt University, interviewers listened to recordings three times: one time to gain a general understanding of the respondents' answers, a second time to identify themes and patterns, and a third time to identify key quotes to illustrate and support the overall themes. The team then created a matrix to record findings from each interview as recommended by Patton (2002). This matrix provided "an additional source of focus in looking for themes and patterns (Patton, 2002, p. 477). All students interviewed were assigned a pseudonym during the coding process to ensure anonymity and maintain confidentiality.

Reliability

In an effort to reduce threats to internal reliability, team members went through common training in delivering the student interview protocol and data analysis and digitally recorded all interviews. We further increased internal reliability by meeting as a team to review data and identify common themes, relying on low inference descriptors to develop these themes and support key concepts. It is highly likely that the results from interviews conducted by other researchers with similarly situated students would produce the same findings and conclusions.

Validity

We relied on the extant literature to develop the student interview protocol to insure content validity. In an effort to decrease interviewer bias, we went through common training in delivering the student interview protocols to insure that questions were asked the same way in each interview. Finally, we divided interviews between all three team members.

Demographic Overview

Our team interviewed eight Pell-eligible students who had graduated from undergraduate programs in December 2014 or who were preparing to graduate at the end of the Spring 2015 semester. Students interviewed included two White males, one Middle Eastern male, one African-American female, and four White females. Those interviewed represented five of the eight colleges and schools at the University of Memphis. Four of the participants represented the College of Arts and Sciences with majors in History, Sociology, Biology, and English. The remaining four participants attended the University College, the College of Business and Economics, the College of Communications and Fine Arts, and the College of Education, Health, and Human Sciences.

Limitations

The project timeline limited the availability of students at the largely commuter institution to find time to complete an interview. We were limited to only those subjects who were available for interviews according to our interviewing schedule. Further, our overall sample as provided by the University of Memphis' Office of Institutional Research contained graduate students who had filed an intent to graduate form. As a result, three students were scheduled for interviews who did not fit the parameters of the study. These two factors resulted in a small sample (n=8) for the qualitative portion of our study.

Although small, the interview sample was representative of the larger population in terms of gender, with men comprising 37.5% of the interview group (compared to 35.4% of the population) and women comprising 62.5% (compared to 64.6% of the population). However, the interview sample was not representative of the larger population in terms of race, as those interview were primarily Caucasian (75%) from a population that was only 34.3% Caucasian. All other groups were underrepresented in the interview sample, with African-Americans making up 12.5% of the sample from a population that was 27.4% African-American. Further, the interview sample included no Hispanic, Asian/Pacific Islanders, or American Indian participants. The low response and participation rates are a limitation of the study. However, Patton (2002) acknowledged that due to the

more individualized attention required in a qualitative study, responses may be more limited in number of participants or cases (Patton, 2002). With this in mind, and because the team was able to clearly identify patterns among responses from those interviewed when reviewing the qualitative data, a second round of interviews was deemed unnecessary. Ultimately, the sample size was determined to be sufficient in that the interviews were used as a secondary method designed to understand the nuances of the results of our survey, which yielded a more robust response rate.

Findings for Study Question 1

What factors influence Pell-eligible students' decision to persist at the University of Memphis?

Study Questions

Q1: What factors influence Pell-eligible students' ability to persist in college?

Tinto's Core Areas

Concepts	Expectations	Support	Assessment and Feedback	Involvement
	Student expectations of themselves		Course placement	
	Institutional expectations of students	Availability and use of academic support	Predictive modeling	
	Faculty expectations	Social support	In-class assessment	Classroom involvement
	Knowledge of expectations	Financial support	Early warning systems	
	Cultural capital			Levels of contact

Figure 2

Study question one focused on the factors that influenced low-income student persistence. Survey respondents were presented with lists of twenty-eight factors and asked to indicate the extent to which each item influenced their decision to return the following academic year. The factors included:

1. Adult Services
2. Career Services
3. On-campus child care
4. Commuter Services
5. Student Success Services (TRiO programs)
6. Affordability/cost
7. Family/peer support
8. Location/convenience
9. On-campus employment
10. Received scholarships/grants
11. Disability Resources for Students
12. Fresh mentorship (through Multicultural Affairs)
13. Educational support/tutoring
14. Quality of teaching
15. ACAD 1100 course
16. Relationship with faculty mentor
17. Multicultural Affairs
18. Residence Life
19. Sororities/fraternities
20. Leadership programs
21. Student Activities Council
22. Student organizations
23. University Center
24. On-campus dining
25. Student Health Services
26. Community Service
27. FROSH Camp
28. Student Government Association

What factors influence Pell-eligible students' ability to persist in college?

Responses were given using a four point Likert scale indicating factor influences with 1= not at all, 2= a little, 3= some and 4= a lot. The twenty-eight factors were then narrowed to include only those items that represented factors as opposed to on-campus resources as we recognize University of Memphis offices and programs serve as resources to be utilized, while other items serve as influencing factors. This list then contained the following seven factors:

1. Affordability/cost
2. Family/peer support
3. Location/convenience
4. On-campus employment
5. Received scholarships/grants
6. Quality of teaching
7. Relationship with faculty mentor

While original responses were divided by what was seen as influential for three separate points in time, we then created an aggregated variable representing the mean influence for each factor. This rating served as the overall undergraduate influence each factor had on the respondent's persistence to graduation.

In order to determine the relative influence of each factor, descriptive statistics were run to perform mean analysis. As indicated in Table 5, seven factors presented mean measures near or above 2.0, which is the rating for a factor to have at least "a little" influence on a student's experience. In order of most influence to least influence, location and convenience rated the highest, followed by scholarships and grants, quality of teaching, affordability, and family/peer support, which each rated above the 2.0

threshold of having identifiable influence. Two factors that rated at or below 2.0 were determined to be important for review when considering Tinto's (2012) four areas that impact persistence. These factors were perceptions of classroom expectations, academic support, and academic engagement, all found in our conceptual framework (See Figure 2).

Table 5. Descriptive Statistics for Factors influencing Low-Income Student Persistence

	N	Minimum	Maximum	Mean	Std. Deviation
Location/ Convenience	239	1.00	4.00	2.6904	1.16462
Received Scholarships/ Grants	239	1.00	4.00	2.6206	1.20067
Quality of Teaching	239	1.00	4.00	2.4707	1.10060
Affordability/ Cost	239	1.00	4.00	2.4017	1.12250
Family/Peer support	239	1.00	4.00	2.3333	1.21075
Relationship with faculty mentor	239	1.00	4.00	2.0042	1.09130
Educational Support/ Tutoring	239	1.00	4.00	1.8117	.98512

faculty mentor relationships and educational support.

Each factor identified is appropriate to analyze one of Tinto's four areas. Faculty support, family/peer support, receipt of scholarships and grants, educational support/tutoring each speak to Tinto's ideas of academic, social, and financial support. Location/convenience and affordability/cost each allow analysis with respect to involvement and/or expectations as students have the ability to interact with others and utilize resources impacted by distance and cost. Quality of teaching reflects students'

Support

The factors having the greatest perceived influence on persistence, with the exception of location, all centered on support. Social, academic, and financial support were seen as key factors in bringing students back to the University of Memphis each year.

After identifying support as a central area of influence, we were able to delve deeper into other survey items regarding support. Mentorship relationships, in particular, gave us clear insight into the student experience. Mentorship is one areas of academic support as defined by Tinto (2012) and is represented

in our conceptual framework under Support. As seen in Table 6, nearly half of the low-income students stated there was someone at the University of Memphis they would consider to be a mentor. Upon looking further at the mentorship data, we saw that students identify faculty, other students, and staff members as their mentor on campus, with frequencies in that order. Thus, we are able to identify mentorship relationships as prominent factors in a large number of students' experiences.

Table 6. Frequencies of Low-Income Students' Identified Mentorship and by Type

Do you have someone at the University of Memphis who you would consider to be a mentor?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	120	50.2	50.4	50.4
	Yes	118	49.4	49.6	100.0
	Total	238	99.6	100.0	
Missing	System	1	.4		
Total		239	100.0		

The person or people from the University of Memphis who you consider to be a mentor is/are a faculty member at the University of Memphis					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unchecked	141	59.0	59.0	59.0
	Checked	98	41.0	41.0	100.0
	Total	239	100.0	100.0	

The person or people from the University of Memphis who you consider to be a mentor is another student at the University of Memphis)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unchecked	203	84.9	84.9	84.9
	Checked	36	15.1	15.1	100.0
	Total	239	100.0	100.0	

The person or people from the University of Memphis who you consider to be a mentor is a staff member at the University of Memphis)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unchecked	213	89.1	89.1	89.1
	Checked	26	10.9	10.9	100.0
	Total	239	100.0	100.0	

Findings Pertaining to Study Question #1 Derived from Student Interviews

Support

During student interviews, two themes emerged in the area of support, specifically academic and financial support.

Academic Support

Six of the students interviewed spoke about mentorships and reported having faculty with whom they felt close or who they knew cared about their success. Robert said, "I am very comfortable with my professors. They share their thoughts and insights on my career plans and are eager to hear about my future plans." All six students spoke of faculty that they were close to and how that impacted their persistence. Allison shared that the faculty in her major (sociology) had lots of different experiences and they related those experiences to her. "I feel extremely supported by the entire department. There is constant support in the halls ... with lots of opportunities to get advice," she related. She shared that the department held brown bag lunches, coffees, and parties during which she could talk to faculty she knew who would then introduce her to other faculty they felt she would benefit from meeting.

Darryl, who is a music major, echoed Allison's thoughts. "They [faculty] say 'Wow – that's really cool that you want to do this instead of that. You've got to make your own decisions.' That's the faculty I'm going to keep in contact with because they encouraged me." Sasha shared that she had received professional contacts from a teacher who had watched her work hard for three years and wanted to reward that hard work. "She didn't necessarily say it outright. It would just be the way she would talk. She never outright told me until this semester."

Student interviews also revealed one area in which students did not feel academically supported while at the University. Six of the eight students interviewed shared that they had struggled in at least one class during their time at the University of Memphis, but only one of those six reached out for tutoring or extra help even though it was suggested. Michael experienced difficulty in Chemistry during his first semester at the University. "I needed tutoring, but I didn't get any," he said simply. Similarly, Allison and Jennifer struggled in Biology, but neither sought out academic support in the way of tutoring. "I did not feel that in Biology they really want you to get through," Jennifer stated. English is Robert's second language and he also admitted to struggling a bit as a result. Because of what he called "a little language barrier" he did seek out help, but found the assistance offered to be inadequate. "I know of it [ESL tutoring], but I didn't use them because my language was better than the most advanced level of training the offered," he said. Darryl failed a music theory class during his first semester due to lack of

> "I feel extremely supported by the entire department. There is constant support in the halls ... with lots of opportunities to get advice."
>
> -Allison

academic support. He placed partial blame on his professor:

> I take some of the blame, but a lot of it was my teacher because she didn't have people skills. So I'm like, if you don't have people skills how can I learn this information. I needed a little more help from her and she couldn't give that help because she didn't know how to teach it.

Sasha was the only student of those interviewed who received help for a class in which she was struggling. She recalled that experience during her interview:

> It was one of my marketing classes that I just didn't care about. I thought it was stupid. It didn't help me with anything. She actually turned my name into some type of program, and they were like, oh, if you need help, da da da da. And I did everything they told me to do for the class and I ended up getting a B.

Financial Support

All eight of the students interviewed received scholarships or grants, but four reported that net cost and/or receiving financial support from the institution was ultimately the reason they chose to attend and were able to continue their studies. Andrea said quite simply, "Cost was the only reason I stayed." She became visibly upset during this portion of the interview as she explained, "Memphis was the only school I could afford that wasn't a community college. I was stuck and had no choice [to leave]." Michael, a young man from a small town in East Tennessee who was educated in a school that housed grades K-12, shared that his sister graduated from Tennessee Tech and lived at home. He explained that he wanted to get out of East Tennessee, but his family could not afford to send him anywhere else. He did not

want to stay in his small town, so he began to look for scholarships that would enable him to leave. He discovered that University of Memphis had a ROTC scholarship and applied. "If I hadn't gotten the scholarship I would have had to go [to Tennessee Tech] and I'd still be stuck in East Tennessee. Now I'm going to see the world when I go into either the Navy or the Marine Corps," he said. He further noted that protecting his scholarship, and by extension his future, had been his primary concern. For example, he changed majors when he struggled during his first year so as not to jeopardize his financial assistance. Michael said that going back to East Tennessee would equal failure and that the financial support provided by University of Memphis had enabled him to follow his dreams. Darryl also chose University of Memphis because of the financial aid it offered by way of a full music scholarship. With his tuition covered by that scholarship, he reported that he is able to use his supplemental grants for living expenses. He revealed that the scholarship was the entire reason he attended University of Memphis instead of a technical school. Allison reported that her although her stepfather would have helped pay for college, it would have been more difficult as she would have had to work and go to school at the same time because it would have interfered with studying. According to Allison, the additional funds she received from the HOPE scholarship and Dean's List scholarships were extremely important to her ability to continue in school.

Expectations

Like support, expectations were identified as playing an important role in low-income student persistence and represent the area of expectations as illustrated in our conceptual

framework. Table 7 presents a review of descriptive statistics for expectation variables, including the expectations scale developed for this study, respondents rate expectations from family, friends, faculty and staff as well as themselves at nearly highest value. With mean values ranging from 3.66 to 3.79, the expectation to graduate is a relevant factor. Taking those four variables and adding knowledge of academic success expectations, such as major and classroom requirements, the expectations scale was developed. Appendix E includes statistics for items included in the computation of the expectations scale along with the Cronbach's alpha indicating scale reliability. The scale resulted in a 3.57 mean value, indicating a high level of influence stemming from expectations.

Table 7. Expectations Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Expectation Scale	239	1	4	3.57	.457
When I began college, I expected to graduate from college	239	1	4	3.77	.551
My family expects me to graduate from college	238	1	4	3.79	.520
My friends from the University of Memphis expect me to graduate from college	237	1	4	3.74	.544
The faculty and staff at the University of Memphis expect me to graduate from college	239	1	4	3.66	.585
Valid N (list-wise)	236				
* 4 point Likert scale					

During student interviews, several sub-themes emerged within the overriding theme of expectations when considering the factors that included these Pell-eligible students' decision to persist at the University of Memphis. These expectation sub-themes includes high levels of cultural capital as demonstrated by the existence of family members who had attended college and who had high expectations that the students would earn a degree, high student expectations of themselves, and a strong awareness of faculty expectations for each to graduate.

Cultural Capital – Family Expectations

All eight of the students interviewed had close family members (parents, siblings, and/or children) who had not only attended college, but had earned a college degree. These relationships resulted in a strong degree of cultural capital in the form of family expectations of degree attainment. As a result, those family members expected these students to graduate as well and shared those expectations in both explicit and implicit ways. Sasha shared that her mother earned both an undergraduate and graduate degree as a single mother raising four children and working full-time demonstrating through actions that circumstances need not interfere with educational pursuits. Sasha explained "Me seeing my momma, I wouldn't say she

struggled, I would say she did what she had to do to raise us and to also show us that it's possible." She elaborated further,

She [Mom] went to college while raising us. She went to grad school while raising us. Nothing, I never go to my mom with any excuses, because it's like she did it with four kids, no help. She went to college. She went to grad school. She worked two jobs, sometimes three jobs to give us what we needed. So it's like, when you have examples like that, it's like why choose failure when you can be as successful as you want to be? The world is so open.

Although Allison's parents did not go to college, both of her stepparents with whom she spent time from a young age did. She reported that the assumption in both homes growing up was that she would also earn a college degree. "They [parents and stepparents] were adamant that I get a degree. I always assumed I would go to college and get a degree," Allison explained. She further intimated that "they would be very disappointed if I didn't graduate." Allison shared that her parents and stepparents guided her towards AP classes in high school in order to prepare her for college.

Andrea, Darryl, and Lisa all had parents and

> "I never go to my mom with any excuses, because it's like she did it with four kids, no help. She went to college. She went to grad school. She worked two jobs, sometimes three jobs to give us what we needed. So it's like, when you have examples like that, it's like why choose failure when you can be as successful as you want to be? The world is so open."
>
> -Sasha

siblings who earned a college degree.

Although their parents did not attend college, Robert's brother earned his Master's and Ph.D. from the University of Memphis and Michael's sister was also the first in his family to earn a degree from a university closer to his home in East Tennessee. Jennifer told a slightly different story. "When I graduated from high school the expectation was that you would go, but not necessarily finish," said the mother of three. Jennifer fulfilled her legacy the first time around, dropping out of college to raise three children. After she got all of her children through college and one of them had gone on to complete a doctorate, she decided to finish what she started and re-enroll at the University of Memphis. "After returning, my husband and children would have been very disappointed" if she had failed to graduate, Jennifer explained.

> "I have to do it. There is no other way."
> -Michael

Although the research shows that students from low-income backgrounds tend to have less access to information about how to enroll in, pay for, and be successful in higher education (Ellwood & Kane, 2000), our sample consisted of students who were not among the first in their families to attend college. In these instances, the information passed from parent to child, sibling to sibling, and even child to parent no doubt helped these students access the information necessary to persist through to graduation.

Student's Expectations of Themselves

Perhaps due to the high degree of social and cultural capital that gave the students interviewed the college knowledge necessary to persist, all of them also exhibited a high level of self-expectation that they would earn a degree from the University of Memphis. According to Tinto (2012), students' expectations of themselves and what they need to do in order to be successful in college partially determines what they will actually achieve. Michael, who attends the University on an ROTC scholarship, said several times during the interview that he was "obligated by payment or service." It is his strong ROTC obligation that he credited with keeping him on track. "I have to do it," he said. "There is no other way." Allison's goal of getting a Master's degree and eventually a Ph.D. has kept her on track towards earning a bachelor's degree. "I always assumed I would go to college and get a degree," she said matter-of-factly. Darryl also attributed his success to his expectations for himself. "I'm not the sort of person who just goes 'oh well – forget this – bye'". However, Sasha had perhaps the greatest vision of what she wants to do with her degree and shared that it was that vision that kept her moving forward when she said:

> I just feel like the opportunity is there to be great in fashion, I could be one of those women. I don't know what it is, but I could be one of those women in the fashion industry who really just makes a huge impact, and I just work harder and harder to get to that space. I just feel like it's there, and I feel like it's going to happen, if I keep working hard, then the universe is just going to make a way for me to be in that space.

Faculty Expectations

Four of the students interviewed shared their insights regarding faculty expectations. Allison and Lisa identified syllabi as the major way faculty outline what their expectations are for courses. Michael shared that ROTC faculty's expectations of their students are very clear. "We are held accountable. We are obligated to pay the scholarship back if we don't graduate," he explained. Sasha revealed that faculty with whom she has worked closely were more direct and personal with their expectations. "They were like, I expect you to graduate college, and I expect you to go to grad school, and I expect you to … so it's just a whole bunch of stuff," she said.

Allison also shared a story about the best class she had taken at the University, labeled such because the professor's expectations were very high:

> The professor's personality was so different. We had to read five books, so it was pretty heady. There were twenty-five students in the class and everybody was reading. It was the only undergrad experience I had where everybody was prepared. She was fun and fiery and semi-unprofessional, but we were prepared out of love for her.

Like Allison, Robert's most memorable professor was also the one with the highest expectations. He recalled:

> The way the professor managed the class was very interesting and useful. He assigned case studies and we discussed them. We also had group projects. It was a competitive environment and very enjoyable. He made the smartest decisions a professor can make.

Allison and Robert's experiences reinforced Tinto's assertion that,

> Teachers must not only set high expectations but must constantly reinforce them. Therefore, while expressing high expectations both in their written course syllabi and by oral communication with students in class, teachers must reinforce those expectations by their own behaviors. (Tinto, 2012, p. 23)

Involvement

As shown in Figure 2, involvement is one of the four areas Tinto (2012) identifies as important to student persistence. An analysis of involvement, as measured by participation in one of six academic, service or social programs, did not spring forth as a prominent factor influencing student persistence. After measuring participation frequencies in six programs (Frosh Camp, new student orientation, Emerging Leaders, Tiger Leadership Institute, community service activities and ACAD 1100) there is only one program, orientation, which has participation by more than half of respondents as shown in Tables 8A to 8F. The program with the second highest participation rate was ACAD 1100, an academic course that has required enrollment for students exhibiting potential for academic difficulty, thus students did

> "The professor's personality was so different…She was fun and fiery and semi-unprofessional, but we were prepared out of love for her."
> -Allison

not elect to participate in this on their own. From this data alone, it is not clear that involvement significantly impacted low-income student persistence and completion.

Table 8A. Low-Income Graduates' Participation in Frosh Camp

		Frequency	Percent	Valid Percent	Cumulative Percent
	No	200	83.7	83.7	83.7
	Yes	39	16.3	16.3	100.0
	Total	239	100.0	100.0	

Table 8B. Low-Income Graduates' Participation in Orientation

		Frequency	Percent	Valid Percent	Cumulative Percent
	No	111	46.4	46.6	46.6
	Yes	127	53.1	53.4	100.0
	Missing	1	.4		
Total		239	100.0		

Table 8C. Low-Income Graduates' Participation in Emerging Leaders

		Frequency	Percent	Valid Percent	Cumulative Percent
	No	228	95.4	96.6	96.6
	Yes	8	3.3	3.4	100.0
	Missing	3	1.3		
Total		239	100.0		

Table 8D. Low-Income Graduates' Participation in Tiger Leadership Institute

		Frequency	Percent	Valid Percent	Cumulative Percent
	No	216	90.4	91.1	91.1
	Yes	21	8.8	8.9	100.0
	Missing	2	.8		
Total		239	100.0		

Table 8E. Low-Income Graduates' Participation in Community Service Activities

		Frequency	Percent	Valid Percent	Cumulative Percent
	No	183	76.6	77.5	77.5
	Yes	53	22.2	22.5	100.0
	Missing	3	1.3		
Total		239	100.0		

Table 8F. Low-Income Graduates' Participation in ACAD 1100		Frequency	Percent	Valid Percent	Cumulative Percent
	No	148	61.9	63.5	63.5
	Yes	85	35.6	36.5	100.0
	Missing	6	2.5		
Total		239	100.0		

In contrast to our findings, Tinto (2012) asserted that the most important contributor to student retention is student involvement. He wrote "the more students are academically and socially engaged with other people on campus, especially faculty and student peers, the more likely (other things being equal) they will stay and graduate from college," (Tinto, 2012, p. 64). With this in mind, we delved more deeply into areas that students might be involved during individual interviews.

All students interviewed reported some level of involvement with faculty, staff, or other students that they viewed as important to their success. Although Allison stated that she was too busy studying for social activities, she was heavily involved in the activities sponsored by the sociology department. "The whole department is very involved – coffee hours, holiday parties, brown bag lunches," she explained. Likewise, Robert chose to be involved in the Persian Student Association because he said "that is where I can go to be with people who understand my culture." Michael has also stayed close to those who understand his student experience as part of the ROTC. "I hang out with other ROTC guys mostly," he explained. Andrea shared that she made a couple of friends during her time at the University, but was really only involved with the honors department.

While Allison, Robert, Michael, and Andrea found friendships within their peer groups, the remaining students engaged with their professors. "School trips, academic trips are how the strongest relationships were built," Lisa recalled. "It was not uncommon for me to stop in to say 'hey' to professors." Jennifer intimated that although she was not "too social" she, too, made "a real effort to meet faculty after class to build relationships." When Darryl was asked about friends, he referenced professors being those friends he is most likely to keep in contact with after graduation.

> A lot of them [faculty] had the same opinions as me and so if I was venting about something, they'd agree and then we'd have a full on conversation about, you know, how this and that played out. And they were very encouraging.

Sasha explained that as part of the University College, she sees her professors daily and they know her very well. It is her relationship with her professors that has connected her most to the University of Memphis. "I love this school so, so much. It's not necessarily what they have available, because that's just, I like what they have available, but I love my professors," she effused.

Additional Influencing Factors

In addition to the questions explicitly asking respondents about influential factors, we collected data around the expectations students had upon entering the institution. Expectations, as indicated by the conceptual framework for study question one (see Figure 2), is one of four areas identified by Tinto (2012) as impacting student persistence. We asked how confident each student was that they would graduate from the University of Memphis. This question was included to measure student

Assessment and Feedback

Finally, the team was able to delve into the importance of assessment and feedback as factors that contributed to their persistence and graduation during in-person individual interviews. All of the students interviewed reported that they relied primarily on grades received throughout the semester to determine how they were doing in each class and, ultimately, what grade they could expect to receive at the end of the course. However, five of the students recalled specific instances in which they received

Table 9. Frequency Table for Low-Income Student Confidence to Graduate from U-M				
When you enrolled at the University of Memphis, how confident were you that you would graduate from the University of Memphis?				
	Frequency	Percent	Valid Percent	Cumulative Percent
Not at all confident	4	1.7	1.7	1.7
Somewhat confident	20	8.4	8.4	10.0
Confident	59	24.7	24.7	34.7
Very Confident	156	65.3	65.3	100.0
Total	239	100.0	100.0	

expectations of themselves, as indicated as a concept falling beneath expectations in the conceptual framework presented in Figure 2. Frequency distributions are reported in Table 9. Only four respondents reported not at all being confident they would graduate. Conversely, two hundred thirty-five students had some measure of confidence they would graduate and one hundred fifty-six were very confident. Thus, a student's level of confidence in his ability to graduate from a collegiate program may have an influence on his eventual completion.

different kinds of assessment and feedback from which they had benefited. Michael shared that while most of his professors used midterms, papers, and finals to assess his progress, he had one professor that gave "heads up pop quizzes" at the beginning of each class. "It's 10 – 15 minutes at the beginning of each class to make sure you read. They really helped me learn better," he explained.

Allison shared a similar experience with a professor who took attendance at the

beginning of each class by having students write three or four sentences about what they'd learned in the last class and turn that in as proof of attendance. "I made sure I never missed that class," she said. Jennifer shared that she had taken courses in which the professors used clickers to assess student understanding of the subject matter. "This was new technology and that is better for students today," she explained. Sasha credited early assessment and feedback with helping her pass a class in which she was struggling. "They don't wait until you get to the midterm," she recalled. "It's like, probably after the first three weeks, they're like OK, something, you know, let's just try to figure out what's going on with you and it helped a lot." All of these students' stories of methods that they felt contributed to their mastery of the course material and ultimate success in the class support Tinto's assertion that "the most effective form of assessment is that which monitors student performance in the classroom" (Tinto, 2012, p. 63). It is this real time assessment and feedback that he maintained contributes greatly to student retention.

Summary of Findings - Study Question #1:

What factors influence Pell-eligible students' decision to persist at the University of Memphis?

- Support is a key factor in enabling a low-income student to persist. Financial support in the form of grants and scholarships and academic support from faculty and staff were both common elements influencing student persistence.
- Similarly, low-income students who were about to graduate also were quite likely to have identified a mentor at the University of Memphis, with faculty, other students, and staff members all identified as important mentors.
- Students from low-income backgrounds who were about to graduate also rated high on expectations: they knew that someone in their lives expected them to graduate from college, whether that was a family member, friend, University of Memphis faculty or staff member, or themselves.
- Finally, these students tended to find involvement with peer groups comprised of others like themselves in some way, whether that was through an academic or major-focused organization, involvement in the classroom, or with students from a similar cultural or ethnic background.

Findings for Study Question 2

What factors did Pell-eligible students who are in line to graduate use to persist at the University of Memphis? Did these factors differ over the course of their four to six years to graduation?

Study Questions

Q2: What factors did Pell-eligible students who are in line to graduate use to persist to graduation? Did these factors change from year to year?

Tinto's Core Areas

Expectations	Support	Assessment and Feedback	Involvement

Concepts

- Developmental education
- Availability and use of academic support
- Social support
- In-class assessment
- Academic engagement
- Social engagement
- Extracurricular participation
- Other interactions
- Advising

Figure 4

34

2
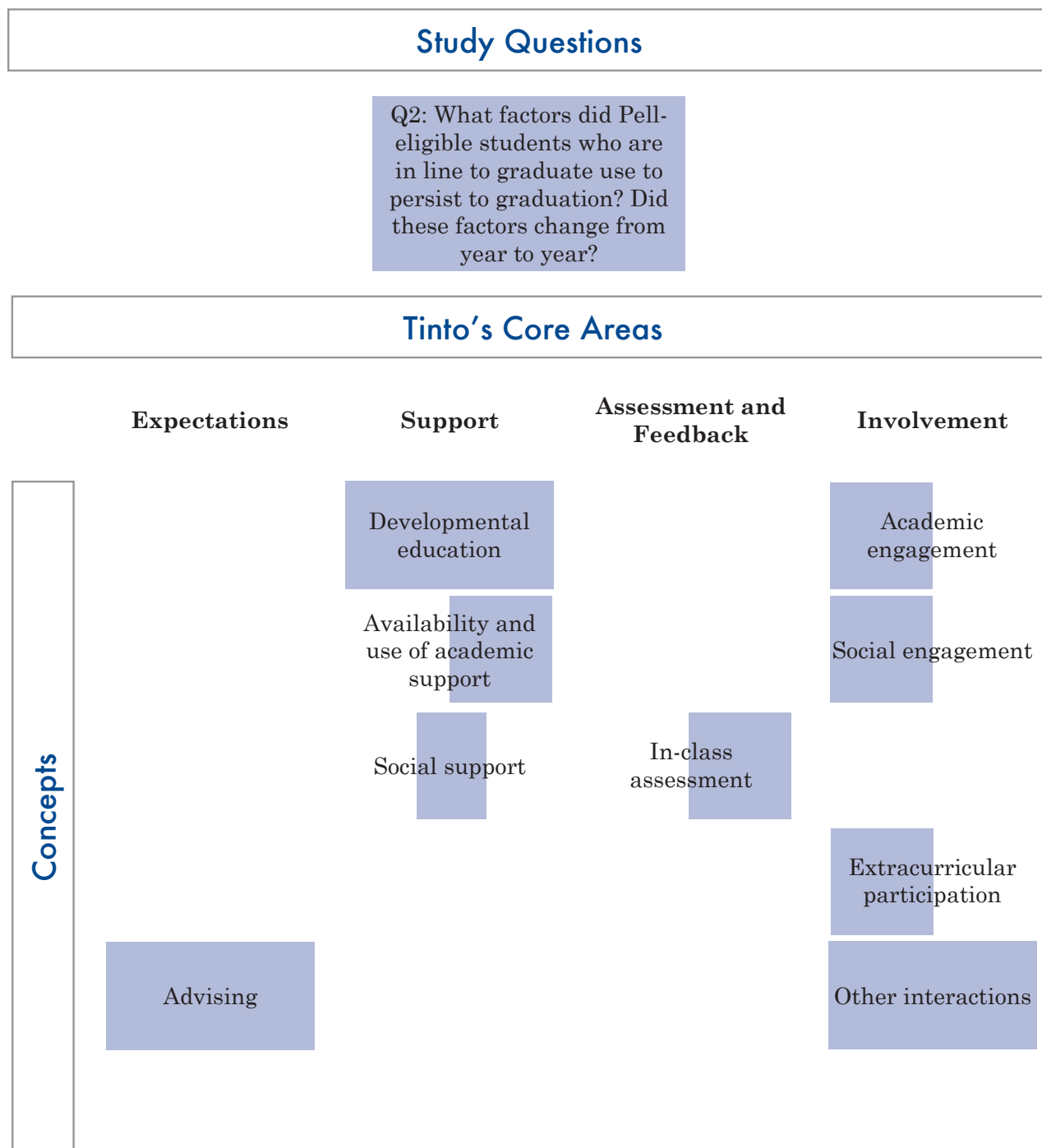
In order to identify the factors students used to persist, we focused on those items identified by students as the most important in helping them return for their sophomore, junior and senior years. While students chose between twenty-eight total resources and programs, we performed additional analysis to determine those factors influential to low-income student persistence. We also performed frequency analysis to identify those factors identified as most important in students' decision to return each year. As the first question included in study question two seeks to identify those factors students used rather than their perceived importance, frequency data provides the requisite information.

When looking for overall trends in factors students used, results from each survey item presented similar output. Twenty-three of the twenty-eight factors were chosen by at least one respondent as being most important in their return for sophomore year. Survey participants were asked to identify the one factor, from the list of twenty-eight, that was most influential in their ability to return for subsequent years.

What factors did Pell-eligible students who are in line to graduate use to persist at the University of Memphis? Did these factors differ over the course of their four to six years to graduation?

Staying connected with family or peers and accepting their support, visiting and/or utilizing career services, and cultivating and/or utilizing faculty mentorship were identified across all three years as being most important to helping the respondents' persist. Tables 10, 11, and 12 and Figures 5, 6, and 7 also include additional factors that were helpful, although not for the entire time period covered. In persisting to sophomore year, sororities and fraternities were identified by seven respondents as being most important. This could either be aspiration to gain membership in one of the organizations or active participation. Both for return sophomore and junior years, student organizations and the recently constructed University Center were identified by multiple students as being most important. Again, this could be awareness of or participation/use in each of these areas. Persistence to senior year added availability or use of educational support and tutoring, a clear tactic being utilizing this resource or knowing its availability if needed. What this data does illustrate is the consistent theme that support, including financial, social, and academic, continue to play a large role in low-income student persistence.
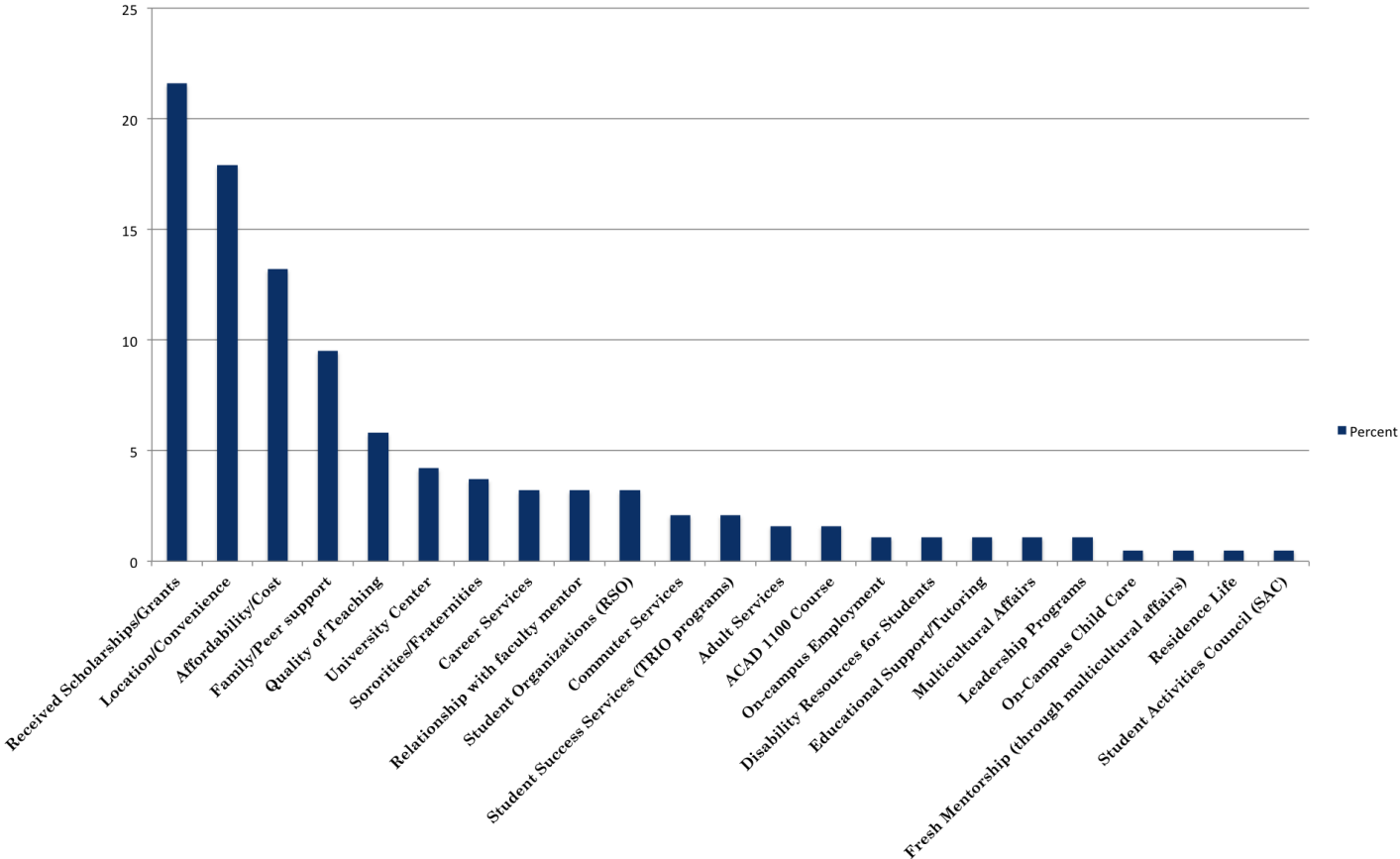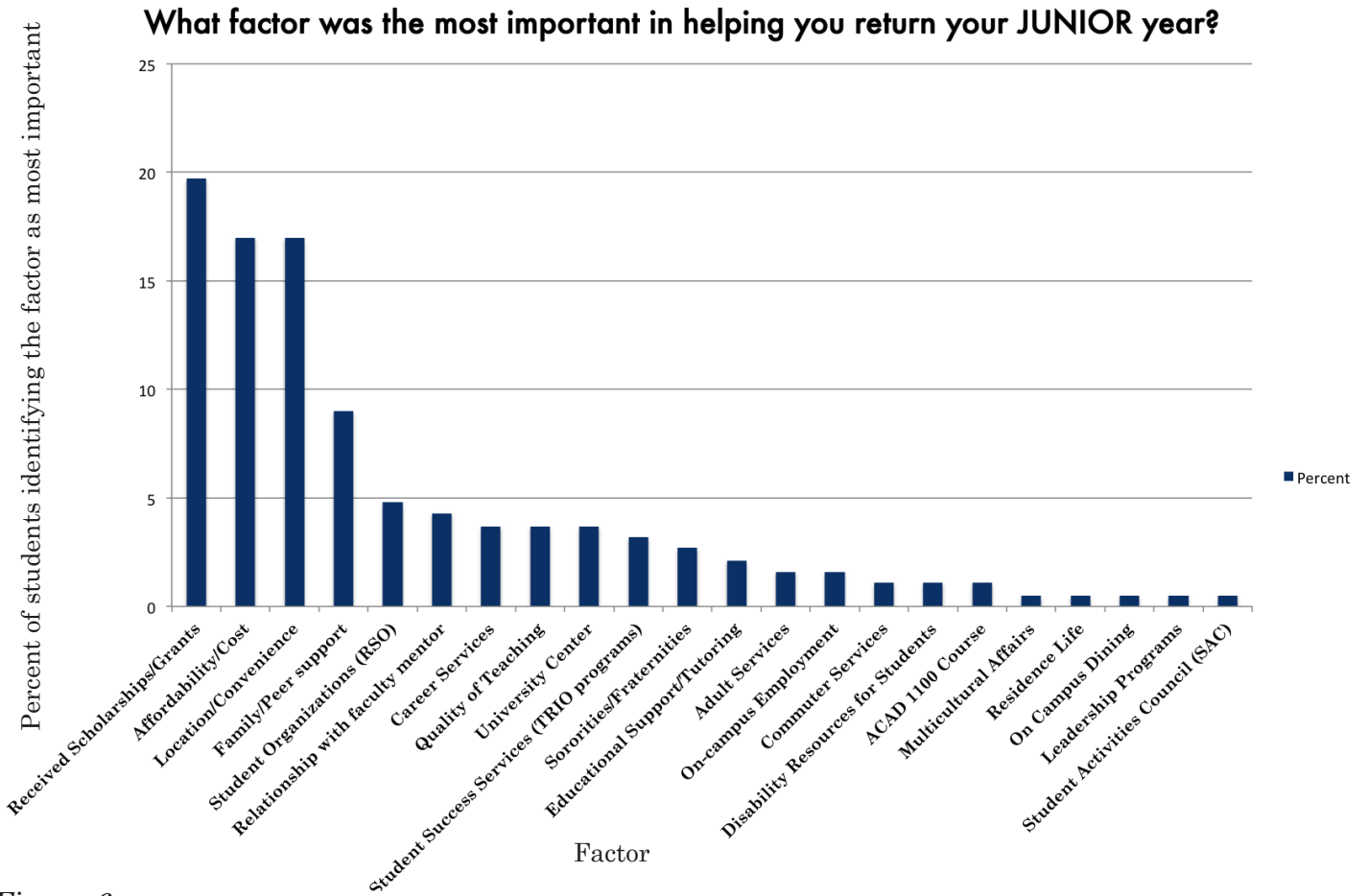
Table 10. Frequencies of Factors Influencing Low-Income Student Return the Sophomore Year

Which factor was the most important in helping you return your SOPHOMORE year?			
	Frequency	Percent	Valid Percent
Received Scholarships/Grants	41	17.2	21.6
Location/Convenience	34	14.2	17.9
Affordability/Cost	25	10.5	13.2
Family/Peer support	18	7.5	9.5
Quality of Teaching	11	4.6	5.8
University Center	8	3.3	4.2
Sororities/Fraternities	7	2.9	3.7
Career Services	6	2.5	3.2
Relationship with faculty mentor	6	2.5	3.2
Student Organizations (RSO)	6	2.5	3.2
Commuter Services	4	1.7	2.1
Student Success Services (TRIO programs)	4	1.7	2.1
Adult Services	3	1.3	1.6
ACAD 1100 Course	3	1.3	1.6
On-campus Employment	2	.8	1.1
Disability Resources for Students	2	.8	1.1
Educational Support/Tutoring	2	.8	1.1
Multicultural Affairs	2	.8	1.1
Leadership Programs	2	.8	1.1
On-Campus Child Care	1	.4	.5
Fresh Mentorship (through multicultural affairs)	1	.4	.5
Residence Life	1	.4	.5
Student Activities Council (SAC)	1	.4	.5
Valid	Total	190	79.5	100.0
Missing	System	49	20.5	
Total	239	100.0		

What factor was most important in helping you return your SOPHOMORE year?

Figure 5

Table 11. Frequencies of Factors Influencing Low-Income Student Return the Junior Year

Which factor was the most important in helping you return your JUNIOR year?		Frequency	Percent	Valid Percent
Received Scholarships/Grants		37	15.5	19.7
Affordability/Cost		32	13.4	17.0
Location/Convenience		32	13.4	17.0
Family/Peer support		17	7.1	9.0
Student Organizations (RSO)		9	3.8	4.8
Relationship with faculty mentor		8	3.3	4.3
Career Services		7	2.9	3.7
Quality of Teaching		7	2.9	3.7
University Center		7	2.9	3.7
Student Success Services (TRIO programs)		6	2.5	3.2
Sororities/Fraternities		5	2.1	2.7
Educational Support/Tutoring		4	1.7	2.1
Adult Services		3	1.3	1.6
On-campus Employment		3	1.3	1.6
Commuter Services		2	.8	1.1
Disability Resources for Students		2	.8	1.1
ACAD 1100 Course		2	.8	1.1
Multicultural Affairs		1	.4	.5
Residence Life		1	.4	.5
On Campus Dining		1	.4	.5
Leadership Programs		1	.4	.5
Student Activities Council (SAC)		1	.4	.5
Valid	Total	188	78.7	100.0
Missing	System	51	21.3	
Total	239	100.0		

What factor was the most important in helping you return your JUNIOR year?

Figure 6

Table 12. Frequencies of Factors Influencing Low-Income Student Return the Senior Year

Which factor was the most important in helping you return your SENIOR year?				
		Frequency	Percent	Valid Percent
Received Scholarships/Grants		41	17.2	21.2
Location/Convenience		35	14.6	18.1
Affordability/Cost		28	11.7	14.5
Family/Peer support		22	9.2	11.4
Quality of Teaching		13	5.4	6.7
Relationship with faculty mentor		12	5.0	6.2
Career Services		11	4.6	5.7
Educational Support/Tutoring		6	2.5	3.1
Student Organizations (RSO)		4	1.7	2.1
University Center		4	1.7	2.1
Adult Services		3	1.3	1.6
Student Success Services (TRIO programs)		3	1.3	1.6
On-campus Employment		3	1.3	1.6
Leadership Programs		3	1.3	1.6
Commuter Services		2	.8	1.0
Sororities/Fraternities		2	.8	1.0
On-Campus Child Care		1	.4	.5
Valid	Total	193	80.8	100.0
Missing	System	46	19.2	
Total	239	100.0		

What factor was the most important in helping you return your SENIOR year?

Y-axis: Percent of students identifying the factor as most important

X-axis: Factor

Legend: ■ Percent
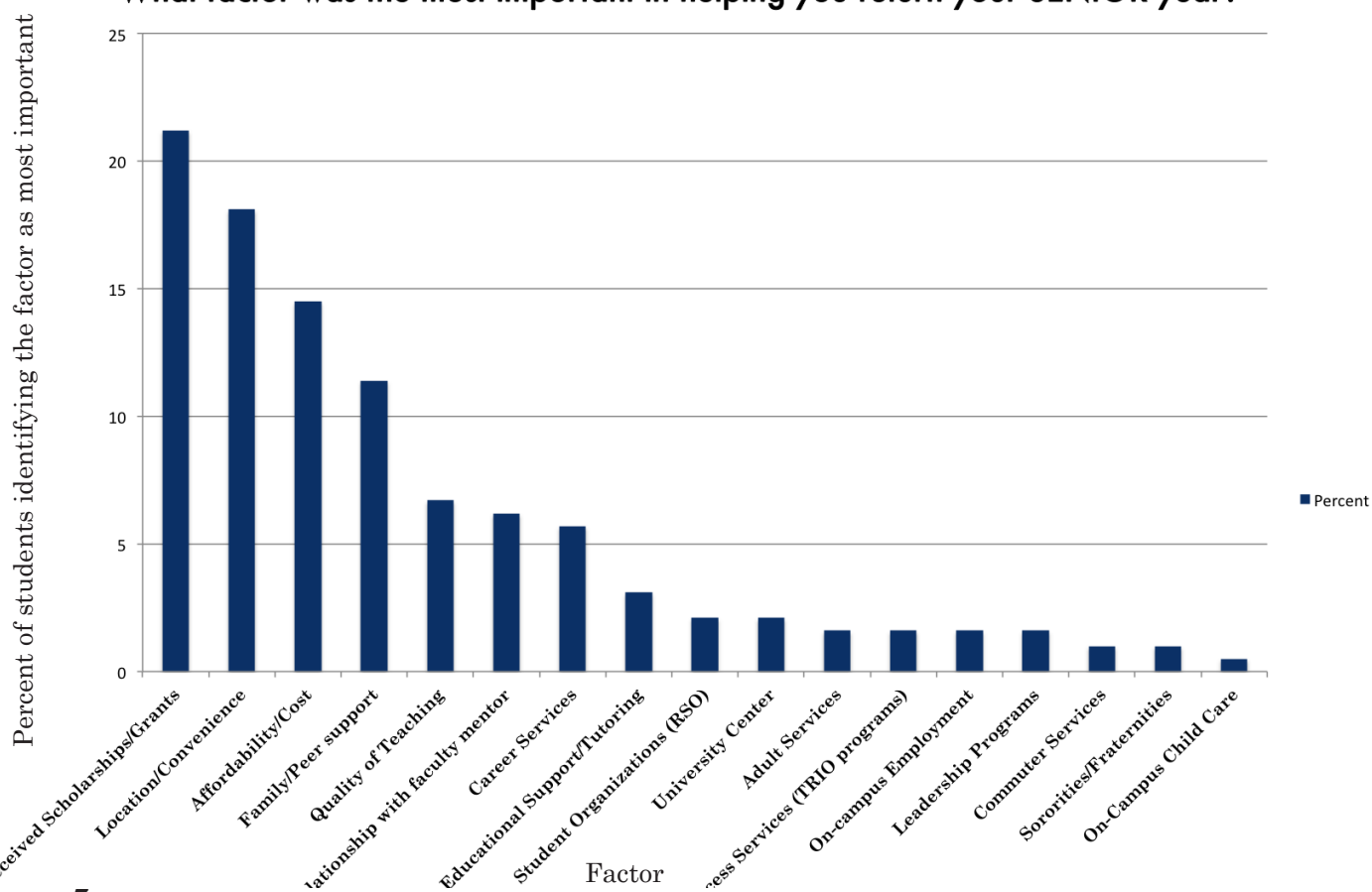
Figure 7

Factors That Contributed to Persistence from First Year to Sophomore Year

Study question two also asks whether the factors that contributed to student persistence differed over the course of four to six years to graduation. This is identified under study question two in the conceptual framework as shown in Figure 4. In addition to focusing on those factors identified as being most helpful in returning each year, we reviewed each of the twenty-eight factors for significant changes in helpfulness for respondents and how those factors differed for specific time periods during students' undergraduate careers. Our survey instrument asked students to rate the level of influence each factor had on their decision to return each year. We ran paired samples T-tests to identify those factors that impacted students at specific times in their academic career. Significant T-test results can be found in Table 13. For a complete list of T-test results for each of the twenty-eight factors, see Appendix I.

We sought to isolate those factors that had statistically significant differences ($p < .05$) in means between sophomore, junior, and senior years. After performing these t-tests, we found that as students moved into their sophomore year, there were five campus resources identified as helpful and had mean differences indicating higher importance at that time period than others that were statistically significant at the .005 level (see Table 13). Enrollment in Participation in Frosh Camp, enrollment in ACAD 1100, involvement in or residing in on-campus housing, presence of campus dining, and the University Center each rated as most important for students as they returned for sophomore year. While results show the students' return to sophomore year was highly influenced by these factors, data also indicates we are not able to discern any difference between factors affecting students' return for junior and senior years, so the only conclusion we can make is that for the time period returning for sophomore year, these five factors have high influence.

Table 13. Factors Most Influential For Low-Income Students Persisting to Sophomore Year

Paired Samples Test								
	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Soph Frosh Camp - Ju Frosh Camp	.119	.464	.030	.059	.178	3.925	235	.000
Soph Frosh Camp - Sr Frosh Camp	.120	.575	.038	.046	.194	3.192	232	.002
Ju Frosh Camp - Sr Frosh Camp	.000	.358	.023	-.046	.046	.000	234	1.000

Soph ACAD 1100 Course - Ju ACAD 1100 Course	.198	.682	.044	.111	.286	4.478	236	.000
Soph ACAD 1100 Course - Sr ACAD 1100 Course	.237	.768	.050	.139	.336	4.745	235	.000
Ju ACAD 1100 Course - Sr ACAD 1100 Course	.034	.422	.028	-.020	.088	1.236	234	.218
Soph Residence Life - Ju Residence Life	.174	.591	.039	.098	.250	4.522	234	.000
Soph Residence Life - Sr Residence Life	.174	.720	.047	.081	.266	3.706	235	.000
Ju Residence Life - Sr Residence Life	.004	.502	.033	-.060	.069	.130	234	.897
Soph On Campus Dining - Ju On Campus Dining	.135	.796	.052	.033	.237	2.610	236	.010
Soph On Campus Dining - Sr On Campus Dining	.143	.914	.059	.027	.260	2.417	236	.016
Ju On Campus Dining - Sr On Campus Dining	.008	.700	.045	-.081	.098	.185	237	.853
Soph University Center - Ju University Center	.175	.838	.055	.067	.283	3.197	233	.002
Soph University Center - Sr University Center	.148	.940	.061	.028	.269	2.423	235	.016
Ju University Center - Sr University Center	-.013	.696	.046	-.102	.077	-.282	233	.778

While we know that these factors played a larger role with students moving into their sophomore year, we also wanted to determine the substantive impact for that time period. We subsequently ran descriptive statistics to determine the means of each factor for the sophomore year only (see Table 14). Of the five factors, all

eight factors impacting students' persistence toward graduation and compared by year, there was not one factor identified by students as being more important for their return to junior year than the other two time periods. We are not able to make any conclusions or definitive statements about factors or resources used as students moved

Table 14. Factors Most Influential During the First Year to Sophomore Transition

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Frosh Camp	237	1	4	1.22	.674
ACAD 1100 Course	239	1	4	1.43	.866
Residence Life	237	1	4	1.39	.835
On Campus Dining	237	1	4	1.88	1.096
University Center	237	1	4	1.91	1.073
Valid N (listwise)	233				

five rated between "not at all helpful" and "a little helpful." Thus, although these factors measured statistically significant for helpfulness in returning sophomore year as opposed to subsequent years, none of the five rated as substantively significant in determining factors that were somewhat or very influential on students' persistence.

Factors That Contributed to Persistence from Sophomore to Junior year

The next time period of interest in addressing study question two, whether factors differ at different times, is the sophomore to junior year transition period. This sub-question is indicated in the conceptual framework shown in Figure 4. After running paired T-tests for the twenty-

into their junior year.

Factors That Contributed to Persistence from Junior to Senior Year

The final time period of interest in addressing the sub question to study question two, as indicated in the conceptual framework (see Figure 4), is the junior to senior year transition. As students moved into their senior year, the focus of influential factors used shifted in focus and rating level to academic engagement and support. Faculty/peer support, quality of teaching and relationships with faculty mentors each resulted in statistically significant ($p < .05$) differences in means after performing the paired sample T-Tests. Table 15 presents paired samples T-test results. In addition,

each factor exhibited noticeably higher ratings from previous years (see Table 16). After running descriptive statistics for factor usefulness in returning for senior year, Family/Peer support had a mean value of 2.45, quality of teaching had a mean value of 2.60 and faculty mentor relationships had a mean value of 2.15. Each of these values rated at least as a little influence and quality of teaching rates closer to having some influence. Students appeared to take more notice of support and relationship building as they drew closer to graduation.

Table 15. Factors Most Influential For Low-Income Students Persisting to Senior Year

Paired Samples Test								
	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Soph Family/Peer support - Ju Family/Peer support	-.071	.859	.056	-.181	.038	-1.280	238	.202
Soph Family/Peer support - Sr Family/Peer support	-.202	.928	.060	-.320	-.083	-3.351	237	.001
Ju Family/Peer support - Sr Family/Peer support	-.130	.864	.056	-.241	-.020	-2.325	237	.021
Soph Quality of Teaching - Ju Quality of Teaching	-.136	.903	.059	-.251	-.020	-2.307	235	.022
Soph Quality of Teaching - Sr Quality of Teaching	-.262	1.100	.071	-.402	-.121	-3.660	236	.000
Ju Quality of Teaching - Sr Quality of Teaching	-.123	.839	.055	-.230	-.015	-2.250	235	.025
Soph Relationship with faculty mentor - Ju Relationship with faculty mentor	-.135	.812	.053	-.239	-.031	-2.559	236	.011
Soph Relationship with faculty mentor - Sr Relationship with faculty mentor	-.282	1.007	.065	-.410	-.153	-4.314	237	.000
Ju Relationship with faculty mentor - Sr Relationship with faculty mentor	-.155	.830	.054	-.261	-.049	-2.890	237	.004

Table 16. Factors Most Influential During the Junior to Senior Transition

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Family/Peer support	238	1	4	2.45	1.336
Quality of Teaching	238	1	4	2.60	1.278
Relationship with faculty mentor	239	1	4	2.15	1.281
Valid N (listwise)	237				

During follow up interviews, three students mentioned advising as a tactic that they employed to stay on the graduation track. Michael's experience with advisors was positive throughout his matriculation due to the structure required by the ROTC program. According to Michael, "ROTC requires that you have a four year degree plan and that is very helpful. My advisors for engineering and history made sure I had everything I needed to stay on track to graduate." Michael further elaborated that he met with his advisor two or three times each term to make sure he was on track. "It can be for 2 minutes or 15 minutes, but his door is always open," he explained. Lisa and Allison had similar experiences with initial advisors. "My first advisor was as useful as rocks," Lisa said. When she changed to another advisor, she found her to be very helpful. Lisa also learned to use UMDegree, the University's online advising program which she found to be very helpful for keeping herself on track. Allison also got off to a rocky start with the general advisor to which she was originally assigned during her first year at the University. At the beginning of her third semester, she was assigned an advisor in her major her was much more helpful. "My experience with my major advisor has been very different. We schedule formal thirty minute sessions each semester, but her door is always open." It would appear from these students' comments that the advising process aside from that required by the ROTC program is one that is stronger as the student settles into his major course of study and as he learns to navigate additional institutional resources.

> "It can be for 2 minutes or 15 minutes, but his door is always open."
>
> -Michael

Summary of Findings - Study Question #2:

What factors did Pell-eligible students who are in line to graduate use to persist at the University of Memphis? Did these factors differ over the course of their four to six years to graduation?

- Enrollment in ACAD 1100, living in on-campus housing, campus dining, the University Center, and Frosh Camp were the top five factors that encouraged a student to persist from the first year to the second year.
- From the sophomore to the junior year, no one program stood out as being the most important in helping students to persist.
- Moving from the junior to senior year, academic engagement and support played a stronger role in student persistence, with family/peer support, quality of teaching, and relationships with faculty mentors significantly increasing in importance for students at this stage.

Findings for Study Question 3

How do Student Affairs departments contribute to Pell-eligible students' persistence?

Study Questions

Q3: How do Student Affairs departments contribute to Pell-eligible students' persistence?

Tinto's Core Areas

Expectations	Support	Assessment and Feedback	Involvement
			Academic engagement
Institutional expectations of students		Predictive modeling	Social engagement
	Social support		
			Extracurricular participation

Concepts
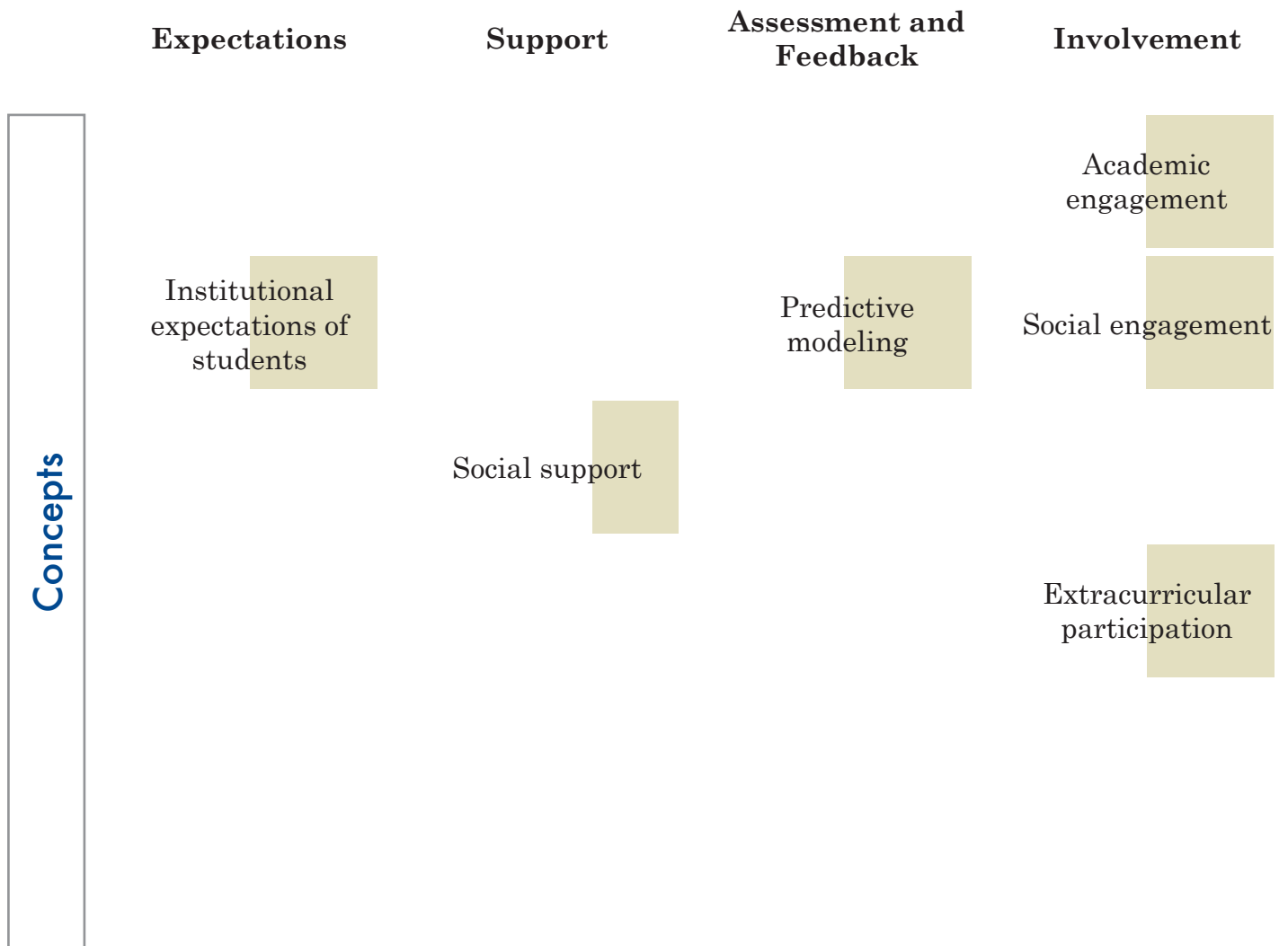
Figure 8

We took a number of approaches to understanding the ways in which Student Affairs Departments contributed to Pell-eligible students' persistence: awareness of programs, involvement in programs, how important the programs were to students, and how participation in these programs correlated with other factors known to promote student success.

Involvement

The first questions on the survey asked students to rate their level of involvement in and awareness of some key student affairs programs and services and student organizations, identified through consultation with the client and previous research at the institution (see Appendix A for the survey and list of Student Affairs programs). Two hundred forty-six students responded to this element of the survey. We then ran frequency statistics to understand how aware students were of these programs. As Table 17 shows, students overall are aware of the key programs and services offered by Student Affairs. Only one student surveyed reported being unaware of the most visible program (Sports and Recreation Clubs) and a high of thirty-four students, or 14.2% of respondents, reported being unaware of Fresh Mentorship (which, as a program geared to a specific student population, is one we would expect to have low visibility among the general campus population).

Table 17: Student Awareness of Key Student Affairs Programs and Organizations

Student Affairs Program	# Unaware of Program	% Unaware of Program
Sports & Recreation Clubs	1	0.4
Student Activities Council (SAC)	3	1.3
Student Government Association (SGA)	4	1.7
Residential Life Programs and Activities	4	1.7
Campus Social Events (movie nights, comedy shows, luaus, etc.)	6	2.5
Registered Student Organizations (RSO) – Honorary/Academic/Professional	13	5.4
Registered Student Organizations (RSO) – Religious	14	5.9
Registered Student Organizations (RSO) – Service	14	5.9
Registered Student Organizations (RSO) – Arts	16	6.7
Registered Student Organizations (RSO) – Cultural	16	6.7
Registered Student Organizations (RSO) – Political	17	7.1
Student Success Programs (TRIO, First Scholars)	21	8.8
Fresh (mentorship through Multicultural Affairs)	34	14.2

Next, we ran descriptive statistics on students' self-reported ratings of their involvement in these student affairs programs. Because "Unaware of Program" and "No Involvement" both resulted in no participation in the program these were both assigned a value of zero. The variables had the following response categories and numerical values: 0=Unaware of Program/ No Involvement; 1=Minimally Involved (Responses of "only a little" on the survey); 2=Involved; 3=High Involvement ("Very involved" on the instrument). Table 18 indicates the means and standard deviations for students' self-reported involvement in these student affairs programs and services, displayed in descending order of means.

Table 18: Low-Income Student Involvement in Student Affairs Programs

Program	Mean	Standard Deviation
Campus Social Events (movie nights, comedy shows, luaus, etc.)	.6627	.85989
Registered Student Organizations (RSO) – Honorary/Academic/Professional	.6094	.96539
Residential Life Programs & Activities	.4387	.83142
Sports and Recreation Clubs	.4095	.81390
Registered Student Organizations (RSO) – Service	.3389	.77757
Registered Student Organizations (RSO) – Religious	.2536	.68209
Student Activities Council (SAC)	.2417	.57117
Registered Student Organizations (RSO) – Cultural	.2146	.61014
Student Success Programs (TRIO, First Scholars)	.1915	.61861
Student Government Association (SGA)	.1486	.47550
Registered Student Organizations (RSO) – Arts	.1418	.51400
Registered Student Organizations (RSO) – Political	.1250	.49196
Fresh (mentorship through Multicultural Affairs)	.0706	.32171

Low-income students reported being minimally involved in Student Affairs programs at the University of Memphis, with the most involvement occurring in campus social events (mean=.6627, SD = .85989) and Honorary/Academic/Professional student organizations (mean=.6094, SD=.96539). It is important to note, though, that these high standard deviations indicated a range of involvement, with some students likely being highly involved in these programs.

Low-income students' lack of involvement in student affairs programs was borne out through our interview findings. The low-income students we interviewed tend to feel that student affairs programs are either not geared to them, not offered at conducive times, or for students who did not need to focus on school. For instance, Sasha, a transfer student, noted that she was not involved in most student affairs programs, choosing to focus instead on her coursework:

> I actually haven't even taken advantage of it (Student Affairs). Well, a little bit. I only took advantage of it when I needed it, not just to say, oh I do this oh I do that. I'm not one of those types of students I think sometimes it just wastes time.

Students interviewed tend to be more involved in programs and organizations directly related to their majors and that they could relate to their career goals. Sasha, for instance, had worked with SGA to fund an internship-related trip she had. Robert, another senior, said that while he had not been to any Student Affairs events he was heavily utilizing the Career Services website to prepare for jobs. Allison, a sociology major, had found a great deal of belonging through involvement with the sociology department's student organization. "The whole department is involved – coffee hours, holiday parties, brown bag lunches – you get to meet with your teachers and they introduce you to other teachers."

Overall, students needed to feel a connection with the events, programs, or mission of the student affairs office in order to be drawn in. As Sasha noted, "If I need it and it will be beneficial to me then I'll go do it, but other than that I was like, 'no that's just going to waste my time.' I want to focus on school."

When they did participate, if students failed to connect to the other students involved they were unlikely to continue. Students would self-assess themselves in relation to other students involved with the program or office and leave if they did not find a connection. For instance, Jennifer felt that the programs offered by Adult Services did not match her needs: "What they were doing didn't match anything I would be interested in. I don't have small children. They would have things like movie nights with Disney movies and I don't have small kids."

Lisa also had difficulty connecting with what she perceived to be the population of Commuter Services. She said, "Commuter Service thing is really primarily targeted at an older crowd, not for college aged crowd, it didn't seem." While these are perceptions, not necessarily objective realities of these offices and their programs, for these students the perceptions help to shape reality. This supports Tinto's (2012) assertion that students' perceptions are what really matter.

Importance of Involvement in Programs

Next, because research question 3 asked about the role of Student Affairs in the persistence of low-income students, and because this meets the "academic engagement," "social engagement," and

"extracurricular participation" boxes in the conceptual framework (see Figure 8), we wanted to understand how important low-income students felt these key student affairs programs were to their success at the University of Memphis. The survey asked students to rate how important a variety of factors were in their return from year to year (so, for instance, the question on page six of the survey asked, "To what extent did the following factors positively influence your decision to return your SOPHOMORE year?"). Responses ranged from "Not at all important" to "Very important." The factors were the same from year to year. We combined the rating for each factor across all three years to find a mean score for that factor (see Table 19). Possible scores ranged from 1 (not at all important) to 4 (very important).

The factors that students rated as most important to their return from year to year were not Student Affairs departments or programs as Location/Convenience and Received Scholarships/Grants were rated the highest. For more on this, please see the discussion on questions one and two. For Student Affairs programs and departments specifically, the top five most useful listed were Educational Support/Tutoring, University Center, On Campus Dining, Career Services, and Registered Student Organizations (RSO).

The students interviewed said that specific student affairs offices and programs were important when they needed them, even if they did not participate throughout their time in college. For instance, Lisa credited the Disabilities Resources for Students Office with significant support for getting through

college: "I'm registered with the disabilities office for dyslexia and they're fantastic. They're great. They do everything they can to help."

Relationships with Other Factors

Finally for study question 3, we wanted to determine how involvement with various Student Affairs programs and services correlated with a student's cultural capital, level of expectation, level of support, and general involvement, all factors shown to help students to be successful in college, as shown in the research. Because these are important factors, we felt that it would be important to understand the relationship between students' involvement with Student Affairs and their level of cultural capital, and their perceived institutional expectation, support, and involvement. To do so, we first created a scale from the items on pages three and four of the survey to determine their level of involvement in Student Affairs.

The students were presented with a list of thirteen Student Affairs programs and Registered Student Organizations. Students were asked to indicate their level of involvement with each, with options of No Involvement, Only a Little, Involved, Very Involved, and Unaware of Program. The thirteen items were:
1. Student Government Association (SGA)
2. Fresh (mentorship through Multicultural Affairs)
3. Student Success Programs (TRIO, First Scholars)
4. Sports & Recreation Clubs
5. Student Activities Council
6. Campus Social Events (movie nights, comedy shows, luaus, etc.)
7. Residential Life Programs & Activities

Table 19. Importance of Various Factors on a Student's Return

Program	Mean	Standard Deviation
Location/Convenience	2.61	1.15
Received Scholarships/Grants	2.48	1.24
Quality of Teaching	2.39	1.24
Affordability/Cost	2.38	1.13
Family/Peer Support	2.32	1.20
Relationship with faculty mentor	1.98	1.08
Educational Support/Tutoring	1.75	0.94
University Center	1.72	0.91
On Campus Dining	1.64	0.89
Career Services	1.47	0.78
Student Organizations (RSO)	1.38	0.79
Community Service	1.36	0.71
Leadership Programs	1.34	0.77
On-campus Employment	1.33	0.74
Commuter Services	1.34	0.68
Student Health Services	1.33	0.67
Adult Services	1.25	0.64
ACAD 1100 Course	1.25	0.62
Sororities/Fraternities	1.24	0.69
Residence Life	1.22	0.57
Multicultural Affairs	1.19	0.56
Student Success Services (TRIO Programs)	1.17	0.56
Student Activities Council (SAC)	1.12	0.42
Frosh Camp	1.13	0.46
Disability Resources for Students	1.11	0.44
Student Government Association (SGA)	1.10	0.39
Fresh Mentorship (through Multicultural Affairs)	1.08	0.35
On-Campus Child Care	1.07	0.35

8. Registered Student Organizations (RSO) – Religious
9. Registered Student Organizations (RSO) – Arts
10. Registered Student Organizations (RSO) – Cultural
11. Registered Student Organizations (RSO) - Honorary/Academic/Professional
12. Registered Student Organizations (RSO) – Political
13. Registered Student Organizations (RSO) - Service

That scale had a Cronbach's alpha of .851

(See Table 20) and was deemed reliable.

Having determined that our measure for student affairs involvement is reliable, we next ran a Pearson Correlation with the Student Affairs Involvement scale and the Cultural Capital, Expectations, Support, and Involvement scales created for question 1 (see Table 21). See page 15 for a complete discussion on the creation and reliability of the cultural capital, expectations, support, and involvement scales.

Table 20: Student Affairs Involvement Scale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.851	.861	13

Table 21. Correlations for Student Affairs Involvement

		Student Affairs Involvement
Cultural Capital	Pearson Correlation	.277**
	Sig. (2-tailed)	.000
	N	239
Expectation	Pearson Correlation	.111
	Sig. (2-tailed)	.087
	N	239
Support	Pearson Correlation	.386**
	Sig. (2-tailed)	.000
	N	239
Involvement	Pearson Correlation	.607**
	Sig. (2-tailed)	.000
	N	239
Student Affairs Involvement	Pearson Correlation	
	Sig. (2-tailed)	
	N	
**Correlation is significant at the 0.01 level (2-tailed).		

Involvement in Student Affairs is positively associated with a student's Cultural Capital, Support, and Involvement scores at a statistically significant level. Therefore, the data show that the more students are involved with Student Affairs programming the higher their degree of involvement and sense of support. Moreover, the higher the students level of cultural capital during their senior year in high school, the greater their involvement with Student Affairs programming. While it is important to note that correlations assume two-way directionality and do not indicate causation, the broader literature shows that as students get more involved on a campus their perceived level of institutional expectations, support, and involvement also increases (Braxton et al., 2014; Tinto, 2012).

Finally, we looked at the ways specific programs correlated with low-income students' expectations, support, and involvement to see what correlations existed. We ran a Pearson correlation with the student affairs programs and expectations, support, and involvement scales (see Table 22) to look for connections. This was done to help the client understand the way specific offices, departments, and programs were contributing to the success of its low-income students.

3

Table 22: Student Affairs Programs and Characteristic Scales

		Expectation	Support	Involvement
Expectation Scale	Pearson Correlation		.376**	.033
	Sig. (2-tailed)		.000	.611
	N		239	239
Support Scale	Pearson Correlation	.376**		.138*
	Sig. (2-tailed)	.000		.033
	N	239		239
Involvement Scale	Pearson Correlation	.033	.138*	
	Sig. (2-tailed)	.611	.033	
	N	239	239	
Student Government Association (SGA)	Pearson Correlation	.119	.263**	.424**
	Sig. (2-tailed)	.067	.000	.000
	N	238	238	238
Fresh (mentorship through Multicultural Affairs)	Pearson Correlation	.134*	.258**	.367**
	Sig. (2-tailed)	.038	.000	.000
	N	239	239	239
Student Success Programs (TRiO, First Scholars)	Pearson Correlation	.074	.276**	.325**
	Sig. (2-tailed)	.258	.000	.000
	N	237	237	237
Sports & Recreation Clubs	Pearson Correlation	.048	.221**	.388**
	Sig. (2-tailed)	.464	.001	.000
	N	237	237	237
Student Activities Council (SAC)	Pearson Correlation	.054	.309**	.309**
	Sig. (2-tailed)	.406	.000	.000
	N	238	238	238
Campus Social Events (movie nights, comedy shows, luaus, etc.)	Pearson Correlation	.054	.393**	.369**
	Sig. (2-tailed)	.403	.000	.000
	N	238	238	238

		Expectation	Support	Involvement
Residential Life Programs & Activities	Pearson Correlation	.066	.333**	.439**
	Sig. (2-tailed)	.308	.000	.000
	N	238	238	238
Registered Student Organizations (RSO) – Religious	Pearson Correlation	-.013	.193**	.378**
	Sig. (2-tailed)	.838	.000	.000
	N	238	238	238
Registered Student Organizations (RSO) – Arts	Pearson Correlation	.073	.179**	.330**
	Sig. (2-tailed)	.263	.006	.000
	N	238	238	238
Registered Student Organizations (RSO) – Cultural	Pearson Correlation	.089	.230**	.485**
	Sig. (2-tailed)	.169	.000	.000
	N	238	238	238
Registered Student Organizations (RSO) -- Honorary/ Academic/Professional	Pearson Correlation	.114	.157*	.352**
	Sig. (2-tailed)	.079	.015	.000
	N	239	239	239
Registered Student Organizations (RSO) – Political	Pearson Correlation	.086	.166*	.423**
	Sig. (2-tailed)	.186	.010	.000
	N	238	238	238
Registered Student Organizations (RSO) – Service	Pearson Correlation	.072	.269**	.490**
	Sig. (2-tailed)	.272	.000	.000
	N	236	236	236
Frosh Camp	Pearson Correlation	.114	.232**	.290**
	Sig. (2-tailed)	.078	.000	.000
	N	239	239	239
Orientation	Pearson Correlation	.106	.370**	.220**
	Sig. (2-tailed)	.096	.000	.001
	N	238	238	238

		Expectation	Support	Involvement
Emerging Leaders	Pearson Correlation	.064	.092	.231**
	Sig. (2-tailed)	.328	.157	.000
	N	236	236	236
Tiger Leadership Institute	Pearson Correlation	.009	.243**	.310**
	Sig. (2-tailed)	.892	.000	.000
	N	237	237	237
Community Service Activities	Pearson Correlation	.113	.280**	.336**
	Sig. (2-tailed)	.083	.000	.000
	N	236	236	234
ACAD 1100	Pearson Correlation	.018	.363**	.154*
	Sig. (2-tailed)	.787	.000	.019
	N	233	233	231
*. Correlation is significant at the 0.05 level (2-tailed).				
**. Correlation is significant at the 0.01 level (2-tailed).				

Every Student Affairs program was correlated with Pell-eligible students' sense of support and involvement at statistically significant levels with Fresh Mentorship also positively correlated with a student's sense of institutional expectation. All scales were based on ordinal variables.

Limitations

A key limitation of this section has to do with timing of the study. We asked students in their final semesters of college to assess their involvement throughout their college careers, a span of at least three to four years. It is possible that students' actual involvement with Student Affairs was different than their recollection. Additionally, levels of involvement were self-reported and may be inconsistent from student to student—students whose actual involvement was the same in programs may have perceived the level of involvement to be different. Future studies should take a longitudinal approach, measuring student involvement as it happens and not relying on self-reported recollection of involvement.

Summary of Findings - Study Question #3:

How do Student Affairs departments contribute to Pell-eligible students' persistence?

• While Pell-eligible students were involved in Student Affairs programs during their first year, listing them as key elements in their persistence to sophomore year, they were less likely to be involved in Student Affairs programs after their first year.

• Overall, Pell-eligible students found Educational Support/Tutoring, the University Center, On Campus Dining, Career Services, and Registered Student Organizations to be the most useful Student Affairs programs during their time at the University of Memphis although these services were still not used with great frequency by the study's participants.

• Pell-eligible students needed to feel a connection with the other students they saw being served by a Student Affairs office or program and understand how that program helped them to be successful academically and in a career in order to continue to participate with that office.

• Finally, Pell-eligible students' cultural capital and level of perceived support and involvement are all related to their involvement in student affairs.

Conclusions

Based on these findings, we were able to draw the following conclusions.

Study Question #1:
What factors influence Pell-eligible students' decision to persist at the University of Memphis?

- Given its unique commuter population, the University's efforts to support Pell-eligible student persistence and graduation are best served by focusing time, energy, and funds on programs that support students (academically and financially) rather than programs that attempt to involve them in programs that may or may not be of interest to them.

- Efforts that focus on providing support for Pell-eligible students through the development of faculty, staff, and/or peer mentorships are likely to provide the greatest return on investment in terms of improving student persistence and graduation rates.

Study Question #2:
What factors did Pell-eligible students who are in line to graduate use to persist at the University of Memphis? Did these factors differ over the course of their four to six years to graduation?

- Programs and resources that seek to fully involve Pell-eligible students on an academic and/or social level are most effective in supporting student persistence from the first to second year of college.

- Programs developed by Student Affairs departments for third and fourth year students without significant input from and direction by students are likely to be ineffective and poorly attended. Therefore, the University's efforts to support student persistence and graduation are best served by Student Affairs' offices that work proactively to solicit greater input from students (particularly those in their third and fourth years of school).

Study Question #3:
How do Student Affairs departments contribute to Pell-eligible students' persistence?

- Given its unique commuter population, the University's efforts to support student persistence and graduation are best served through outreach to students who would benefit from the programs and resources available rather than waiting to serve those students who present themselves for assistance.

Recommendations for Future Research

Upon completion of this study, we have identified four recommendations for further research on factors impacting low-income students' college experience.

1.Conduct analysis of students who did not persist at The University of Memphis.

Due to time constraints and limitations in our ability to identify and locate students who did not persist, we addressed study questions using only data collected from individuals who maintained enrollment at the University of Memphis until application for graduation. In order to pinpoint factors and factors used by students to persist, a comparative analysis between the reported factors used by both students who matriculated and those who did not would offer additional insight. For full understanding, we suggest duplicating this study with a secondary group of participants - students who left the University of Memphis regardless of income status. By creating four distinct groups, Pell-eligible students who did and did not persist and non-Pell eligible students who did and did not persist, a more valid set of recommendations could be developed.

2.Perform longitudinal data collection and analysis.

A threat to the reliability of this study comes in history effects in respondents. Study question two asked the team to determine which factors were most helpful for students throughout their time at University of Memphis. The question continued to ask whether those factors differed at various points in time. By asking respondents about importance of resources years later, respondents may not have had a clear recollection of how useful or important each was for their persistence. One way to overcome this threat to reliability is to conduct a longitudinal study beginning in the freshman year. By selecting a cohort of students and tracking their program participation and use of resources, a more accurate account will be gathered of factors and resources used by period in time.

In order to perform this research effectively, teams would need to understand the time needed. Researchers would need to be consistently engaged with their subjects and have the support of departments providing resources to students. Researchers would also need to understand the threat of study attrition and attempt to maintain records for students who maintain enrollment, but discontinue reports on engagement with resources.

3.Investigate the sophomore year experience and transition to the junior year.

An interesting finding from this study, that no identifiable factors or resources

are used more during the transition to the junior year than any other year, can be overcome by focusing on the sophomore year experience. Higher education research has traditionally focused on the first year experience and first-to-second year persistence. There has not been focus on persistence to the junior year or what is of interest to sophomores in college, low-income or not. We recommend Student Affairs units research the needs of sophomores and what would be helpful when persisting to the junior year, set goals and objectives around how to best serve this population, and develop programs that are most likely to reach those states goals.

4. Analyze the staff and faculty experience.

In preparation for this study, we conducted information interviews with Student Affairs departmental leadership. In those interviews, we were able to glean an understanding of programs offered, perceived impacts, leadership frustrations and divisional practices. To develop a more robust study, it would be helpful to formally gather data around faculty and staff understanding of, perceptions of, and roles with resources offered. Most directly tied to the study questions asked, we would like to understand how and why programs are developed, the intended impact of each office's services, whether staff see themselves as meeting stated goals and objectives, and ultimately whether their understanding aligns with the data collected from students.

Recommendations for Practice

In addition to the four recommendations for further research, we have identified five recommendations for practice. As the Division of Student Affairs is the client for whom this study was performed, recommendations center on what the division can do to more effectively impact low-income student experiences given the finding of our research.

1. Student Affairs must work proactively with faculty to ensure the early warning system designed to provide academic support for students reaches them when the first signs of struggle begin to show.

When asked about feedback from faculty on academic performance or feedback from the institution on satisfactory progress toward degree, students did not point to consistent mechanisms for receiving that feedback. Through our analysis of institutional programs during informal interviews with Student Affairs staff, we learned that students may work with or be contacted by the Center for Academic Retention and Enrichment Services in the event they are not performing well academically. Students did not identify any of the CARES efforts consistently, with the exception of the ACAD 1100 course, which is not an early warning program. Student Affairs, along with Academic Affairs, can develop consistent methods of giving timely feedback to students, so they are aware of support systems in place to assist those experiencing academic difficulty.

2. Increase partnerships with academic departments to promote students' academic engagement and improve academic support.

Academic support and academic engagement are important to student matriculation. Particularly for high commuter populations, Braxton et al. (2014) state that institutions must understand their student body in order to best meet student needs. Our findings support that students, particularly when approaching senior year, are more aware of relationships with faculty and methods in the classroom. Student Affairs can work with faculty members to stay abreast of new technology, teaching/presentation methods, real-time feedback and methods on how to offer academic assistance. Encouraging this collaboration will both support students in ways they currently appreciate and also help build relationships on campus between Academic Affairs and Student Affairs departments.

The University of Memphis Student Affairs Annual Report (2014) points to Student Affairs "maintaining partnerships with Academic Affairs to provide ongoing support" (p. 2). Respondents indicate that academic engagement is one of the most influential factors in their persistence and eventual completion. Specifically, the

development and use of faculty mentor relationships rated as one of the highest factors in students' return each year. Utilizing student interviews to delve further into student-faculty relationships, we found that students value one-on-one interaction with faculty members and often spoke of favorite courses being those where faculty seem connected to the material and exhibit care toward students. Student Affairs, both to better meet student needs and to increase visibility, can partner, more often, with faculty members. This can be done by hosting events in conjunction with academic departments, invite faculty to have a more prominent role at Student Affairs functions, or encourage faculty-study collaboration with funding opportunities.

3. To raise awareness of Student Affairs offices and resources, make alterations to the Student Affairs' physical footprint to improve visibility and increase student involvement.

Our survey data indicated a consistently low level of awareness of Student Affairs departments. This was reiterated during student interviews as we often had to explain which offices are included in the Division of Student Affairs. One notable response from study participants was that many students did not know where Student Affairs offices were located. Tinto (2012) includes involvement as one of the four factors that encourage student persistence, however respondents in our study ranked very low on the involvement scale. This is an area that Student Affairs can directly impact through programming and connecting with students. While the University Center is known by students and visited by many for food service or

for a break during the day, the student involvement corridor is not as visible as it could be. Moreover, the doors at the entrance to the student involvement corridor are not consistent with other student spaces in the University Center, which have open entrances and seating visible from the central walkway. It is our recommendation to remove the doors leading to the student involvement area, improve signage, and host events/activities in the central area to heighten traffic and awareness of activities on campus. By encouraging more than student leaders to engage with involvement offices, there is a greater opportunity to increase involvement overall and impact persistence.

4. To increase participation in Student Affairs programs, invest programming dollars as scholarships, grants or incentives for participation and help students understand how these programs will help them academically and in a career.

Our research findings illustrate the importance of financial awareness and affordability in the student experience and specifically in low-income student persistence and completion. Student Affairs currently sponsors the Emerging Leaders program. Although leadership programs received a relatively low mean rating (1.3 average for low-income and non low-income) for helpfulness and influence on student persistence, the Division of Student Affairs reports 89% of Emerging Leaders participants returned their second year (Annual Report, 2014). One characteristic of the Emerging Leaders program is a $5500 scholarship awarded for participation. We recommend

investing fiscal resources toward student financial support in ways that encourage participation in Student Affairs activities. Earmarking additional financial resources for students is the first step in recognizing the importance of financial support. In addition, Student Affairs departments that offer scholarships, grants and other programs with financial incentives should work to ensure students are aware of opportunities. As illustrated by our survey data and supported by interviews, students are generally not aware of the services and programs housed in Student Affairs. With attention focused on student-supporting programs, use of resources and involvement could increase.

5. Because we found that students who have the support of family and community members are more likely to persist, we recommend developing programs that encourage increased participation of family and community members.

Aside from academic engagement and financial support, family and peer support were identified to be among the most influential factors related to students' persistence and completion. Student Affairs, through adult and commuter student services as well as parent and family services, currently offer programming. We recommend reviewing program details and expanding

engagement opportunities. Orientation is the first opportunity for revision. Students are able to invite family members to attend orientation, however this may be cost-prohibitive, specifically for low-income students. We recommend adjusting the cost for family members to attend orientation or consider offering grants for Pell eligible students. Creating opportunities for family support systems to become more knowledgeable about the college's expectations as well as a chance to have questions answered about the family's role in their student's success, can be invaluable.

In addition to making family involvement possible at the start of a student's college career, we recommend having ongoing programming and resources appropriate to multiple student circumstances. Adult and commuter student services should program for the traditional-aged students as well as the non-traditional. Students may be single without children, single with children, and their children may be young as well as adults themselves. Interview participants indicated the programing offered by these two offices seemed geared primarily toward non-traditional students with young children. A broadened scope of resources and events can heighten participation across the student body.

Closing Thoughts

Low-income students face a variety of challenges to college completion, even after those students have successfully enrolled in college. By fulfilling its mission to foster student learning and promote student success through engagement and involvement in community, academics, diversity, and leadership, the Division of Student Affairs at the University of Memphis has great opportunity to help these students succeed in and graduate from college. Low-income students who were about to graduate demonstrated feeling high levels of support and expectation for college completion. Their needs changed as they moved through college, with the most important resources moving from freshman to sophomore year differing from the important resources transitioning from junior to senior year. Finally, while involvement in Student Affairs correlates with a student's cultural/social capital, expectations, support, and involvement, low-income students are less likely to involve themselves with these programs, particularly following the freshman year.

> By fulfilling its mission to foster student learning and promote student success through engagement and involvement in community, academics, diversity, and leadership, the Division of Student Affairs at the University of Memphis has great opportunity to help these students succeed in and graduate from college.

While limited by the timeline and scope of the capstone research, these findings point to some key opportunities for the University of Memphis's work with low-income students. We recommend that the University of Memphis use this as an opportunity to increase involvement in Student Affairs programming, particularly for low-income students following the freshman year. We also hope this will be an opportunity for the division of Student Affairs to educate faculty and parents and family members about the role they play in fostering student success. The University of Memphis continues to have great opportunity to be a model for the success of low-income students, and we believe that the Division of Student Affairs will play a key role in bringing this about.

The University of Memphis continues to have great opportunity to be a model for the success of low-income students, and we believe that the Division of Student Affairs will play a key role in bringing this about.

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Appendix A
Survey Instrument

Successful Graduation Study

Please complete the survey below.

Thank you!

Supplemental Instruction (SI)Survey Consent Form

PLEASE DO NOT CONTINUE IF YOU ARE UNDER THE AGE OF 18.

You are invited to be in a research study that explores the factors that influence students' persistence in college, the tactics they used to succeed throughout their enrollment, and the ways Student Affairs programs contributed to their success. The following information is provided to inform you about the research project and your participation in it. Please read this form carefully and feel free to contact us with any questions you may have about this study and the information given below. If you wish to participate, please mark agree at the bottom of the consent page. Purpose of the study: This research is being conducted to investigate the factors that influenced students' decisions to persist in college, the tactics they used to succeed throughout their enrollment, and the ways Student Affairs programs contributed to their success. Procedures to be followed: If you choose to participate, you will be asked to participate in a 15 minute survey that asks questions about your experiences at the University of Memphis. Researchers will only utilize your identification number to attain demographic information from the University of Memphis database (i.e. credit hours attained, grade point average, gender, race, etc.). Risks and benefits: There are no serious risks that can be reasonably expected as a result of participation in this study. The main inconvenience is the time required for completing the survey. Direct beneficiaries of the project will be administrators that can develop institutional programs and initiatives after reviewing the data collected.Participation in this study is voluntary. Your decision whether or not to participate will not affect your performance in any current courses or future relations with your institution. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting your academic standing. Contact Information.   If you have any questions about this research study or possible injury, feel free to contact Cyndee Perdue Moore at 434-203-1885 or Cynthia.Moore@Vanderbilt.edu or Dr. John Braxton at 615-322-8021 or john.braxton@vanderbilt.edu. For additional information about this study, giving consent, or your rights as a participant in this study, please feel free to contact the Vanderbilt University Institutional Review Board Office at (615) 322-2918 or toll free at (866) 224-8273. Confidentiality & Anonymity: Diligent efforts will be made to ensure that your participation in this study and your responses remain confidential and anonymous. The records of this study will be kept private and confidential to the extent permitted by law. In any sort of report we might publish, we will not include any information that will make it possible to identify you as a research participant. Your name will never be used in either data entry or research products that result from the study. Results will be presented so that you are not individually identifiable. Research records will be stored securely and only researchers will have access to the records. We will keep survey data for up to 10 years at which time it will be destroyed. By agreeing below, you acknowledge that you have read, understand, and agree to the

confidentiality procedures and freely and voluntarily choose to participate in the survey.

STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS STUDY (Please check if agree)

☐ I have read this informed consent document. I freely and voluntarily choose to participate.

Please provide your University of Memphis ID#

_____

(This is your UUID#. This information will be used when we analyze the data to match your responses to demographic variables. Your individual responses to the survey are confidential and will not be shared with anyone. Once the match has been completed, personally identifiable information will be removed from the data to ensure confidentiality and anonymity. Data analysis will be performed and reported on group, not individual, data.)

1.**How involved have you been in the following Student Affairs programs while a student at the University of Memphis?**

	No involvement	Only a little	Involved	Very involved	Unaware of program
A.Student Government Association (SGA)	○	○	○	○	○
B,Fresh (mentorship through Multicultural Affairs)	○	○	○	○	○
C.Student Success Programs (TRiO, First Scholars)	○	○	○	○	○
D.Sports & Recreation Clubs	○	○	○	○	○
E.Student Activities Council (SAC)	○	○	○	○	○
F. Campus Social Events (movie nights, comedy shows, luaus, etc.)	○	○	○	○	○
Residential Life Programs & Activities	○	○	○	○	○

2. **How involved have you been in the following Registered Student Organizations (RSOs) while a student at the University of Memphis?**

A. Registered Student Organizations (RSO) - Religious	○	○	○	○	○
B. Registered Student Organizations (RSO) - Arts	○	○	○	○	○
C. Registered Student Organizations (RSO) - Cultural	○	○	○	○	○
D. Registered Student Organizations (RSO) -- Honorary/Academic/Professional	○	○	○	○	○
E. Registered Student Organizations (RSO) - Political	○	○	○	○	○
F. Registered Student Organizations (RSO) - Service	○	○	○	○	○

74

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3. **Did you participate in any of the following activities or programs?**

	No	Yes
A. Frosh Camp	○	○
B. Orientation	○	○
C. Emerging Leaders	○	○
D. Tiger Leadership Institute	○	○
E. Community Service	○	○
F. Activities ACAD 1100	○	○

4. Have you lived, or do you live, in on-campus housing?
- ○ I have never lived in on-campus housing
- ○ I have lived in on-campus housing but no longer do
- ○ I currently live in on-campus housing

4a. Please list the semesters in which you live(d) on campus.
- ☐ Fall 2014
- ☐ Spring 2014
- ☐ Fall 2013
- ☐ Spring 2013
- ☐ Fall 2012
- ☐ Spring 2012
- ☐ Fall 2011
- ☐ Spring 2011
- ☐ Fall 2010

5. How much time per week do you spend on campus outside of class?
- ○ I do not spend any additional time on campus
- ○ 1-5 hours
- ○ 6-10 hours
- ○ 11 or more hours

6. **To what extent did the following support factors positively influence your decision to return your SOPHOMORE year?**

	Not at all	A little	Some	A lot
A. Adult Services	○	○	○	○
B. Career Services	○	○	○	○
C. On-Campus Child Care	○	○	○	○
D. Commuter Services	○	○	○	○
E. Student Success Services (TRIO programs)	○	○	○	○
F. Student Health Services	○	○	○	○
G. Affordability/Cost	○	○	○	○
H. Family/Peer support	○	○	○	○
I. Location/Convenience	○	○	○	○
J. On-campus Employment	○	○	○	○
K. Received Scholarships/Grants	○	○	○	○
L. Disability Resources for Students	○	○	○	○
M. Fresh Mentorship (through multicultural affairs)	○	○	○	○
N. Frosh Camp	○	○	○	○

7.To what extent did the following academic factors positively influence your decision to return your SOPHOMORE year?

A.Educational Support/Tutoring	○	○	○	○
B.Quality of Teaching	○	○	○	○
C.ACAD 1100 Course	○	○	○	○
D.Relationship with faculty mentor	○	○	○	○

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77

8.To what extent did the following involvement factors positively influence your decision to return your SOPHOMORE year?

A.Multicultural Affairs	○	○	○	○
B.Residence Life	○	○	○	○
C.On Campus Dining	○	○	○	○
D.Community Service	○	○	○	○
E.Sororities/Fraternities	○	○	○	○
F.Leadership Programs	○	○	○	○
G.Student Activities Council (SAC)	○	○	○	○
H.Student Organizations (RSO)	○	○	○	○
I.Student Government Association	○	○	○	○
J.University Center	○	○	○	○

9.Which factor was the most important in helping you return your SOPHOMORE year?

- ○ Adult Services
- ○ Career Services
- ○ On-Campus Child Care
- ○ Commuter Services
- ○ Student Success Services (TRIO programs)
- ○ Student Health Services
- ○ Affordability/Cost
- ○ Family/Peer support
- ○ Location/Convenience
- ○ On-campus Employment
- ○ Received Scholarships/Grants
- ○ Disability Resources for Students
- ○ Fresh Mentorship (through multicultural affairs)
- ○ Frosh Camp
- ○ Educational Support/Tutoring
- ○ Quality of Teaching
- ○ ACAD 1100 Course
- ○ Relationship with faculty mentor
- ○ Multicultural Affairs
- ○ Residence Life
- ○ On Campus Dining
- ○ Community Service
- ○ Sororities/Fraternities
- ○ Leadership Programs
- ○ Student Activities Council (SAC)
- ○ Student Organizations (RSO)
- ○ Student Government Association
- ○ University Center

10. **To what extent did the following academic factors positively influence your decision to return your JUNIOR year?**

	Not at all	A little	Some	A lot
A. Educational Support/Tutoring	○	○	○	○
B. Quality of Teaching	○	○	○	○
C. ACAD 1100 Course	○	○	○	○
D. Relationship with faculty mentor	○	○	○	○

11.To what extent did the following support factors positively influence your decision to return your JUNIOR year?

A.Adult Services	○	○	○	○
B.Career Services	○	○	○	○
C.On-Campus Child Care	○	○	○	○
D.Commuter Services	○	○	○	○
E.Student Success Services (TRIO programs)	○	○	○	○
F.Student Health Services	○	○	○	○
G.Affordability/Cost	○	○	○	○
H.Family/Peer support	○	○	○	○
I.Location/Convenience	○	○	○	○
J.On-campus Employment Received	○	○	○	○
K.Scholarships/Grants Disability	○	○	○	○
L.Resources for Students Fresh	○	○	○	○
M.Mentorship (through multicultural affairs)	○	○	○	○
N.Frosh Camp	○	○	○	○

12. To what extent did the following involvement factors positively influence your decision to return your JUNIOR year?

A. Multicultural Affairs	○	○	○	○
B. Residence Life	○	○	○	○
C. On Campus Dining Community Service	○	○	○	○
D. Sororities/Fraternities	○	○	○	○
E. Leadership Programs	○	○	○	○
F. Student Activities Council (SAC)	○	○	○	○
G. Student Organizations (RSO)	○	○	○	○
H. Student Government Association	○	○	○	○
I. University Center	○	○	○	○
	○	○	○	○

12. Which factor was the most important in helping you return your JUNIOR year?

- ○ Adult Services
- ○ Career Services
- ○ On-Campus Child Care
- ○ Commuter Services
- ○ Student Success Services (TRIO programs)
- ○ Student Health Services
- ○ Affordability/Cost
- ○ Family/Peer support
- ○ Location/Convenience
- ○ On-campus Employment
- ○ Received Scholarships/Grants
- ○ Disability Resources for Students
- ○ Fresh Mentorship (through multicultural affairs)
- ○ Frosh Camp
- ○ Educational Support/Tutoring
- ○ Quality of Teaching
- ○ ACAD 1100 Course
- ○ Relationship with faculty mentor
- ○ Multicultural Affairs
- ○ Residence Life
- ○ On Campus Dining
- ○ Community Service
- ○ Sororities/Fraternities
- ○ Leadership Programs
- ○ Student Activities Council (SAC)
- ○ Student Organizations (RSO)
- ○ Student Government Association
- ○ University Center

13. **To what extent did the following academic factors positively influence your decision to return your SENIOR year?**

	Not at all	A little	Some	A lot
A. Educational Support/Tutoring	○	○	○	○
B. Quality of Teaching	○	○	○	○
C. ACAD 1100 Course	○	○	○	○
D. Relationship with faculty mentor	○	○	○	○

14.To what extent did the following involvement factors positively influence your decision to return your SENIOR year?

A.Multicultural Affairs	◯	◯	◯	◯
B.Residence Life	◯	◯	◯	◯
C.On Campus Dining	◯	◯	◯	◯
D.Community Service	◯	◯	◯	◯
E.Sororities/Fraternities	◯	◯	◯	◯
F.Leadership Programs	◯	◯	◯	◯
G.Student Activities Council (SAC)	◯	◯	◯	◯
H.Student Organizations (RSO)	◯	◯	◯	◯
I.Student Government Association	◯	◯	◯	◯
J.University Center	◯	◯	◯	◯

15. To what extent did the following support factors positively influence your decision to return your SENIOR year?

A. Adult Services	○	○	○	○
B. Career Services	○	○	○	○
C. On-Campus Child Care	○	○	○	○
D. Commuter Services	○	○	○	○
E. Student Success Services (TRIO programs)	○	○	○	○
F. Student Health Services	○	○	○	○
G. Affordability/Cost	○	○	○	○
H. Family/Peer support	○	○	○	○
I. Location/Convenience	○	○	○	○
J. On-campus Employment	○	○	○	○
K. Received Scholarships/Grants	○	○	○	○
L. Disability Resources for Students	○	○	○	○
M. Fresh Mentorship (through multicultural affairs)	○	○	○	○
N. Frosh Camp	○	○	○	○

16. Which factor was the most important in helping you return your SENIOR year?

○ Adult Services
○ Career Services
○ On-Campus Child Care
○ Commuter Services
○ Student Success Services (TRIO programs)
○ Student Health Services
○ Affordability/Cost
○ Family/Peer support
○ Location/Convenience
○ On-campus Employment
○ Received Scholarships/Grants
○ Disability Resources for Students
○ Fresh Mentorship (through multicultural affairs)
○ Frosh Camp
○ Educational Support/Tutoring
○ Quality of Teaching
○ ACAD 1100 Course
○ Relationship with faculty mentor
○ Multicultural Affairs
○ Residence Life
○ On Campus Dining
○ Community Service
○ Sororities/Fraternities
○ Leadership Programs
○ Student Activities Council (SAC)
○ Student Organizations (RSO)
○ Student Government Association
○ University Center

`17.`Do you work?

☐ No
☐ Yes, full-time, on campus
☐ Yes, part-time, on campus
☐ Yes, full-time, off campus
☐ Yes, part-time, off campus
 (Select all that apply)

`18.`Do you have children?

○ Yes
○ No

`19.`What is the highest level of education completed by either of your parents (or those who raised you)?

○ Did not finish high school
○ High school diploma or GED
○ Some college
○ Associate's Degree (2-year college)
○ Bachelor's Degree
○ Post-baccalaureate graduate education
○ I don't know

`20.`If you earned a high school diploma, did you enroll in college the summer or fall immediately after you graduated from high school?

○ Yes
○ No

`21.`When you applied to college, was the University of Memphis

○ Your 1st choice
○ Your 2nd choice
○ Your 3rd choice or more

`22.`When you enrolled at the University of Memphis, how confident were you that you would graduate from the University of Memphis?

○ Not at all confident
○ Somewhat confident
○ Confident
○ Very Confident

`23.`You indicated that you were not confident that you would graduate from the University of Memphis. What factors contributed to this lack of confidence? (Check all that apply)

☐ I intended to transfer to a different institution
☐ I was concerned that it might be too academically challenging
☐ I was concerned that it might not be academically challenging enough
☐ I was concerned about my ability to afford four years in college
☐ I was concerned about my ability to juggle school and other obligations such as family and work
☐ Other

`24.`Prior to coming to college, how did your family and friends from home feel about you attending the University of Memphis?

○ They did not want me to attend U of M
○ They felt OK, but wished I had attended somewhere else
○ They were supportive
○ They were very supportive/excited

25. Do you use Twitter?   ○ Yes
                           ○ No

25a.Below is a list of Twitter accounts from the University of Memphis. Please indicate your level of engagement with each one.

	Do not follow	Follow but do not regularly read	Follow and read but do not tweet to	Follow, read, and tweet to
@uofmfutureyou (U of M Future You)	○	○	○	○
@slimemphis (U of Memphis Student Leadership & Involvement)	○	○	○	○
@UofMSAC (Student Activities Council)	○	○	○	○
@TigerBingham (Dr. Rosie Bingham)	○	○	○	○
@UofMemphisPres (Dr. M. David Rudd)	○	○	○	○
@UofMPlugin (U of M Plug-In)	○	○	○	○
@UofMLibraries (U of M Library)	○	○	○	○
@UofM_IM_Sports (Memphis Intramurals)	○	○	○	○
@UMFirstScholars (U of M First Scholars)	○	○	○	○
@UofMCampusRec (U of M Campus Rec)	○	○	○	○
@UofMCommuters (Commuter Student Association)	○	○	○	○
@UofM_UC (U of M University Center)	○	○	○	○
@UofMemphis (University of Memphis)	○	○	○	○

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Please indicate your level of agreement with the following statements

	Strongly Disagree	Disagree	Agree	Strongly Agree
26. When I began college, I expected to graduate from college	○	○	○	○
My family expects me to graduate from college	○	○	○	○
27. My friends from the University of Memphis expect me to graduate from college	○	○	○	○
28. The faculty and staff at the University of Memphis expect me to graduate from college	○	○	○	○
29. Beginning my freshman year, I knew what was expected of me in order to be able to graduate from the University of Memphis	○	○	○	○
30. Faculty members at the University of Memphis let you know what you need to do in order to be successful in their classes	○	○	○	○

88

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31. During your last year of HIGH SCHOOL, how frequently did you engage in the following activities?

	Never	Seldom	Occasionally	Frequently	Very Frequently
Took private art lessons	○	○	○	○	○
To private music lessons	○	○	○	○	○
Participated in band or orchestra	○	○	○	○	○
Participated in chorus or choir	○	○	○	○	○
Participated in dance at school	○	○	○	○	○
Participated in drama club	○	○	○	○	○
Participated in a school play or musical	○	○	○	○	○
Visited art museums	○	○	○	○	○
Visited history museums	○	○	○	○	○
Attended a symphony concert	○	○	○	○	○
Took a dance class outside of school	○	○	○	○	○
Studied a foreign language outside regular school	○	○	○	○	○
Borrowed books from the public library	○	○	○	○	○
Read for pleasure outside of school	○	○	○	○	○
Participated in a youth religious club/group	○	○	○	○	○
Read or meditated on sacred or religious writings	○	○	○	○	○
Traveled abroad	○	○	○	○	○
Attended a ballet performance	○	○	○	○	○
Attended an opera performance	○	○	○	○	○
Discussed religion or spirituality	○	○	○	○	○
Attended a religious service	○	○	○	○	○
Spent time in prayer or meditation	○	○	○	○	○
Performed volunteer work	○	○	○	○	○

Please indicate your level of agreement with the following statements

	Strongly Disagree	Disagree	Agree	Strongly Agree
32. I have made good friends during my time at the University of Memphis	○	○	○	○
33. I feel supported by faculty members at the University of Memphis	○	○	○	○
I feel supported by Student Affairs staff members at the University of Memphis	○	○	○	○
34. If I had problems in a class, I knew where to go for help	○	○	○	○
35. If I had problems outside of a class, I knew where to go for help	○	○	○	○
36. I worked hard in my classes at the University of Memphis	○	○	○	○
37. I was usually able to anticipate the final grade I would receive in each of my classes at the University of Memphis	○	○	○	○

38. Do you have someone at the University of Memphis who you would consider to be a mentor?

○ Yes
○ No

39. The person or people from the University of Memphis who you consider to be a mentor is/are:

☐ Another student at the University of Memphis
☐ A faculty member at the University of Memphis
☐ A staff member at the University of Memphis
☐ Other
(Please check all that apply)

_____

40. Students who participate in follow-up interviews will be entered for a chance to win a $100 gift card. We will be interviewing students to get more information about the factors that have helped them reach graduation. If you would be interested in participating in the interviews, please enter your email address (note that email addresses will be removed from the survey data and the interview data will be confidential).

Appendix B
Survey Concept Map

Research Question	Tinto's Core Area	Concept	Survey Item
Q1: What factors influence Pell-eligible students' ability to persist in college?	Expectations	Student expectations of themselves	21, 22, 23, 26
		Institutional expectations of students	Institutional expectations of students
		Faculty expectations	28, 30
		Knowledge of expectations	19, 29
		Cultural capital	19, 26a, 31
	Support	Social support	1b,c, 6a,b,d,f,h,m,n 11a,b,d,f,h,m,n 15a,b,d,f,h,m,n, 24, 27, 32, 33, 33a, 35, 38, 39
		Financial support	6c,g,j,k 11c,g,j,k 15c,g,j,k, 17, 18
	Assessment and Feedback	Course placement	3b
		In-class assessment	3f, 37
		Early warning systems	37
	Involvement	Classroom involvement	36
		Levels of contact	1, 5, 6i, 11i, 15i, 25, 38, 39

Research Question	Tinto's Core Area	Concept	Survey Item
Q2: What tactics did Pell-eligible students who are in line to graduate use to persist to graduation? Did these tactics change from year to year?	Expectations	Advising	38, 39
	Support	Developmental education	1c
		Availability and use of academic support	1c, 6e,l, 7a, 10a, 11e,l, 13a, 15e,l, 33, 34
		Social support	1b,c, 6a,b,d,f,h,m,n 11a,b,d,f,h,m,n 15a,b,d,f,h,m,n, 24, 27, 32, 33, 33a, 35, 38, 39
	Assessment and Feedback	In-class assessment	3f, 37
	Involvement	Academic engagement	1c, 2d, 3f, 5, 7, 10, 13, 36
		Social engagement	1a,d,e,f, 2, 4, 5, 8, 12, 14
		Extracurricular participation	1a,d,e,f, 2, 3, 5, 8, 12, 14
		Other interactions	3, 4, 8j, 12j, 14j
		Change from year to year	4a, 6, 7, 8, 9, 10, 11, 12, 12a, 13, 14, 15, 16
Q3: How do Student Affairs departments contribute to low-income students' persistence?	Support	Social support	1b,c, 6a,b,d,f,h,m,n 11a,b,d,f,h,m,n 15a,b,d,f,h,m,n, 24, 27, 32, 33, 33a, 35, 38, 39
	Involvement	Academic engagement	1c, 2d, 3f, 5, 7, 10, 13, 36
		Social engagement	1a,d,e,f, 2, 4, 5, 8, 12, 14
		Extracurricular participation	1a,d,e,f, 2, 3, 5, 8, 12, 14

Appendix C

Table 3 Crosstab of Wave Submission and Race Count									
		ipeds_race							
		(un-speci-fied)	Asian	Black	Hispan-ic	Multi Race	Non-Resi-dent Alien	White	Total
Wave the sur-vey was submit-ted	Re-sponded to first invite	1	4	68	8	9	3	135	228
	Re-sponded to sub-sequent invite	0	3	84	6	4	0	101	198
Total		1	7	152	14	13	3	236	426

Chi-Square Tests for Wave Submitted * Race Crosstab			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.875a	6	.092
Likelihood Ratio	12.437	6	.053
N of Valid Cases	426		
a. 6 cells (42.9%) have expected count less than 5. The minimum expected count is .46.			

Crosstab of Wave Submitted and Sex				
Count				
		Sex		Total
		Female	Male	
Wave the survey was submitted	Responded to first invite	167	61	228
	Responded to subsequent invite	140	58	198
Total		307	119	426

Chi-Square Tests for Wave Submitted * Sex Crosstab					
	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.339a	1	.560		
Continuity Correctionb	.225	1	.635		
Likelihood Ratio	.339	1	.560		
Fisher's Exact Test				.589	.317
N of Valid Cases	426				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 55.31.					
b. Computed only for a 2x2 table					

Crosstab of Wave Submitted and Pell-eligibility					
Count					
			Pell		
		0	1	Total	
Wave the survey was submitted	Responded to first invitation	100	128	228	
	Responded to subsequent invitation	87	111	198	
	Total	187	239	426	

Chi-Square Tests for Wave Submitted * Pell-eligibility Crosstab					
	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.000a	1	.987		
Continuity Correctionb	.000	1	1.000		
Likelihood Ratio	.000	1	.987		
Fisher's Exact Test				1.000	.532
Linear-by-Linear Association	.000	1	.987		
N of Valid Cases	426				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 86.92.					
b. Computed only for a 2x2 table					

Appendix D

		Sum of Squares	df	Mean Square	F	Sig.	
Table 4. ANOVA Between Wave Submission Groups for Expectations, Support and Involvement Scales							
Expectation Scale	Between Groups	.016	1	.016	.066	.798	
	Within Groups	102.607	424	.242			
	Total	102.622	425				
Support Scale	Between Groups	.000	1	.000	.000	.998	
	Within Groups	83.859	424	.198			
	Total	83.859	425				
Involvement Scale	Between Groups	.052	1	.052	.237	.627	
	Within Groups	92.572	424	.218			
	Total	92.624	425				

Appendix E
Expectations Scale Variables

Expectation Scale Reliability Statistics	
Cronbach's Alpha	N of Items
.741	7

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Prior to coming to college, how did your family and friends from home feel about you attending the University of Memphis?	21.35	8.203	.119	.790
When I began college, I expected to graduate from college	20.87	7.294	.587	.690
My family expects me to graduate from college	20.84	7.422	.570	.695
My friends from the University of Memphis expect me to graduate from college	20.91	7.285	.536	.697
The faculty and staff at the University of Memphis expect me to graduate from college	21.00	7.007	.603	.682
Beginning my freshman year, I knew what was expected of me in order to be able to graduate from the University of Memphis	21.49	6.183	.475	.715
Faculty members at the University of Memphis let you know what you need to do in order to be successful in their classes	21.36	6.621	.516	.696

Appendix F
Support Scale Variables

Support Scale Reliability Statistics	
Cronbach's Alpha	N of Items
.751	8

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Orientation	16.04	10.605	.204	.760
ACAD 1100	16.24	10.629	.211	.759
I have made good friends during my time at the University of Memphis	13.35	8.905	.438	.728
I feel supported by faculty members at the University of Memphis	13.34	8.550	.577	.700
I feel supported by Student Affairs staff members at the University of Memphis	13.95	8.204	.513	.713
If I had problems in a class, I knew where to go for help	13.52	8.008	.656	.681
If I had problems outside of a class, I knew where to go for help	13.64	7.772	.630	.685
Do you have someone at the University of Memphis who you would consider to be a mentor?	16.09	10.362	.280	.751

Appendix G
Involvement Scale Variables

Involvement Scale Reliability Statistics	
Cronbach's Alpha	N of Items
.847	19

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Do you use Twitter?	21.15	76.137	.089	.850
Emerging Leaders	21.42	76.336	.231	.848
Tiger Leadership Institute	21.37	75.860	.244	.847
Frosh Camp	21.27	75.570	.204	.847
Community Service Activities	21.22	74.462	.333	.845
Have you lived, or do you live, in on-campus housing?	20.13	74.954	.214	.847
Registered Student Organizations (RSO) - Religious	19.99	64.724	.652	.828
Registered Student Organizations (RSO) - Arts	20.08	65.671	.615	.830
Registered Student Organizations (RSO) - Cultural	20.01	63.606	.726	.824
Registered Student Organizations (RSO) -- Honorary/Academic/Professional	19.67	64.565	.583	.832
Registered Student Organizations (RSO) - Political	20.09	65.105	.651	.828
Registered Student Organizations (RSO) - Service	19.90	62.586	.738	.823
Student Government Association (SGA)	20.25	71.821	.450	.840
Fresh (through Multicultural Affairs)	19.85	68.039	.317	.851
Student Success Programs	19.82	66.766	.391	.845
Sports & Recreation Clubs	20.01	70.713	.382	.842
Student Activities Council (SAC)	20.13	70.248	.475	.838
Campus Social Events	19.72	69.029	.436	.840
Residential Life Programs & Activities	19.95	69.087	.450	.839

Appendix H
Student Interview Protocol

Icebreakers

    1.Are you originally from Memphis?

    2.How did you choose the University of Memphis? (side questions: if transferred in, when?)

    3.What is your major?

Expectations

    4.Based on your high school experience, did you feel academically prepared to succeed at the University of Memphis? Why/why not? If not, how did you overcome that?

    5.Does anyone in your family have a College degree? Who?

    6.When did you decide you wanted to go to college? Did something or someone influence that decision?

    7.Would your family or friends be disappointed if you did not finish College? If yes, why? How would you know? If no, why not?

    8.Would University of Memphis faculty and staff be disappointed if you did not finish College? If yes, who? Why? How would you know? If no, why not?

    9.How did you know what you needed to do to be successful in your classes? In your major? At the University of Memphis?

    10.Were you assigned an advisor? When were you assigned an advisor? Did you change advisors during your time at the University of Memphis? If so, why? What did advising meetings look like? How often did you meet with your advisor? Did you find advising helpful?

Support

    11.Did you receive scholarships while attending University of Memphis? What kind?

    12.How important was funding (Scholarship or financial aid) for your ability to stay at U-M?

    13.Was there ever a time you considered dropping out of U-M? Who or what influenced your decision to stay?

    14.Have any Student Affairs resources or services at the University of Memphis impressed you? Which ones and why?

    15.Have any Student Affairs resources or services disappointed you? Which ones and why?

    16.Do you feel like you have developed strong relationships with any faculty or staff members at the University of Memphis? If so, how did these relationships build? Can you please tell me about any particularly influential relationships?

    17.Is there anyone on campus you would credit with helping you reach graduation? Why?

    18.A lot of people say that the friends you make in college are the friends you'll have the rest of your life. Has that been true for you at the University of Memphis? (Why or why not?) Tell me about them.

Involvement

19. What were you involved in that was important during your time at U-M? What prompted you to be involved with those activities/offices? Why?
20. Tell me about your favorite class at the University of Memphis. What made it that?
21. How involved have been on campus?
22. How would your professors describe your level of participation in classes? Do you see this as consistent across all classes?

Assessment and Feedback

23. During the term, how did you know how well you were doing in class?
24. Did professors ensure you received real-time feedback in classes? If so, how did they do so?
25. Did you ever receive outreach if you were not performing well in a class? If so, where did that outreach come from?

Wrap-up

26. Is there anything else you would like to add that can round out the picture of your success at U-M?

Appendix I

		Paired Differences							
Factor importance in Influencing Year-to-Year Persistence									
Paired Samples Test									
			Std. Devia-tion	Std. Error Mean	95% confidence interval of the difference		t	df.	Sig. (2-tailed)
		Mean			Lower	Upper			
Pair 1	Soph Adult Services - Ju Adult Services	.059			-.007	.125	1.758	236	.080
Pair 2	Soph Adult Services - Sr Adult Services	.072	.603	.039	-.005	.149	1.832	236	.068
Pair 3	Ju Adult Services - Sr Adult Services	.008	.433	.028	-.047	.064	.301	235	.764
Pair 4	Soph Career Services - Ju Career Services	.077	.747	.049	-.019	.173	1.572	234	.117
Pair 5	Soph Career Services - Sr Career Services	-.034	.843	.055	-.142	.074	-.616	236	.538

Pair 6	Ju Career Services - Sr Career Services	-.089	.769	.050	-.188	.010	-1.777	235	.077
Pair 7	Soph on-cam-pus child care - Ju on-cam-pus child care	-.034	.430	.028	-.089	.021	-1.207	236	.229
Pair 8	Soph on-cam-pus child care - Ju on-cam-pus child care	-.004	.483	.031	-.066	.058	-.135	236	.893
Pair 9	Ju on-cam-pus child care - Sr on-cam-pus child care	.030	.406	.026	-.022	.082	1.122	235	.263

Pair 10	Soph Commuter Services - Ju Commuter Services	.106	.556	.036	.035	.178	2.933	234	.004
Pair 11	Soph Commuter Services - Sr Commuter Services	.076	.755	.049	-.021	.173	1.548	236	.123
Pair 12	Ju Commuter Services - Sr Commuter Services	-.017	.621	.041	-.097	.063	-.421	233	.674
Pair 13	Soph Student Success Services (TRIO programs) - Ju Student Success Services (TRIO programs)	-.004	.559	.036	-.076	.068	-.117	234	.907

Pair 14	Soph Student Success Services (TRIO pro-grams) - Sr Student Success Services (TRIO pro-grams)	-.030	.559	.037	-.102	.042	-.819	233	.414
Pair 15	Ju Student Success Services (TRIO pro-grams) - Sr Student Success Services (TRIO pro-grams)	-.025	.400	.026	-.077	.026	-.973	236	.331
Pair 16	Soph Student Health Services - Ju Student Health Services	.055	.523	.034	-.012	.122	1.618	235	.107

Pair 17	Soph Student Health Services - Sr Student Health Services	.072	.610	.040	-.006	.150	1.811	236	.071
Pair 18	Ju Student Health Services - Sr Student Health Services	.017	.390	.025	-.033	.067	.666	236	.506
Pair 19	Soph Afford-ability/ Cost - Ju Afford-ability/ Cost	-.207	.918	.060	-.324	-.089	-3.467	236	.001
Pair 20	Soph Afford-ability/ Cost - Sr Afford-ability/ Cost	-.289	1.009	.066	-.419	-.160	-4.395	234	.000
Pair 21	Ju Afford-ability/ Cost - Sr Afford-ability/ Cost	-.063	.670	.044	-.149	.022	-1.454	236	.147

Pair 22	Soph Family/ Peer support - Ju Family/ Peer support	-.071	.859	.056	-.181	.038	-1.280	238	.202
Pair 23	Soph Family/ Peer support - Sr Family/ Peer support	-.202	.928	.060	-.320	-.083	-3.351	237	.001
Pair 24	Ju Family/ Peer support - Sr Family/ Peer support	-.130	.864	.056	-.241	-.020	-2.325	237	.021

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